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The Japanese Macroeconomic Mystery

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Abstract

This paper examines Japan's two decades of so-called 'stagnation' since the rapid the collapse of the bubble economy in the early 1990s brought the long period of rapid post-war economic growth to an abrupt halt. Successive governments have experimented with varying policy measures to restore growth without much success, though Keynesian fiscal measures have helped avoid high unemployment. A series of policy mistakes and demographic shifts that foreshadowed an aging and shrinking population led to a loss of confidence in the country's long term economic prospects and hampered recovery. A major cause of continuing stagnation has been a sharp decline in private corporate investment to the point where it became a net saver. Surprising for a country with no regulatory barriers to cross border capital mobility, the bulk of Japanese savings have gone into government bonds yielding progressively lower returns despite better foreign options. This extreme 'home bias' has enabled governments to run debt financed fiscal deficits for a long period but now public debt has exploded to well over twice GDP, threatening fiscal sustainability. Direct government measures to channel investments overseas through a Sovereign Wealth Fund can not only boost Japan's longer term income but also provide an immediate stimulus by depreciating its exchange rate. A fundamental lesson from the Japanese experience is that, to avoid a public debt sustainability problem, long term fiscal stimulus measures should make productive investments that enable subsequent debt repayments.

Key words: Fiscal sustainability; bond market crisis; home bias; Sovereign Wealth Fund

JEL codes: E12, E21, E62

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THE JAPANESE MACROECONOMIC MYSTERY¹

This essay is designed to unravel a set of complications and mysteries concerned with the Japanese macro-economy for the last twenty years, or even longer. This is the period of Japan's Two Lost Decades, beginning around 1995. We draw on a huge and highly sophisticated, even brilliant, literature on this, written principally by Japanese economists (and also some Americans). Fortunately for us, much of it is written, or translated into, English, and we have tried to understand it. Our aim is to make the complex issues and possible solutions simple enough for non-specialists to understand. We also wish to see whether there are some lessons for other countries.

What are these mysteries? Well, the single most interesting one is this. For about 20 years, the Japanese government has run significant and deliberate budget deficits that have been motivated by the Keynesian objective of stimulating the economy. Plenty of countries have run budget deficits for long periods, usually because of political difficulties in raising taxes or cutting spending. But this is different because the explicit Keynesian "fiscal stimulus" motive for maintaining aggregate employment or the growth rate is usually only short term, whereas the Japanese case is unique because it has gone on for more than two decades. But this does not mean that it is interesting only as a historical curiosity. Since the global financial crisis (GFC) of 2008, prolonged application of stimulus policies has become increasingly common as many major economies struggle to restore growth, and the Japanese experience is likely to hold lessons of wider contemporary relevance.

I

THE BUBBLE AND AFTER

The economic recovery of Japan after the war was impressive. It was indeed a boom, especially a boom in manufactured exports. The main problems came from two sharp world oil price rises. Details of this post-war period go beyond this paper. Anyway, the economic situation of Japan was dramatically transformed in a short period of five years – from 1985 to 1990 - by "*The Bubble*". Indeed, this surprising episode was the bridge between the remarkably successful post war years (lasting about thirty years) and the later long unfortunate period of stagnation or recession - described as *the two lost decades* - with which this paper is mainly concerned.

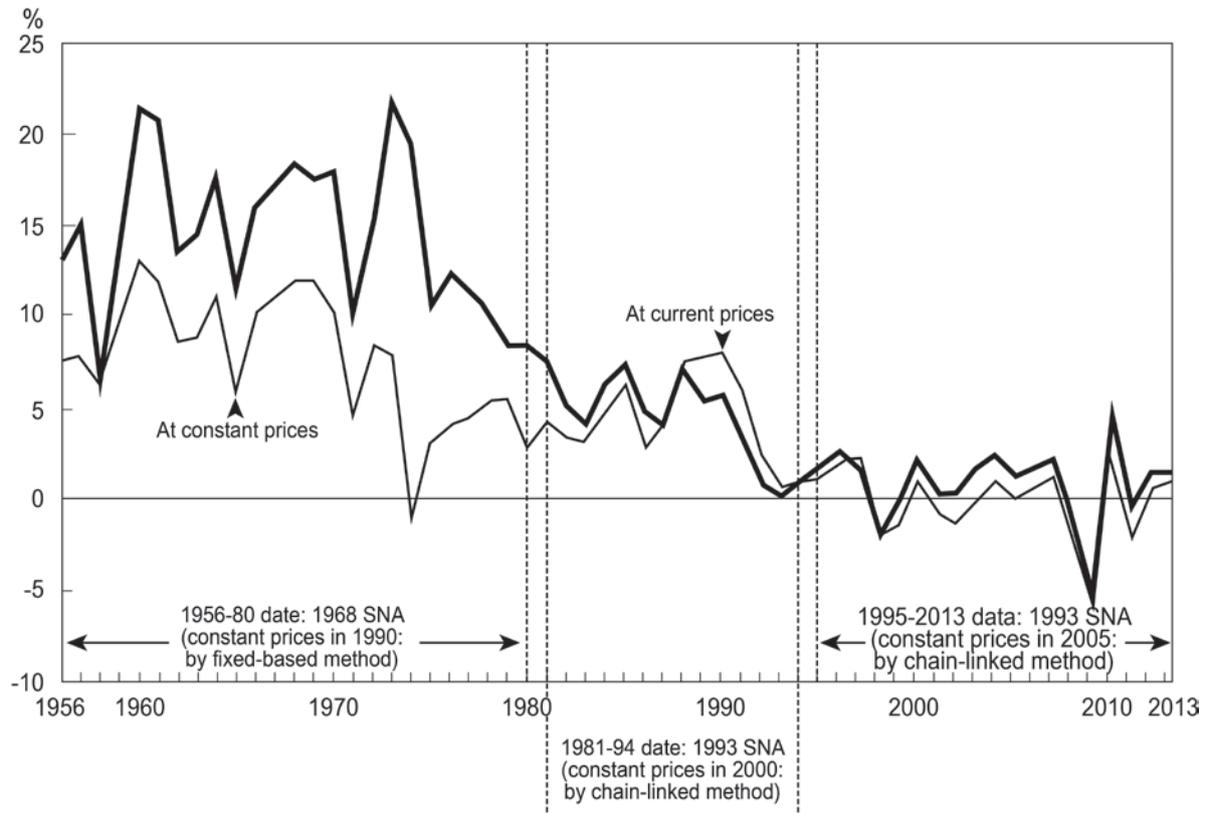
What happened during the Bubble?

First, under pressure from the United States following the Plaza Accord of 1985, the yen appreciated (from 260 yen/dollar in February 1985 to 150 yen/dollar by mid-1986), then Japanese interest rates were reduced (to create offsetting domestic demand and to minimise further appreciation), which raised sharply both equity (stock) prices and land prices. Eventually interest rates were increased again, and equity and land prices fell. It is not clear that the ups and downs of equity and land prices were the direct result of interest rate changes. Perhaps interest rates actually lagged behind asset prices. Both equity and land prices rose

¹ Without implication we wish to record our thanks to Hal Hill, Charles Horioka, Yoshiyasu Ono and Martin Wolf for helpful discussions, suggestions and insights, and Chandra Jayasuriya for assistance with the figures. We have also learned much from the writings of Takatoshi Ito, Richard Koo, Paul Krugman and Adam Posen, two excellent books (Hamada, Kashyap and Weinstein, 2011 and Huchison and Westermann, 2006) and from the large English language literature now available on the Japanese economy.

approximately threefold from 1985, and stock prices peaked in 1989 and land prices in 1990. But the general price level did not change much at all, with annual (CPI) inflation rate below 1%.

Fig 1 – Japan GDP growth



Source: Statistical Handbook of Japan 2014

Policy Dilemma

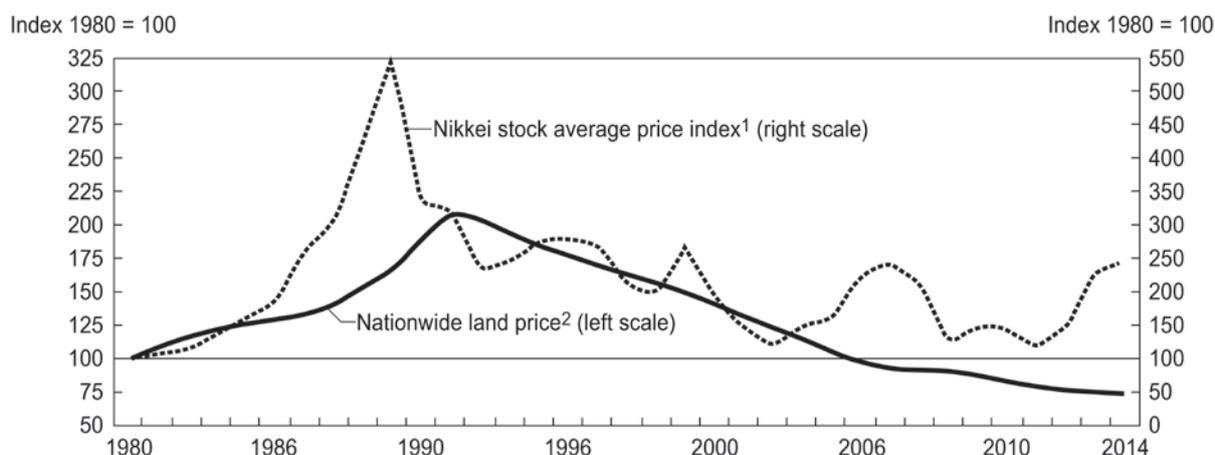
Expectations were surely not rational. What should the Japanese central bank, the Bank of Japan (BOJ) have done? With hindsight many commentators criticised its supposed passivity or its being “behind the curve”. It is easy to be critical with hindsight. What should a central bank do when there is no general inflation or deflation, but asset prices boom or slump? This poses a difficult question for monetary policy. Initial asset price increases were seen as a sign of the underlying strong economy, though the subsequent sharp increases were clearly not based on rational expectations. But, basically, there was much confusion as to whether asset price booms indicated a successful economy and what, if any, action should be taken by the monetary authorities. As Ito and Mishkin (2006: p. 140) pointed out, “First, the central bank often would not know whether asset prices are rising due to fundamentals or due to a bubble. Second, when the bubble is in force, it would take a very high interest rate to pop the bubble, and that would throw real variables into volatile fluctuations”. They argued - and we agree - that central bank policy should have continued to focus on general price stability (perhaps inflation targeting) but supplemented by regulatory measures to moderate asset price booms

