

**Mont Pelerin Society  
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New York City**

**How to Escape from Balance Sheet  
Recessions – Lessons from Japan**

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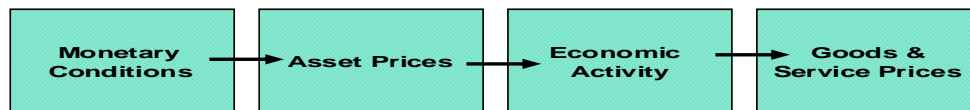
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## Two Types of Economic Downturn

### 1. CONVENTIONAL or STANDARD

- Inflation->interest rate hikes-> economic slowdown
- >decline in inflation->interest rates lowered -> economic recovery
- This model emphasises FLOWS (not ASSETS & LIABILITIES), and implies that banks restrict credit, but assumes there is a continuing demand to borrow by private sector.



The conventional type of economic downturn follows a standard template. Most recessions in the post World War 2 era in the US and the UK have been comparatively mild and fairly quickly reversed because the authorities only needed to deal with one problem – namely, inflation.

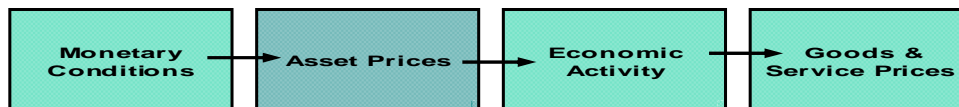
The typical sequence of events is set out in the slide above.

An unspoken assumption in this process is that after inflation has declined to an acceptable level and the central bank cuts interest rates, the demand for credit picks up autonomously in response to lower rates. This leads to an expansion of bank balance sheets and the resumption of faster money growth. In short, this mechanism depends the willingness of the private sector (households and non-financial companies) to resume borrowing. The assumption is that balance sheets are not impaired.

## Two Types of Economic Downturn

### 2. UNCONVENTIONAL or BALANCE SHEET RECESSION (=Fisher-type, after Irving Fisher, US economist)

- Credit bubble -> asset bubble -> asset price collapse -> debt deflation or credit shrinkage -> economic downturn and deflation
- This model emphasises **BALANCE SHEETS**, and implies that although banks may have funds to lend, households or firms may NOT want to borrow, preferring to repair their balance sheets before spending again.



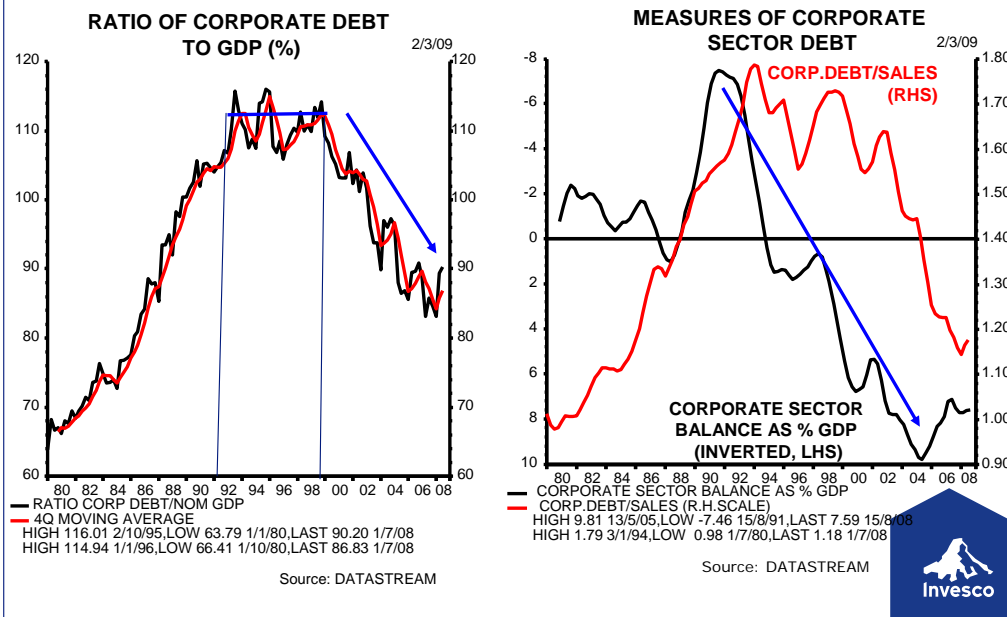
The unconventional (and rarer) type of economic downturn is much deeper and longer, and not so easily reversed. The reason is that in this type of downturn the authorities have usually had to deal with two problems – over-indebted private sector balance sheets and either inflation (or sometimes deflation).