and slumps. With two objectives there have to be two instruments. A single instrument - interest rate policy - can successfully achieve both commodity price stability and asset-price stability.

In May 1989, monetary policy started to tighten and continued in 1990. Asset prices started to slide. Stock prices began to fall sharply from the beginning of 1990. By end of 1990, stock prices were down by a third and by mid-1991, were 60 % down. Land prices started sliding rapidly in 1991. The bubble was over.

Then followed the crucial post-bubble stage, from about 1990 to 1995, when the asset price collapse started to impact on the real economy. Growth came down to below 1 % in 1992) and asset prices continued to slide. This involved what Koo (2009) has called a “balance sheet recession”. Firms (and perhaps also some households) gave priority to rectifying their balance sheets. This, of course, applied particularly to the losers from the bubble chaos, being those, both private firms and households, who ended with big undesirable debts. Somewhat surprisingly the collapse of the bubble economy with its erosion had only relatively small wealth effects and hence only a mild impact on household savings behaviour; wealth effects were small because of some special features of the Japanese housing market and the small share of equity in Japanese household financial assets (around 5% in the 1990s) (Ramaswamy and Rendu, 2000; Muellbauer and Murata, 2011). But overall demand declined, and though the government ran a fiscal deficit and the Bank of Japan continued to cut interest rates, these had little impact on growth.

Fig 2: stock and land prices



1. The annual Nikkei stock price index, which averages the price of 225 individual stocks listed on the Tokyo Stock Exchange
2. Nationwide urban land price at end-March of each year for all uses (residential, commercial and industrial)

Source: OECD (2015)

Some have argued that the reason for the failure of interest rate cuts to restore growth was that the pace of cuts was too slow. Koo (2009) has argued persuasively that in these circumstances monetary policy becomes ineffective and requires fiscal stimulus by the government to compensate for the decline in private sector demand. When a debt-financed bubble bursts, asset prices collapse but liabilities remain, leaving private sector balance sheets severely eroded. The private sector responds by paying back debt or increasing savings to restore their balance sheets. They are not interested in borrowing at any interest rate. Lenders, whose balance sheets are also weak, are also not interested in lending to those with impaired balance sheets. Money supply shrinks because the private sector in aggregate draws down bank deposits to pay back debt, precipitating a ‘balance sheet recession’. In such circumstances the money multiplier is zero or negative at the margin and interest rate cuts and injections of liquidity by monetary authorities fail to expand money supply and aggregate

demand. This 'balance sheet recession' analysis, despite its considerable international impact (e.g. Eggertsson and Krugman, 2012) has been largely ignored by Japanese academic economists.

One might ask: did Koo just rediscover Keynes? Keynes would have said that there was temporarily a lack of "animal spirits" in the private sector, and this provided the need for government intervention. But "animal spirits" is a very general term. Why would it be temporary? Koo has given one possible explanation, thus going behind the rather general concept, and shown why, in this case, it must be temporary.

Policy Failures

At first glance, judging by the expansion of the fiscal deficit, the government appeared to have implemented a very large fiscal stimulus. But in fact, as Bayoumi and Collins (2000:14) pointed out, these stimulus measures were not large enough to impart a significant impact on aggregate demand: "Stimulus packages thus played a relatively minor role in the expansion of the budget deficit in the 1990s, which is largely accounted for by an unexplained fall in tax elasticity in the early 1990s, apparently related to the bursting of the bubble, and the impact of the slump of activity on tax revenues".

In any case, there is a consensus that policy failures contributed to constrain the recovery. The key initial policy failure was the delay in addressing extensive financial sector problems. The magnitude of these problems was hushed up and bank restructuring and necessary reforms were delayed (Hoshi and Kashyap, 2004). By late 1995 there were some signs of a weak recovery but the recovery was aborted in 1997 following increases in the consumption tax rate and social security contributions in April 1997 and the Asian financial crisis. The Japanese economy was back in recession in 1998.

In Japan this post-bubble balance sheet recession contributed directly to the next stage, namely the prolonged period - "Two Lost Decades" - when Japan experienced a persistent output gap and struggled to get back on a sustained growth path.

II

DEFICIENCY OF AGGREGATE DEMAND

What have been the primary causes of the economic stagnation during this Two-Decade period (lasting from, say, 1995 to 2015)? This issue has been widely discussed (and continues to be debated) both by Japanese and international economists, and a range of explanations have been put forward. Supply side explanations are based primarily on the slowdown of productivity growth, particularly in the services sector, and on demographic factors, in particular the rapid aging of the Japanese population) (Aloy & Gente, 2009, Fukao, 2013; Fukao et. al, 2014, Hayashi & Prescott, 2002, Tyers, 2012; Yoshino and Sakakibara, 2002; Yoshino and Taghizadeh-Hesary, 2015). But the majority view is that lack of aggregate demand has been the primary cause, a view supported by the observation that the post-bubble period was not one of continuous recession but comprised a series of recessions followed by (sometimes quite strong) recovery periods (Bayoumi, 2001; Hamada & Okada, 2009; Hoshi & Kashyap, 2004; Ito and Mishkin, 2006; Koo, 2009; Krugman, 1998; McKinnon & Ohno, 2001; Murota and Ono, 2012; Ono, 2010). In fact the Japanese recovery from 2002 to 2008 was the longest unbroken recovery of Japan's post-war history. While not as strong as pre-bubble Japanese growth, this performance, on a per capita basis, compared favourably with that of other comparable economies.

This occurred despite the fact that monetary and fiscal policies were not coordinated towards achieving a sustained recovery. Surprisingly monetary policy in particular was driven by fear of inflation even when deflationary pressures were clearly becoming the major problem (Ito,

2006). Several incipient recoveries were aborted by adverse policy shocks from monetary tightening or withdrawal of fiscal stimulus (Bernanke, 2000; Ito and Mishkin, 2006; Jinushi, Kuroki, and Miyao, 2000; Kuttner, Tokuo and Posen, 2015; Kuttner and Posen, 2001). Posen (2010: 6) points out that “Japan was not in structural decline during the 1990s, that the series of recessions were demand (and macroeconomic policy) driven and were not real business cycles, that therefore this was avoidable and policy could help matters”.

But if demand deficiency has been the major problem, the question arises: once the effects of the bubble collapse had worn off – as it appears to have done by about 1995 - what were the reasons for this lack of aggregate demand that has persisted to this date?

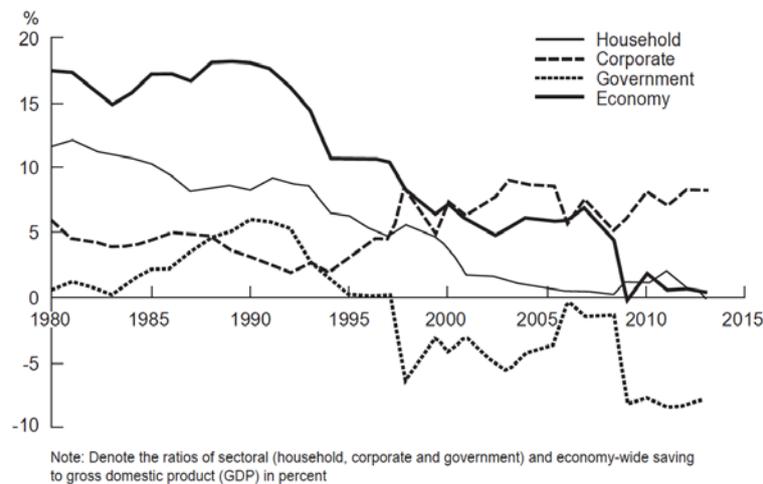
In the large literature on the topic several contributory factors have been presented. These include monetary and fiscal policy mistakes, currency appreciation, extreme liquidity preference (excessive demand for cash), demographic factors, and various interactions among these factors; their relative contributions to the long stagnation have been exhaustively discussed.

Corporate Savings and Decline in Private Investment

It has been conventional wisdom that Japanese households, traditionally high savers, may be to blame for the decline in aggregate demand. But in a series of papers analysing Japanese savings behaviour, Horioka (2006, 2008, 2010, forthcoming) has shown that as the population aged and the proportion of ‘retired aged’ households increased, Japan’s household savings propensity declined sharply from 1980 onwards in line with the life cycle model of savings. Indeed, Japan’s household saving rate, formerly one of the highest in the world, fell below 5% in 2001 and became negative in 2013. In other words, increasing household savings (i.e. falling household consumption) has not been the cause of declining aggregate demand.

But there has been an offsetting factor affecting aggregate private spending: private fixed investment has been falling. Corporates, traditionally net borrowers have become net lenders in Japan. If corporate savings were at ‘normal’ levels, the long secular decline in the household savings would have soon eliminated the Japanese private sector savings surplus. Instead, corporate investment fell quite sharply, and corporates - saving a large fraction of their profits, and keeping investment, wages and dividend distribution low- ended up as the principal contributors to Japanese national savings, and thus also to the shortage of aggregate demand (Fig. 3). Horioka (2006: 381) argues convincingly that “the stagnation of investment, especially private fixed investment was the primary culprit of the prolonged slowdown of the Japanese economy”.

Figure 3: Japan Savings



Source: Horioka (forthcoming)

Why did corporate investment fall?

There have been a number of explanations advanced for the fall in corporate investment. There had been corporate overinvestment during the Bubble Economy years and probably also during the earlier post-war boom years (Ando, Christelis and Miyagawa, 2003, Hayashi, 2006). However, that is inadequate to explain the fall in corporate investment (increase in savings) that has persisted from the mid-1990s through to recent times. Fukao et.al.2014) in a detailed examination of the Japanese investment and productivity trends, identify some structural issues that slowed down productivity growth, thus aggravating the trend towards lower investment returns. But they highlight that Japan has experienced a rising capital coefficient (capital stock/GDP) and slow TFP growth, and conclude that investment opportunities are limited and the rate of return on capital is very low, falling well below rates in other countries including the USA. However, they do not ask why Japanese capital did not flow out in response to these differentials in returns – an issue that we will return to later.

One reason for lack of productive investment opportunities in Japan may be because it is in the grip of 'Secular Stagnation' - a concept revived recently by Summers (2014, 2015) in the context of current US economic problems but originally advanced by Hansen (1939), and much discussed in the development economics literature during the post-war years (see, Higgins, 1959). Its possible relevance to Japan as well as other developed economies has been much discussed in recent times (Eichengreen, 2015; Krugman, 2014). Backhouse and Boianovsky (2015) provide a good discussion of the history and evolution of the concept.) It is argued that this situation might worsen in the future as the (slowing) growth of productivity fails to adequately offset the effects of a decline in the active labour force due to the shrinking and

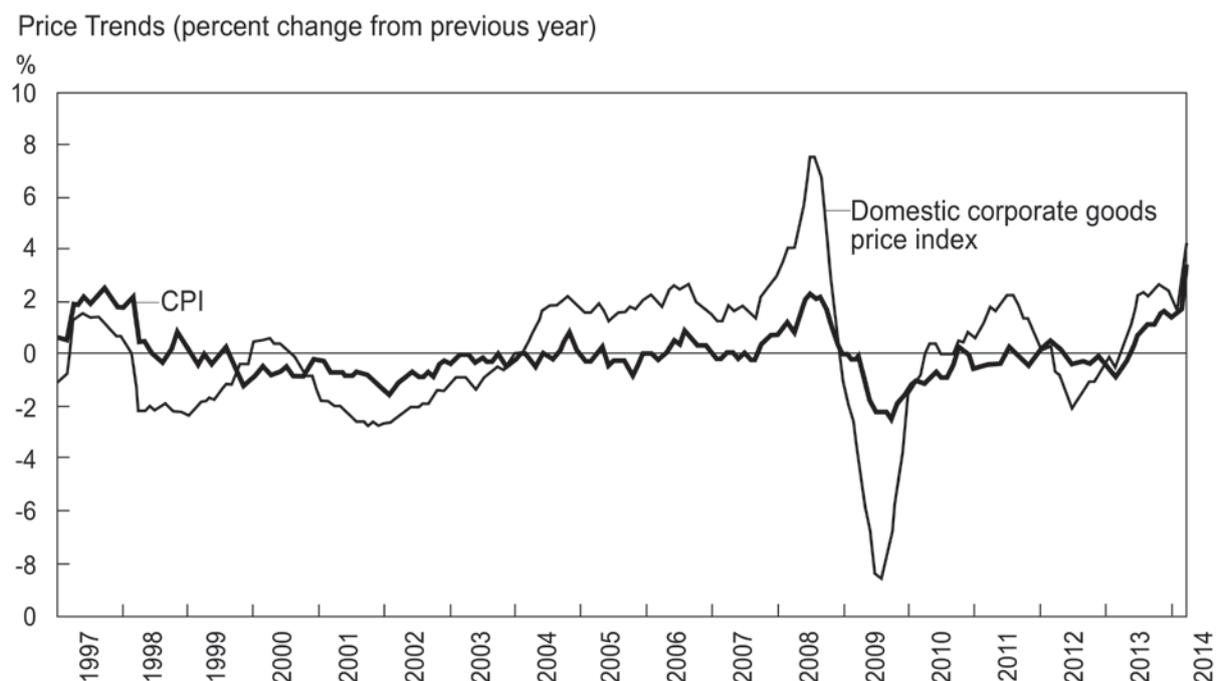
aging population. However, the conclusion that an aging population would necessarily lower returns to investment can be challenged. Arguably, new investment opportunities can arise to cater to the needs and preferences of an older community.

But if the domestic investment outlook in Japan is indeed restricted, Japanese firms will face strong incentives to move their investments out of Japan to take advantage of better outside opportunities. In fact, many Japanese corporates, particular the larger manufacturing conglomerates producing for global markets, have already done so and increased their overseas investments very substantially. This is shown by the large outward foreign direct investment (FDI) flows from Japan. But the scale of such outward FDI has not been sufficient to stop corporate savings held in Japan from increasing. Many corporates are incapable or unwilling to shift investments overseas and prefer to save and invest in low yielding Japanese Government Bonds (JGBs). Obviously most firms producing non-tradeables and other goods and services mainly targeting the home market will not locate production facilities overseas. In that sense such firms have a natural home-bias in investment. They are much more likely to be reluctant to invest if affected by long term pessimism about prospects for profitable investment opportunities in Japan (irrespective of whether such pessimism is rational or based on 'animal spirits').

Chronic Price Deflation

At this point something must be said about Japan's chronic *price* deflation, a phenomenon not seen in an advanced economy since the Great Depression of the 1930s. This is also a unique, remarkable, and much discussed feature of Japan's macroeconomic history. The average (up to 2009) rate of price decline was around 1% pa, and it has continued (Fig. 4).

Fig 4: Japanese Inflation



Source: Based on Statistics Bureau and Bank of Japan data

It must be emphasized that price deflation is not the same as a decline in aggregate demand. In principle, there can be a variety of reasons for price deflation. Fujita and Fujiwara (2014), for example, have presented a model where deflationary pressures arise because a

combination of an aging population and a high degree of human capital specificity (characteristic of the Japanese labour market) drives down real wages in the presence of nominal wage rigidities. But the steady but mild decline in the average price level can be most plausibly regarded as a by-product, or perhaps a symptom, of a decline in aggregate demand relative to potential supply, which would give rise to output gaps; as Murota and Ono (2012) show, 'excessive' preference for cash can result in price deflation and long run stagnation as a steady state phenomenon by absorbing purchasing power that would have otherwise gone into consumption.

If demand-deficiency is the cause of output gaps, the policy objective should be to minimise such output gaps by increasing aggregate demand. Nevertheless, chronic price deflation can have some undesirable consequences. First, deflationary expectations raise the real interest rate for a given nominal interest rate. Even when nominal interest rates are at or close to zero, real interest rates may continue to remain at much higher levels. Secondly, deflation raises the real value of any given nominal debt of the government and thus affects adversely Japan's government debt problem. Thirdly, it raises the real value of all debts owed to the financial sector, which leads to "debt deflation", a concept developed during the Great Depression, aggravating the difficulties of the financial sector.

III

MONETARY POLICY DURING THE LOST DECADES

We come now to a difficult, but crucial issue, that is, the role of monetary policy. As previously mentioned, there is a huge, sophisticated, and perhaps opinionated, literature on monetary policy in Japan. Much of it is critical of the monetary policy measures of the BOJ for being tentative and reactive instead of being aggressive and decisive. While the BOJ did reduce interest rates as the recession deepened (Fig. 5), there is a strong perception that it dragged its feet when it came to cutting rates and that this undermined the effectiveness of the cuts even when they were finally implemented.