Again the typical sequence of events is set out in the slide above.

Inflation may or may not have been a significant feature of these episodes, but the key difference is that corporate, financial or household balance sheets will have been swollen by large quantities of debt. Typically the debt will have been used to buy assets – equities, commercial or residential property, or commodities – and the fall in asset prices will create widespread negative equity for firms and individuals, triggering an economic downturn. The main focus of indebted firms or households in this situation is de-leveraging or debt repayment.

Since private sector borrowing does not revive no matter how far interest rates are reduced, an economic recovery is dependent on (1) the progress of balance sheet repair, and (2) the measures taken by the central bank and government to increase the money supply.

## Japan's Balance Sheet Recession – Corporate Sector Debt Reduction from 1998



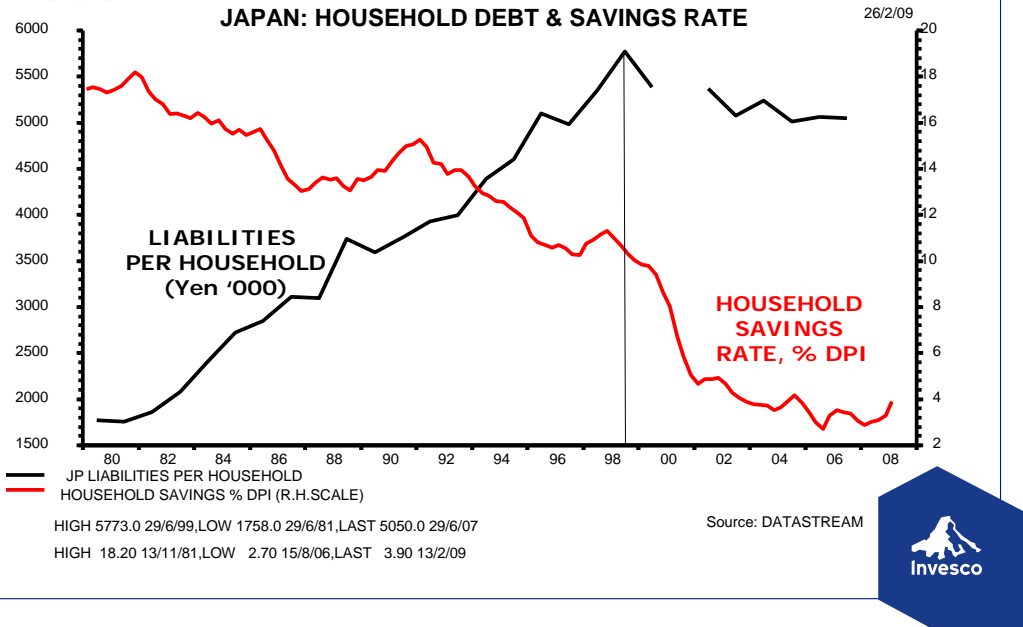
As an illustration of a balance sheet recession consider the case of Japan since the asset bubble of the late 1980s. In this episode inflation was moderate (the CPI peaked at 3.9% yoy in January 1991), and the BOJ raised rates from 2.5% in May 1989 to 6% by July 1991. The major problem was corporate balance sheets.

The left panel above shows the surge in corporate debt from below 70% of GDP in 1980 to over 100% by 1989 when the equity market peaked. In the early years of the downturn debt levels remained broadly unchanged relative to GDP, but following the banking and insurance crisis of 1997-98, companies began to de-leverage their balance sheets aggressively. The fact that by this time the BOJ had lowered its interest rates to zero made no difference – companies just did not want to borrow.

The right hand panel above illustrates the same phenomenon using the corporate sector's financial deficit or surplus (inverted) from the flow of funds (i.e. the difference between corporate saving and investment). In the first case companies moved from a deficit of almost 8% of GDP in the bubble years to a surplus of 9.8% by 2005 as firms invested less, repaid loans, and built up cash reserves. Similarly the red line shows the ratio of corporate debt to sales.