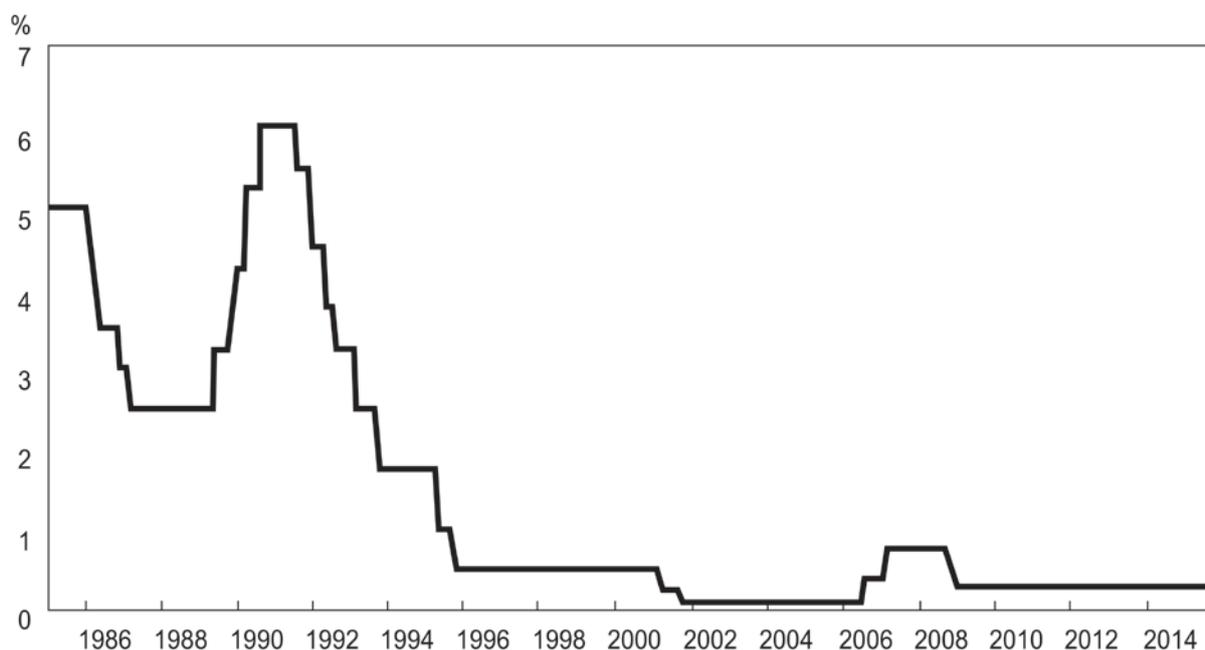
Normally central banks manage monetary policy with the objective of maintaining a balance between adequate aggregate demand and low and stable inflation. The main policy instrument is the short term policy interest rate. It can be argued that the BOJ was initially reluctant to cut rates all the way to zero because by doing so it would have exhausted the 'last card' that should be kept for a catastrophic situation. But the evidence – based on the discussions in the Monetary Policy Meetings of the Policy Board of the BOJ – suggests that this was not a major reason for its reluctance to cut rates sooner and faster. BOJ not only had a strongly entrenched anti-inflation stance but, according to many analysts such as Ito (2006), the majority of the members including the Governor did not believe that deflation was a particularly serious problem even a year after the crash of the bubble. They continued to believe that the danger that inflation may re-emerge was the greater danger, reflecting its strongly entrenched anti-inflation stance. As the Bank of Japan has traditionally enjoyed a high degree of independence, and this had been further strengthened after the revision of the Bank of Japan Law in 1997 (effective from 1998), there was little that the government could do to direct it to adopt a more aggressive stance in fighting deflation.

When the economy, already reeling from the negative impact of the increase in the consumption tax in April 1997, was hit by the Asian financial crisis in July and a banking crisis in November 1997, and went into recession, the BOJ responded by cutting the policy rate from its already quite low levels. It went on to cut the rate all the way down to zero, adopting the so-called zero interest rate policy (ZIRP) in early 1999.

It has been argued that BOJ finally did implement a “historically unprecedented accommodative monetary policy” because they cut the policy rate all the way down to zero (Okina, 1999:1). But the impact of the cuts was weakened because the BOJ abandoned the zero interest policy and in August 2000, at the first signs of recovery, raised rates. Just two months after the rate increase the economy was back in recession and deflation. It was only after it became clear that there was no likelihood of any inflation but a serious danger of a serious recession that the BOJ reversed policy in March 2001. The effectiveness of an interest rate cut depends on the degree to which economic agents expect the low rate to be sustained. In the Japanese case, neither the public pronouncements nor the actions of the BOJ inspired much confidence that the low interest rate would be a durable one.

When the central bank policy interest rate becomes zero, obviously no further stimulus can be provided through cuts to nominal rates; monetary policy is constrained by the zero lower bound. It should be noted here that even when the central bank policy rate is zero, not all nominal rates in an economy converge to zero. But as Mishkin (1996) pointed out, in principle monetary policy need not be completely ineffective even if nominal rates are zero. There are two ways through which spending may be stimulated by monetary policy to increase demand. The first is by encouraging inflationary expectations; the second is through the ‘unconventional’ monetary policies commonly described as Quantitative Easing (QE).

Fig 5: BOJ Discount Rate (% per annum)



Source: Bank of Japan Statistics

The first policy is based on the fact that if the nominal interest rate is zero, the real rate can be lowered (to negative values) if inflationary expectations are positive. This is the policy advocated by Krugman (1998: 141) as a way for Japan to escape what he diagnosed as the liquidity trap: “A liquidity trap may be defined as a situation in which conventional monetary policies have become impotent, because nominal interest rates are at or near zero: injecting monetary base into the economy has no effect, because base and bonds are viewed by the private sector as perfect substitutes”. There is no consensus on the underlying reasons for the

emergence of a liquidity trap. In contrast to the Krugman analysis based on a two period model with a 'cash in advance' constraint on consumption, Ono (1994, 2001), using a multi-period dynamic optimization model has shown how a long term (persistent) liquidity trap can emerge from 'insatiable' money demand. Crucially, deflationary expectations (i.e. expectations of price declines) will have the opposite effect, raising the real rate and adversely affecting demand. From about 1996, Japan experienced a long period of consistent (though moderate) price-deflation. This is likely to have dampened any inflationary expectations weakening any recovery of aggregate demand, even if did not generate and entrench deflationary expectations. Nishizaki, Sekine and Ueno (2014) found no evidence of deflationary expectations though there was evidence that long run inflationary expectations had come down.

If the real rate of interest is to decline, so as to stimulate the economy further, the central bank must create inflationary expectations sufficient to more than offset any prevailing deflationary expectations. But how can it do that – indeed why would it want to do this – when in earlier (pre-bubble) years it had prided itself on having kept Japan's inflation rate low over a long period? There is considerable evidence that the Bank of Japan not only did not take any serious steps to generate inflationary expectations, but had a questionable commitment to expansionary policies. Even when the economy was clearly struggling with deflationary pressures the BOJ resisted setting an explicit inflation target.

But, as pointed out above, many BOJ members, including the BOJ Governor, did not seem to be very concerned about the costs of deflation. In fact some of them even made public statements expressing positive views about the price falls. These were hardly conducive to generating inflationary expectations in the community (Ito, 2004). Unsurprisingly the BOJ was certainly not seen as being committed to stimulating inflation. Rogoff, in a comment on Krugman's 1998 paper, put it simply and bluntly: "The real obstacle is that the BOJ does not want to blemish its record of price stability" (Krugman, 1998: 197). Thus the inflationary expectations avenue to reducing real interest rates was effectively closed by the BOJ.

The second policy option in a zero policy rate situation is Quantitative Easing (QE). This is now widely known because major economies including the US and UK have implemented large scale QE programmes since the 2008 global financial crisis. But it is less well known that the first major QE programme was pioneered by the BOJ in March 2001 targeting bank reserves and was operational until 2006. The Bank of Japan was the pioneer in implementing QE, initiating its (quite large scale) QE operations in March 2001 and maintained it till 2006. It resumed QE following the global financial crisis and has been particularly aggressive in implementing it as part of the 'Abenomics' programme from late 2012.

While there are differences between the various QE programmes, the main difference between QE and conventional monetary policy is that in QE the central bank engages in direct asset purchases and bank lending. Instead of buying and selling short-term debt securities to influence short-term interest rates and the monetary base, it purchases long-term assets to reduce real, long-term interest rates, and sometimes lends directly to specific short-term credit markets. Asset purchases are expected to work through a number of channels to stimulate spending by increasing broad money holdings, push up asset prices and stimulate expenditure by lowering borrowing costs, increasing wealth and strengthening confidence.

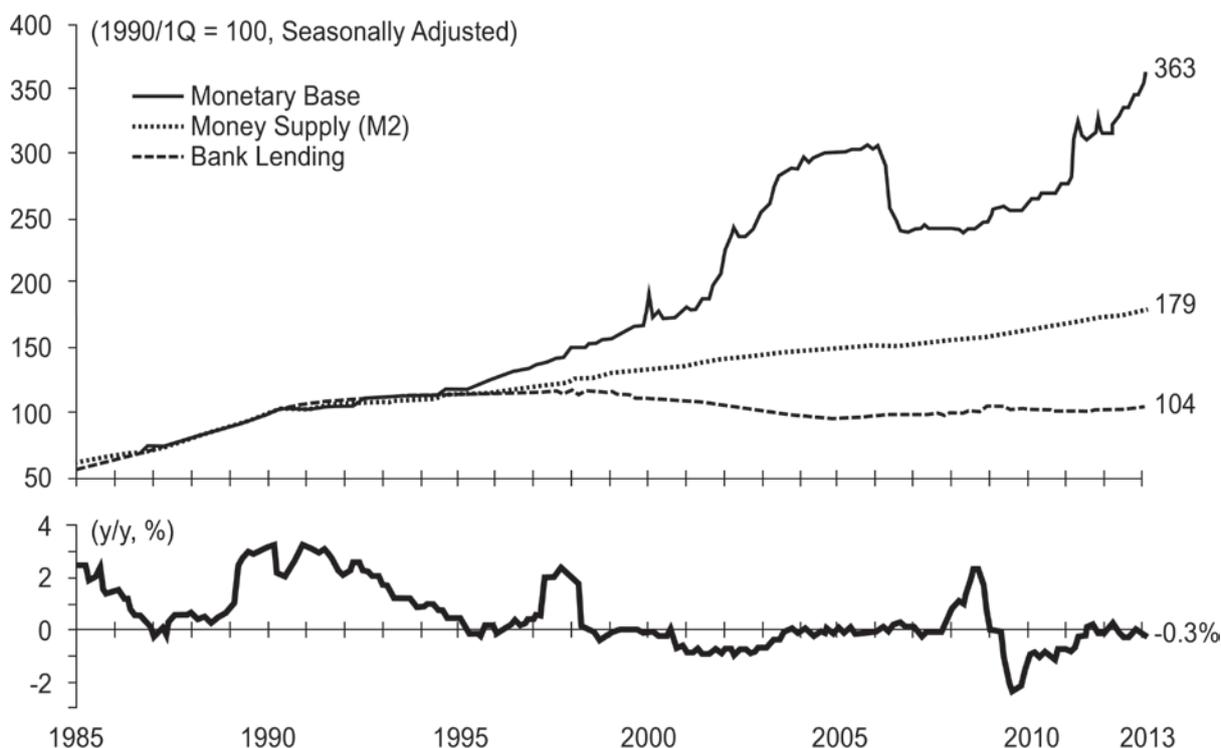
It has been argued that QE would be particularly effective in signalling to markets that the central bank has a commitment to long term monetary easing, thereby overcoming the so-called time-inconsistency problem: a central bank has the incentive to renege on its commitment and return to its normal policy when conditions improve. It is argued that with QE, the central bank faces disincentives to tighten policy; if a central bank has purchased a sizable quantity of long bonds and provided long term loans when long rates are low, it will see the value of its bond portfolio and loans decline if long rates rise (see Fawley and Neely, 2013;

Joyce, Miles, Scott and Vayanos, 2012; and Ueda, 2012 who provides a detailed discussion of the Japanese case).

How effective has been QE in stimulating spending and economic activity? There is a growing and already considerable body of empirical research on this issue that examines the experience of Japan which provides the longest period for study but also of the more recent post-GFC experience in US, EU and UK (e.g., Berkman, 2012; Engen, Laubach and Reifschneider, 2015; Fawley and Neely, 2013; Ueda, 2012). There has certainly been a positive impact on asset prices, particularly visible in a surge of stock price indices. But its effects on inflation and economic activity have been at best quite modest. One reason for this was that even the very large scale Japanese QE programme seems to have failed to send a credible signal that the BOJ had changed its previous attitude and become committed to long term monetary easing (Hausman and Weiland, 2015).

One proximate reason for this relative ineffectiveness is clear from Figure 6: though QE has expanded the money base, it has had only minimal effects on money supply, bank credit and prices. This is of course precisely what is expected in a 'liquidity trap economy'. The observed (weak) relationship between money supply and monetary base in Japan is again quite similar to what is found in US, UK and EU (see Figure 4 in Fawley and Neely, 2013). But contrary to much conventional wisdom it is by no means clear that monetary policy is a very effective instrument for stimulating corporate investment in any case; a recent detailed study of US corporate investment from 1952 to 2010 concludes that monetary policy measures such as interest rate changes have only a very weak influence on corporate investments (Kothari, Lewellen and Warner, 2015).

Figure 6: Money Base, Money Supply, Credit and Prices: 1985-2012



Note: Bank lending are seasonally adjusted by Nomura Research Institute

Source: Based on Koo (2012)

The long Japanese experience using both conventional and unconventional monetary policies to stimulate a recovery from stagnation can be summarised as follows; by itself monetary policy, including QE, appears to be effective only in one direction: a tightening of monetary policy can further contract the economy but expansionary monetary policy is unable to engineer a recovery. In addition, the stock market boom (a bubble?) that has been created by large scale QE programmes has a strong impact on inequality in Japan where only 7% of households invest in stock markets.

We now turn to an examination of fiscal policy, perhaps the most controversial macroeconomic policy issue in Japan.

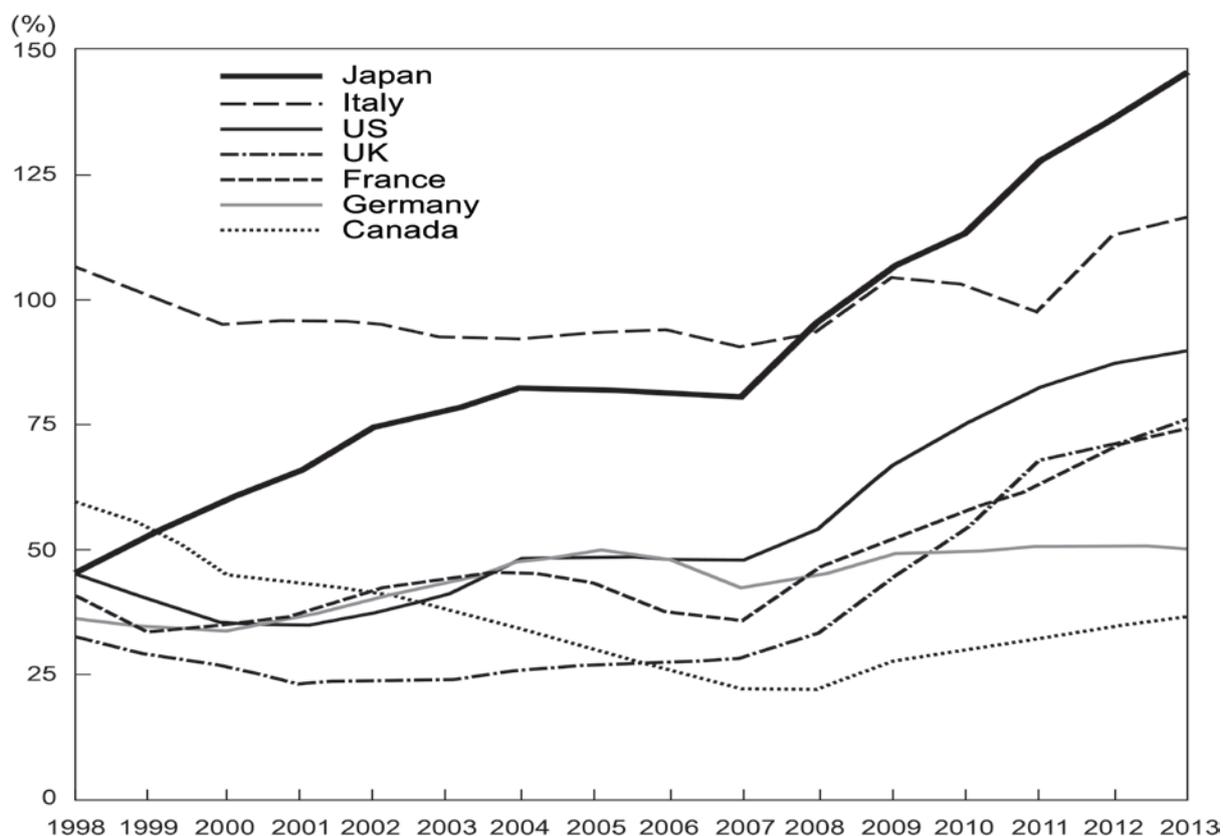
IV

THE FISCAL STIMULUS

It is well known that for over twenty years, from 1992, the Japanese government has run big budget deficits, so much so that it now has the largest government debt (both gross and net) relative to GDP of any comparable economy (Figure 7). In the immediate post-bubble years the deficit was an outcome of reduced revenues rather than due to deliberate expansionary policy. But subsequent deficits have been mainly the result of fiscal stimulus policies, meant to supplement monetary policy efforts to address deficient private sector aggregate demand.

Though the accumulated debt is obviously very large, it has been the result of the very long period over which fiscal stimulus measures have been maintained rather than because it has been consistently very large. The magnitude of incremental stimulus spending from year to year is difficult to estimate accurately because it is difficult to separate out the actual incremental expenditure because many expenditure items that were already budgeted for are often counted as part of the stimulus measures but the actual stimulus was relatively small in the early post-bubble years (Ito, 2011). As the IMF (2009: 65) also points out, "While deficits appeared large, the actual fiscal impulse was modest, with the cyclically adjusted deficit (the "structural" deficit) increasing only modestly between 1994 and 1998 (Figure 4.7). It was only after 1998 that fiscal policy became truly expansionary, with a more significant widening of the structural deficit".

Fig 7: Japanese Net Government Debt in a Comparative Perspective



Source: Ministry of Finance, Japan

The government has financed these deficits by selling JGBs (Japanese government bonds) to Japanese banks, paying a very modest rate of interest. Where do the funds come from? The answer is that they come primarily from the Japanese firms and households.