GIPI, GIPN

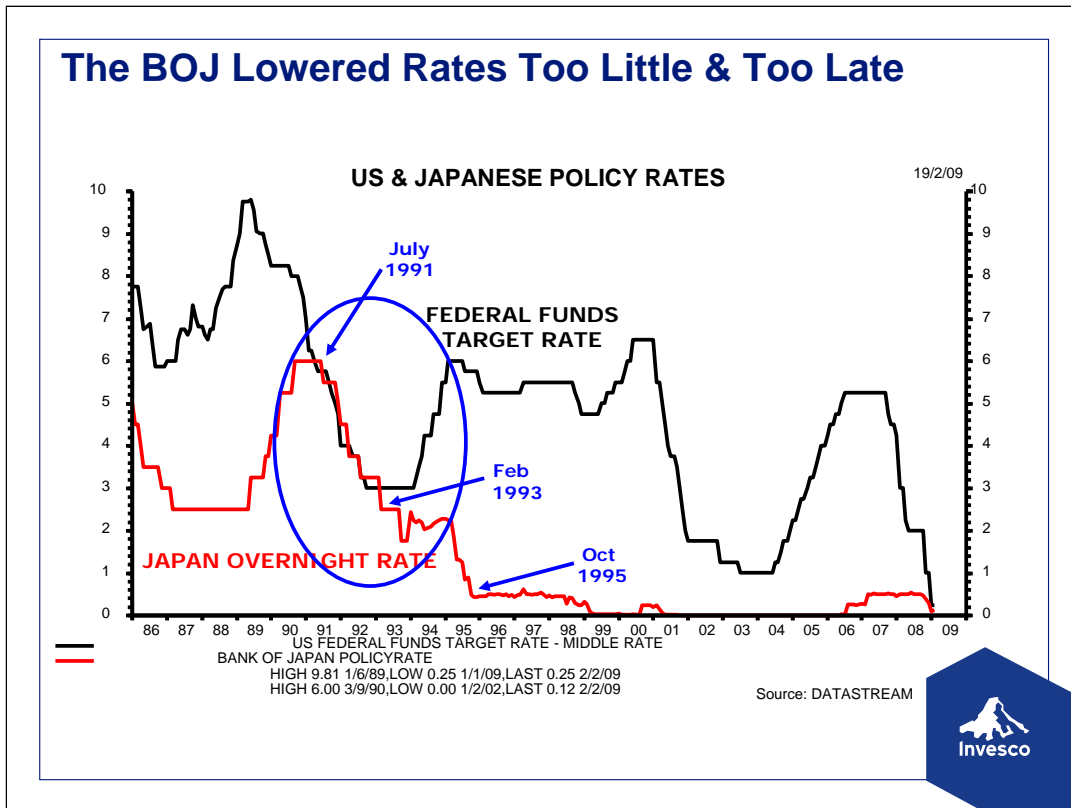
## Japan's Balance Sheet Recession - Households Reducing Debt & Savings from 1999



The response of Japanese households to the prolonged economic downturn was similar, but more delayed. Liabilities or debt per household continued to grow in absolute terms until 1999, but then began to decline consistently until June 2007 (the latest data available from the annual household survey).

Simultaneously there was a steep decline in the household savings ratio after 1999. This could suggest that households were more willing to reduce their savings and possibly sell down financial assets rather than to their levels of debt. Demographic factors such as the aging of the population are consistent with a reluctance to add to debt and the need to reduce savings.

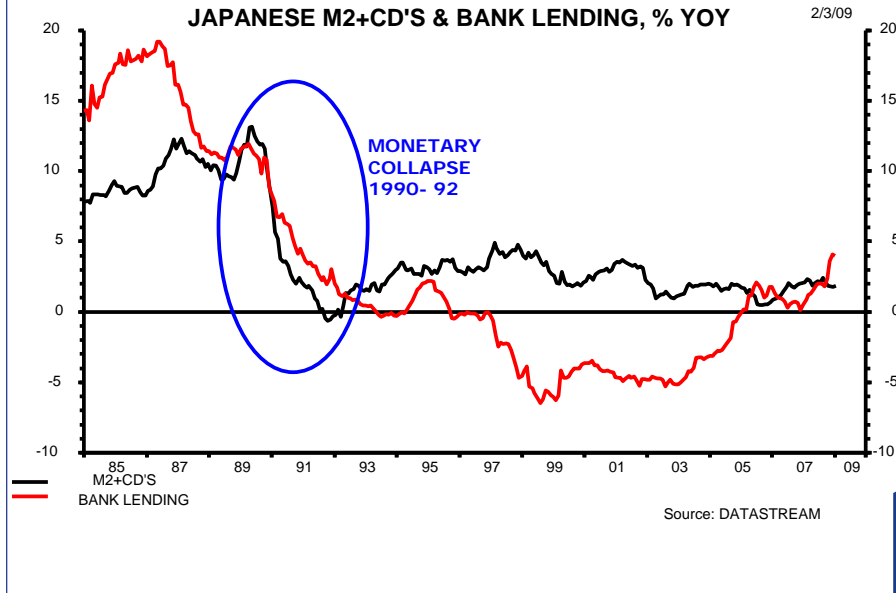
GIPQ



To summarize the argument so far, the behaviour of Japanese companies and households in the aftermath of the bursting of the bubble of the late 1980s was initially to slow debt accumulation, and then to try to de-leverage – even after interest rates had been reduced to very low levels. No matter how low rates fell, neither firms nor households wanted to borrow enough from the banks to enable the money supply to accelerate enough to generate a domestic recovery. The result, shown in the chart below, was that Japan’s monetary growth rate plunged in the early 1990s and has never recovered. The modest recovery in the Japanese economy after 2000 was almost entirely export-led.