How effective has been this policy of borrowing from the private sector and spending by the government in stimulating aggregate demand? What has been the impact on productivity and output in the longer term?

There have been serious (and quite valid) issues raised about the (investment) efficiency of various government expenditure programmes, many of them involving infrastructure investments and public works, with Japan gaining a reputation for wasteful public expenditures - building 'roads and bridges to nowhere'. Here we focus first on the impact of fiscal spending on economic activity but we will return to the efficiency issue later because of its importance in the context of long term fiscal deficits.

Unsurprisingly, those who are ideologically opposed to Keynesian type discretionary policies have argued that temporary stimulus policies can never work because spending depends on permanent income, and temporary stimulus does not affect permanent income. When a stimulus is funded by government borrowings, as in Japan, government spending financed by debt will have no real economic effects because rational economic agents, recognising that the current government debt has to be paid off in the future with higher future taxes will set aside through savings any present increases in income to meet future tax obligations (the

'Ricardian effect'). Even in theory, the Ricardian effect holds only under some quite stringent and unrealistic conditions that we do not go into here. But, if such Ricardian effects were to be found anywhere, as Bayoumi (2001) pointed out, they should be found in Japan, given the very large and increasing government deficits and debt accumulation.

What is the empirical evidence? The evidence in Japan overwhelmingly rejects any significant Ricardian effects. Horioka's finding that Japanese savings behaviour is well explained by the life-cycle model is inconsistent with strong Ricardian effects (see also, Posen (1998), Kuttner and Posen (2002), and Posen (2010). Rather, the evidence suggests significant fiscal policy effectiveness during recessionary periods though the degree of effectiveness (the size of the fiscal multiplier) has varied depending on the fiscal policy instrument, the scale of the stimulus programme, and the accompanying monetary policy regime. Koo (2009, 2012) has argued strongly that, though the fiscal stimulus has failed to engineer an economic recovery, fiscal policies have helped to avoid sharper reductions in incomes and employment and a plunge into even deeper recession. Murota and Ono (2015) show that in an economy trapped in long run stagnation due to deficient aggregate demand government measures that create jobs can mitigate nominal wage and price deflation by raising the costs of holding money, and thereby stimulating consumption and output. It is indeed quite remarkable that after two decades of stagnation Japanese unemployment is only just above 3% - well below unemployment levels in comparable countries.

We now turn to a discussion of the issue that dominates policy debates in Japan: given the already massive government debt, can the Japanese government continue to sustain any further fiscal expansion?

Long term fiscal stimulus

Keynesian type fiscal stimulus policies have always been conceived as essentially short term programs that would 'jolt' an economy back into recovery and growth. Hence the issues of its long term applicability and sustainability have been largely ignored in the literature. But it is noteworthy that this possibility was raised by Krugman as far back as 1998 in relation to Japan. While recognising fiscal expansion as a 'classic remedy for a liquidity trap' he cautioned against placing much reliance on fiscal policy because of two factors, one political and one economic. The political factor he referred to was the likelihood that political support may be lacking for the scale of the fiscal package that would be required. The economic factor was "whether an adequate expansion was possible without an unacceptable impact on the government's long term fiscal position", warning that Japan may be facing a long term deficiency of demand requiring a very large fiscal injection such that the "eventual size of that (government) debt becomes an important concern" (Krugman, 1998: 178).

The central issue here is of course how the borrowed money is spent. Obviously, if the funds are invested efficiently then sustainability should not become an issue. But the debt becomes 'unsustainable' if current debt financed government spending does not yield future increases in income and tax revenue. In the absence of fiscal consolidation, it will at some point precipitate a 'bond market crisis' – a situation where investors are no longer prepared to purchase or hold government bonds.

The story of how a bond market crisis develops goes along the following lines. The mounting stock of public debt and the concerns that it will generate among lenders (in this case Japanese holders of Japanese government bonds (JGBs)) would produce a bond market crisis as lenders seek higher yields or refuse to lend any more. This would produce a spike in interest rates and enforced fiscal cuts, and plunge the economy into deep recession. Many economists and analysts, both Japanese and international, including the BOJ, have been warning ever more insistently of this scenario since the beginning of this century, though Japanese bond markets have been obstinately confounding these expectations and

predictions, giving rise to the 'Japanese Bond Yield Puzzle'. Japanese bond yields, instead of increasing have been on a seemingly unstoppable decline (Figure 8).

Fig 8: 10 Year Japanese Government Bond yields



Source: Ministry of Finance, Japan

Clearly the Japanese savers have been prepared to lend their funds to the Japanese government at a very low rate and, in recent times, at almost zero rates, enabling the Japanese government to finance fiscal deficits at very low cost. In addition, there have been increasing purchases in recent years by foreigners of Japanese government debt instruments, particularly short term securities in the aftermath of the GFC (Horioka, Nomoto and Terada-Hagiwara, 2014). This has occurred even though, as Hoshi and Ito (2012:3) in an excellent recent review point out, "Almost all recent papers on Japanese government debt reach the same conclusion: the current course of fiscal debt dynamics is not sustainable". In a more recent study, while pointing out that Japanese savings behaviour permits the government to have a higher fiscal default level than, say Greece, Matsuoka (2015) comes to the same conclusion that, "without change in fiscal policy, Japan will face a sovereign default crisis".

If that is the case, why do Japanese savers continue to lend their savings to the government for very low returns? There are a variety of reasons for the willingness of Japanese investors to continue lending to the Japanese government. As Hoshi and Ito (2012: 7) explain: "Banks find the JGBs attractive because the investment does not involve currency risk, which has been historically high for foreign bonds. The capital adequacy requirements (Basle I, II, and III) also make JGBs desirable for banks: JGBs (and sovereign debts of advanced countries) are assigned zero weights in calculating the risk-weighted assets, either by regulation or by

internal models, that determine the minimum amount of capital banks must hold. Pension funds and insurance companies seem also to be content with holding a large amount of long-term JGBs because their liabilities are also in the yen. The stagnation of the Japanese economy also makes JGBs attractive to banks. The returns from alternative investments such as corporate loans have been quite low. The sustained near-zero interest rate policy of the Bank of Japan was another reason for low rates of return in general. Finally, continued deflation means that the real yields of JGBs for Japanese consumers have been higher than the nominal yields”.

Home Bias in Investment

But none of these fully explains why low yields in Japan have not driven more funds into higher yielding overseas investment options. As clearly shown in Fukao et. al. (2014), returns to capital in Japan have been well below those in many other developed economies, and Chia (2009) has pointed out that Japanese investors would have obtained much higher yields if they had utilised global investment opportunities. Japan has no regulatory barriers to cross-border capital mobility; so in principle Japanese private savers have had the option of investing overseas, both as portfolio investments and, in the case of corporates, also as FDI. Indeed there have been large Japanese foreign investments in both categories. But the point is that the bulk of domestic savings has been – and continues to be – lent to the government (by purchases of JGBs) by the financial institutions into which most private savings are deposited. While exchange risk may have been a deterrent, the risk-adjusted yield differentials have been sufficiently high that arguably much larger capital outflows should have occurred.

This raises the issue of how strongly Japanese capital and financial markets are integrated with global markets. The key point to note is that absence of *regulatory* barriers to free capital mobility alone does not guarantee that domestic and international markets will be fully integrated. In the case of Japan, a variety of factors have created a very strong and well documented ‘home bias’ in investment partly attributable to an institutional setting that distorts incentives of funds managers towards investing at home. (See frequent references to Japan’s very strong home bias in numerous publications including, for example, IMF, 2009; OECD, 2009, 2015; Bekaert and Wang (2009) identify Japan as the ‘most biased’ developed country.

This has cost Japan dearly. Chia (2009) estimates that this home bias cost Japanese investors heavily: over the 15 years ending in July 2009, the conventional equity asset allocation rule followed by Japanese investors (60% allocation to the Japanese market representing only around 10% of global market) yielded only 14.6% compared with over 80-90% return (i.e. 5-6 times greater) - both calculated in Yen terms - if a less home biased asset allocation rule with weights more reflective of global market shares were followed. This is consistent with the finding by Rogoff and Tashiro (2015) that yields of Japanese overseas investments, particularly from equity investments, have been very attractive.

A bond market crisis

For a bond market crisis to happen, Japanese banks and others that buy JGBs must (suddenly) decide not to buy them. This can happen if they have to come to believe that the default risk is too high or a much higher yield is required to compensate for the risk. They have the choice then of holding currency, lending abroad or, perhaps, finance domestic private investment (purchase domestic equity and similar assets). Going by the continuing low 10-year JGB yields, Japanese savers do not seem to anticipate any such crisis soon, and have shrugged off repeated downgrades by international ratings agencies. Perhaps too many alarmist past predictions about imminent crisis may have made the Japanese quite sanguine about the chances of any such event or they may have high confidence that the government would implement necessary tax reforms and alter fiscal policy when necessary. However, as Horioka, Nomoto and Terada-Hagiwara (2014) point out, foreign buyers of JGBs, who are

mainly buyers of short-term bonds, may be more prepared to reduce their holdings in future thus increasing the chances of a crisis.

But the perception that further fiscal stimulus can result in an unsustainable increase in government debt biases policy analysts against fiscal stimulus. Arguably, this is a major reason why Japanese policy makers continue to prefer monetary policy as the instrument for expansionary policies rather than fiscal policy, even in the face of strong evidence that monetary policy is not only ineffective in the context of a liquidity trap but also raises the danger of asset bubbles, and has adverse effects on inequality.

In actual fact fiscal stimulus has been relatively mild, much milder than is commonly perceived – cyclically adjusted fiscal easing in 2013 was estimated to be only 0.4% of GDP and in 2014, it actually tightened by 1.3 % of GDP. Nevertheless, many who recognise that past BOJ policies contributed in no small measure to the long stagnation of the economy are either ambivalent about or supportive of measures to reduce the fiscal deficit because of concerns about the ballooning government debt.

This was why the majority of Japanese economists, including many who have argued the need for determined expansionary policies, supported the April 2014 increase of the Japanese consumption tax rate from 5% to 8% by the Abe government. This controversial increase in the consumption tax was implemented by the government amidst signs of a slowing economy, and despite its stated commitment to implementing expansionary policies until a 2% inflation target was achieved and deflation was clearly defeated. A planned increase from 8% to 10% in 2015 was subsequently postponed only because of popular opposition, and reportedly led to tensions between the government and the BOJ Governor.

In this context, it is important to note that the Japanese fiscal deficit ‘problem’ is fundamentally different from what might be called the ‘Latin American fiscal problem’ - where governments are locked into unsustainable levels of government spending that cannot be financed by higher taxes because of political constraints. Despite having a huge public debt and large fiscal deficit, the Japanese situation is also different from that of a country like Greece. When the deficit cannot be financed through domestic borrowing, or can be financed only at much higher cost, the outcome would be a crisis (an inflationary crisis if the debt is monetised) and a painful adjustment programme that cuts real expenditure. *But this is not the Japanese case.*

In the case of Japan, the fiscal deficit financed by JGBs is driven by Keynesian stimulus motives. It aims to reduce the output gap by increasing aggregate demand through higher government spending. This output gap has been created or increased because private saving (deposited in banks and other financial institutions) increased and/or private investment declined.

A gradual switch by Japanese savers away from JGBs would not necessarily be a disaster or “crisis” for the Japanese economy though there may be short term problems because of a surge in domestic interest rates. If the funds went to finance domestic investment, that will stimulate domestic demand. In this situation, if Japanese savers switch their lending from the government to domestic investors, while it will obviously make it harder for the Japanese government to run fiscal deficits, it will also make it unnecessary for the government to run a deficit to implement fiscal stimulus because this signifies that private sector investment demand has picked up.

If the funds were lent to foreigners in one form or another, the exchange rate would depreciate because of capital outflow and this depreciation will stimulate demand for exports and more generally for all tradeables. Again, automatically there is a compensation for reduced government spending and the need for government stimulus financing is reduced or even eliminated. If this occurs in an orderly manner it need not precipitate a crisis. The banking

system has large foreign assets whose value will go up in case of a yen depreciation – in contrast to the situation of many countries where financial institutions have large foreign currency denominated liabilities. Japan's huge foreign reserves also provide monetary authorities with a 'war chest' that can be used in the case of speculative attacks in the foreign exchange market.

Invest, not just spend

This brings us to what we believe is the central issue. If the private sector, for whatever reason, does not spend enough to stimulate the economy and eliminate the output gap, then the government should step in and 'do the spending on behalf of the private sector'.

Direct measures to shift Japan's excess corporate savings into wages and taxes to finance fiscal expansion are an option. In recent times, the government has been calling on corporates to increase wages but with little effect. Another option is for the government take steps to tax excess savings and spend the tax revenues - which, if done in a way that does not further reduce private consumption, would avoid increasing public debt while stimulating the economy. Murota and Ono (2015), for example, advocate such a policy based on Ono's (2001) analysis: in a liquidity trap economy higher taxes on private savings will have negligible effects on consumption; therefore fiscal expenditure financed by a tax to create jobs will have a net expansionary effect on aggregate demand.

But if taxes on the private sector are considered to adversely affect consumption and aggregate demand, as is generally assumed, then fiscal expansion will have to be financed by borrowing 'idle funds' from the private sector. Long term fiscal sustainability in that situation requires that such funds should be spent in a way that creates assets with long term value, to enable future repayment of present borrowings. This means that the government should invest the borrowed funds efficiently.

Such investment can be not only on national or local public works, but also in education, environment and 'green energy', housing, town planning and so on. If government spending financed by JGBs is targeted onto such productive investments, then it is effectively utilising the excess private savings of the people. It will not only generate an immediate stimulus to the economy and raise current GDP, but also expand the future productive and taxable capacity of the country, so that the debt can be repaid. In other words, if government spending is directed not to 'dig holes and close them up' (or 'build roads and bridges to nowhere'), but to channel excess private savings into creating productive assets that will enhance long term growth, then the debt sustainability problem disappears.

Japan is fortunate to have such excess savings, and should make good use of them.

Some of the investment opportunities may be in various public goods where the benefits cannot be captured privately. So it is up to the government to undertake such investments in any case. And, what better time to do this than when the cost of investment funds is so low and the gains are both immediate and long term. As previously mentioned, much public investment in Japan in the past was channelled into wasteful and unproductive public works and construction projects (see, for example, Brückner and Tuladhar, 2010 and Kingston, 2010). For opponents of fiscal stimulus, including the BOJ, such wasteful government spending has been proof that governments cannot be trusted to implement good economic policies. But the lesson is surely not that government spending must be discarded as a policy instrument, but that public spending should also be subject to norms of good corporate governance and the exercise of proper scrutiny.

But profitable investment options may not be only in public goods. Even if such opportunities are limited within Japan, there may be opportunities overseas. Then the issue is: if there are profitable foreign investment options, why doesn't the corporate sector invest in them? Of course Japan has undertaken very substantial foreign investments and some Japanese firms are among the top global multinational enterprises. In fact, Japan has been the world's largest net creditor country for more than two decades and, with Japanese foreign investments providing very healthy yields, Japan's net investment income from abroad now exceeds 3% of its GDP (Rogoff and Tashiro, 2015).

But the point is that there continues to be excess savings that arguably can be profitably invested abroad. What constrains such savings from being invested abroad? Though there are no obvious regulatory barriers, we have already pointed to the extremely strong, institutionally entrenched 'home bias' of Japanese investors as a major factor. Arguably, if aggressive measures had been taken to reduce home bias and more actively encourage profitable foreign investments, the Japanese economic stagnation may have been milder and shorter.

Overcoming 'Home Bias': A Sovereign Wealth Fund

The question may be asked: how can overseas investments, whether as portfolio investments or FDI, substitute for direct fiscal policy measures and deliver a stimulus to the domestic economy?

Not only have yields in foreign equity investments provided very attractive returns and a boost to Japanese national income, even Japanese outward FDI in manufacturing and services sector have contributed to increasing national income and domestic employment through a variety of channels (Yamashita and Fukao, 2010; Sakura and Kondo, 2014). But we believe that a primary conduit for delivering a stimulus to aggregate demand could be an exchange rate effect: it is likely that the outflow of investment funds will cause an exchange rate depreciation that can stimulate the Japanese economy by raising demand for tradeables.

In theory of course this need not necessarily happen: if foreign exchange markets are frictionless and economic agents have perfect foresight, then a current investment outflow that subsequently yields a higher valued inflow will produce an immediate appreciation of the exchange rate. However, empirical evidence on actual exchange rate behaviour suggests that the more likely real world scenario is that, by and large, the exchange rate will follow the time path of investment flows: the initial outflow of international investment producing a depreciation and the subsequent return flow of interest and dividends producing an appreciation. What matters is not the specific form of foreign investments (FDI or portfolio etc.) but the direction of flows, though the specific form of investment will affect the time profile of returns and the employment impacts.

The potential of the exchange rate depreciation channel as a pathway for Japan to get out of the liquidity trap has been canvassed before by Bernanke (2000) as well as many others (Hamada and Okada, 2009; McCallum, 2003; Meltzer, 1999). Indeed, McKinnon and Ohno (2001) had pointed to an overvalued Japanese exchange rate as a major cause of Japanese stagnation arguing forcefully the need for a downward exchange rate adjustment. But the mechanism for achieving an exchange rate depreciation was almost invariably framed in the form of direct market interventions by the BOJ. This avenue for adjustment was also generally rejected primarily because of expected hostile reactions from trading partners, in particular the US, on grounds of currency manipulation. Arguably, an exchange rate depreciation caused by outward foreign investment, particularly if some of the funds flow to countries such as India that are net capital importers with huge infrastructure related financing needs and a young population (the reverse of the demographic situation of Japan), is less likely to generate accusations of currency manipulation.

The case for government action to remove all regulatory and institutional barriers that constrain foreign investment by excessive home bias is clear. But if the problem of excess savings continues even after the government has done all it can to remove all such direct or indirect barriers to investing abroad, how can a government implement an effective investment programme, without sliding into the trap of ‘roads and bridges to nowhere’?

We suggest that in such a situation policy makers should consider direct government action to efficiently invest excess savings. This may be done by establishing a professionally managed and politically independent “Sovereign Wealth Fund” (SWF) unconstrained by excessive home bias. Such a fund may be able to not only invest overseas directly but also encourage and assist Japanese firms to expand FDI. If properly constituted and mandated, such a fund can use existing private or quasi-state firms as agents or advisers given the substantial extent of expertise available in the financial area. After all, the example of the BOJ shows that Japan is capable of establishing strong politically independent institutions with the necessary legal and technical safeguards.

Sound fiscal stimulus policy has to satisfy two requirements. Firstly, it must actually stimulate the economy in the short run by increasing demand for home-produced goods and services. Secondly, it must avoid or minimise the sustainability problem by adequate creation of productive assets. The first requirement is met by the SWF through the exchange rate channel. The second is met by the build-up of productive foreign assets.

The basic rationale for using an instrument such as a SWF to undertake overseas investments flows from the fact that excessive home bias is a form of market failure that results in a sub-optimal level of foreign investment. This is overcome by the government investing overseas through a SWF, thus replacing the private sector in this respect. It is the same Keynesian argument that applies when a private sector demand deficiency is counter-acted through a fiscal expansion.

The decline or inadequacy of private corporate investment underlying the Two Lost Decades has been a feature of the story we have told. Perhaps this will come to an end. But it seems a reasonable possibility that, with Japan’s population growth so low, the incentive to invest domestically may also stay low, even though a population that expects to continue ageing may well increase its current rate of saving to finance future consumption. Thus there will be a need to send more savings abroad. There are other countries where the demographic situation is the reverse – one example being India – and which may welcome the import of capital and technical know-how. There would be mutual gains. The gains to Japan would take the form of remittance of the returns of such investment in the form of interest and dividends.

The SWF can be financed through the sale of JGBs to Japanese savers and financial institutions such as banks that intermediate household and corporate savings. The JGBs embody the Government of Japan’s liabilities to Japan’s savers, while the investments that the SWF would make would be the necessary assets to back up the liabilities. The dividends and interest yielded by such investments will enable the eventual repayment of debt to the owners of JGBs. In the case of investments in domestic public goods, the community will inherit real assets (e.g. infrastructure) and other assets (e.g. knowledge, skills). In other words these assets will back the liabilities that these JGBs represent.

These would help the Japanese government finance the eventual interest payments and maturing of JGBs.

If profitable investment options expand in Japan and private firms increase investments accordingly, the scope of such a fund can be reduced, and at the limit, it can be closed. It is also possible that developments like partial privatization of Japan Post – the Japanese postal

service institution which is also the country's biggest bank by deposits and largest insurer by assets, estimated to hold around a quarter of the nation's household financial assets – may reduce the need for a SWF provided it leads to a lowering of home bias in investment. The privatization is expected to lead to more aggressive, less risk averse, investment strategies and greater investments in the Japanese equity market. While this may in fact serve to further inflate the current stock market boom, whether it will also lower the home bias in investment is an open question.

Of course none of these measures, including an SWF, can fully offset the negative demand impacts from a distressed global economy (as at present) or the problems arising from the inefficient past investments and the legacy of accumulated stock of debt. But a well managed SWF can ensure that, at least in the future, funds borrowed from the public are invested efficiently and new liabilities would be matched by adequate assets, so that a debt financed fiscal stimulus policy becomes a sustainable policy option.

V

CONCLUSION

The somewhat complex story we have told in this recent macroeconomic history of Japan can be summarised as follows.

It all started with the collapse of the bubble economy and the crisis in the financial sector and a series of policy mistakes that hampered recovery. The stagnation continued primarily because of a sharp decline in private corporate fixed investment to the point where the corporate sector became a net saver.

A variety of explanations have been offered for this decline. These include: (a) previous overinvestment – investment fell as the inevitable consequence of earlier excessive investment during the period of the bubble or the long post-war period of economic recovery; (b) a demographic explanation – that the actual and expected decline in the size of the working age population lowered expected returns from investment; and (c) slowdown of productivity growth. It is likely that the policy mistakes and failures that hindered economic recovery eroded confidence about the ability of Japan to get back to a growth trajectory and entrenched investor pessimism regarding its long term prospects. In addition, Koo's balance sheet recession explanation points to another important factor: firms affected by high levels of debt (together with financial institutions and households) would have focused on rebuilding their balance sheets, particularly in the early post-crash period. In any case, crucially the decline in private corporate fixed investment led to a reduction of aggregate demand.

Traditionally this would have been dealt with by monetary policy – and the BOJ did take steps to stimulate demand by reducing nominal interest rates. But this did not work, or was not enough, to rejuvenate investment and restore economic growth. Once nominal interest rates had reached zero, further reductions in *real* rates required inflationary expectations. But this did not occur. The BOJ's reputation was based on its commitment to fighting inflation. Neither its words nor its deeds inspired confidence that it was seriously committed to sustained monetary easing to get the economy out of deflation, and its anti-inflation reputation most likely weakened the impact of subsequent quantitative easing measures.

Because of this failure of monetary policy to restore growth, Japanese governments had to choose between having a prolonged recession or implementing a fiscal stimulus. They chose the latter, or perhaps drifted into the latter. As it turned out, they were forced to implement

fiscal stimulus for a much longer period than anybody anticipated. But the lack of coordination between monetary and fiscal policies, the lack of credibility regarding BOJ's commitment to monetary easing, and the stop-go nature of fiscal stimulus weakened overall fiscal policy effectiveness and failed to end stagnation. Nevertheless it surely helped to avoid a deeper recession and higher unemployment and explains why Japan has managed to maintain a lower rate of unemployment than most comparable countries.

But prolonged fiscal stimulus involving substantial public debt accumulation has created its own problems. This is the sustainability problem, which now dominates Japanese policy debates. Governments should have implemented fiscal policy measures that would build up assets with adequate yields to balance the growing liabilities in the form of JGBs sold to savers. In retrospect the failure to do that was clearly a mistake, even though the fact that its liabilities are mostly to its own people has helped.

Recent economic trends in Japan have not been encouraging. Economic recovery has not occurred despite the large QE programme and the significant nominal (and real) exchange rate depreciation. Global market conditions, including the slowdown in China have played a role. But Hausman and Wieland (2015:18) express a widely shared view that "Abenomics, as is, is unlikely to substantially raise long-run output in Japan".

At the heart of the Japanese story, however, is the central question: why did markets fail to find a way out of stagnation? If falling corporate investment has been the core factor underpinning the continuing stagnation, and this fall was driven by pessimism (for whatever reason) about the long term prospects for the Japanese economy, then the 'normal' market response would have been an outflow of Japanese funds to exploit superior investment options. After all, Japan has had no regulatory barriers to cross-border capital mobility in this period and, at least until the GFC in 2008, global investment conditions were buoyant and attractive and would have yielded much higher returns. Such an outflow of funds would have not only boosted Japan's overall longer term income but also provided a healthy stimulus to the economy immediately through its impact on exchange rate and thereby on the tradeables sector.

But this did not happen. Instead, private savings went, and have continued to go, into JGBs yielding progressively lower returns. Thus extreme 'home bias' effectively blocked a possible recovery path.

Looking to the future, are two fundamental issues facing Japan. First, will aggregate demand recover through the recovery of private investment and/or through further declines in private savings? Second, if continuing imbalances persist and fiscal stimulus needs to continue, will the country be able to avoid a potentially highly disruptive sudden and severe bond market crisis?

It is difficult to infer how the macroeconomic balances will evolve as there are factors working in different directions (Horioka, forthcoming). Household savings have continued to fall and are projected to fall further with an aging population, though higher savings in the face of uncertainty about future prospects cannot be ruled out. While corporates may stop accumulating savings once enough savings have been built up to meet unexpected future contingencies, corporates may continue to reduce investments as population aging depresses future profit prospects.

But if imbalances persist and government borrowings continue, then at some point a crisis of confidence will precipitate a switch away from government bonds. The outcome will be a hike in domestic interest rates. When this occurs there will be capital flight as at least some investors will overcome the home bias constraint and there will be pressures for a sharp exchange rate depreciation. While Japan's large foreign reserves will deter speculative attacks

and allow the BOJ some scope to avoid an immediate currency crisis, it will prove impossible to avoid a yen depreciation and higher interest rates if a fundamental shift by Japanese savers to alternative assets occurs. Such a crisis will in turn deal a further blow to prospects of an economic recovery.

The Japanese experience highlights the fact that there is always a price to be paid for policy mistakes and failures. Japan is now facing an external environment that is very different to that of the 1990s. The global economy is in a depressed state making an export led growth strategy more difficult. There is evidence that export responses to currency depreciations have become weaker with the spread of international production networks and there are heightened international concerns over competitive currency depreciations ('currency wars') in the context of sluggish global demand conditions. But exchange rate adjustments that result from outward investments may be less controversial.

As more and more countries face the issue of how to implement stimulus policies over much longer periods than traditionally envisaged, the lessons of the Japanese experience also become increasingly more relevant internationally. If for whatever reason the market fails to eliminate the deficit in aggregate demand, it is clear that long term sustainable stimulus measures must be undertaken to address the market failure. A fundamental lesson from the Japanese experience is that any long term fiscal stimulus measures should channel funds into productive investments, including foreign investments, to avoid a public debt sustainability problem. This may need an institutional mechanism such as a SWF tasked with undertaking such foreign investments if private foreign investment remains sub-optimal.



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