GIPJ

## Keeping Rates Too High Caused Monetary Collapse

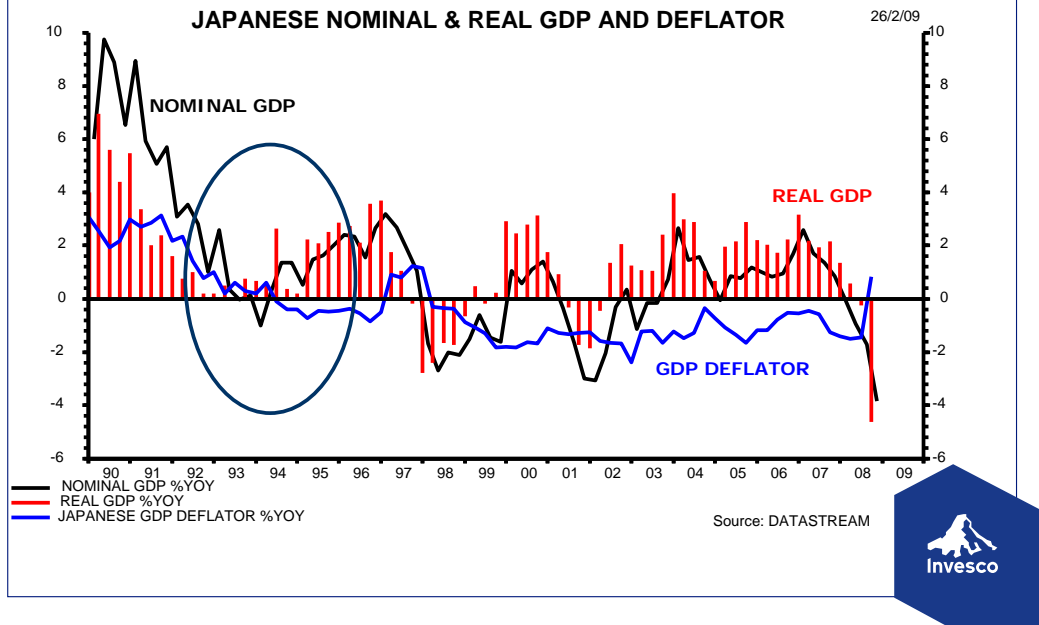


As is clear from the chart above, bank lending growth plunged after the stock market peaked out, falling to zero growth rates in 1994-97, and then recording absolute declines from 1998 onwards. If firms and households were de-leveraging and reducing their borrowings from banks after 1998, how was it that monetary growth did not contract in absolute terms?

The answer is that lending to firms and households was partially replaced by lending to the Japanese government, primarily through bank purchases of JGBs and other government securities (see below.)

GIPW

## Consequently, Nominal & Real GDP, and Prices Fell, and Deflation Persisted



Part of the background to the de-leveraging by Japanese firms and households was the persistence of deflation after 1994. In the chart above this is illustrated by the repeated declines in nominal GDP, and the continuous decline in the GDP deflator (the only exceptions being the 1997 increase in the consumption tax which was directly reflected in all final goods and service prices, and the very recent jump in prices due to yen depreciation).

Since debt is fixed in nominal terms, falling prices increase the real burden of debt, exacerbating the difficulty of paying off outstanding obligations. The failure by the Japanese authorities to end deflation has almost certainly extended the de-leveraging process.

G564

## Japanese Supplementary Budgets, 1992-2002

• Aug 1992	Y10.7tr	2.2%	• Nov 1998	Y23.9tr	4.6%
• April 1993	Y13.2tr	2.7%	• Nov 1999	Y18.0tr	3.5%
• Sept 1993	Y6.2tr	1.3%	• Sept 2000	Y5.0tr	0.9%
• Feb 1994	Y15.3tr	3.1%	• Nov 2002	Y6.2tr	1.2%
• April 1995	Y4.6tr	0.9%			
• Sept 1995	Y12.8tr	2.6%			
• April 1998	Y16.7tr	3.2%			

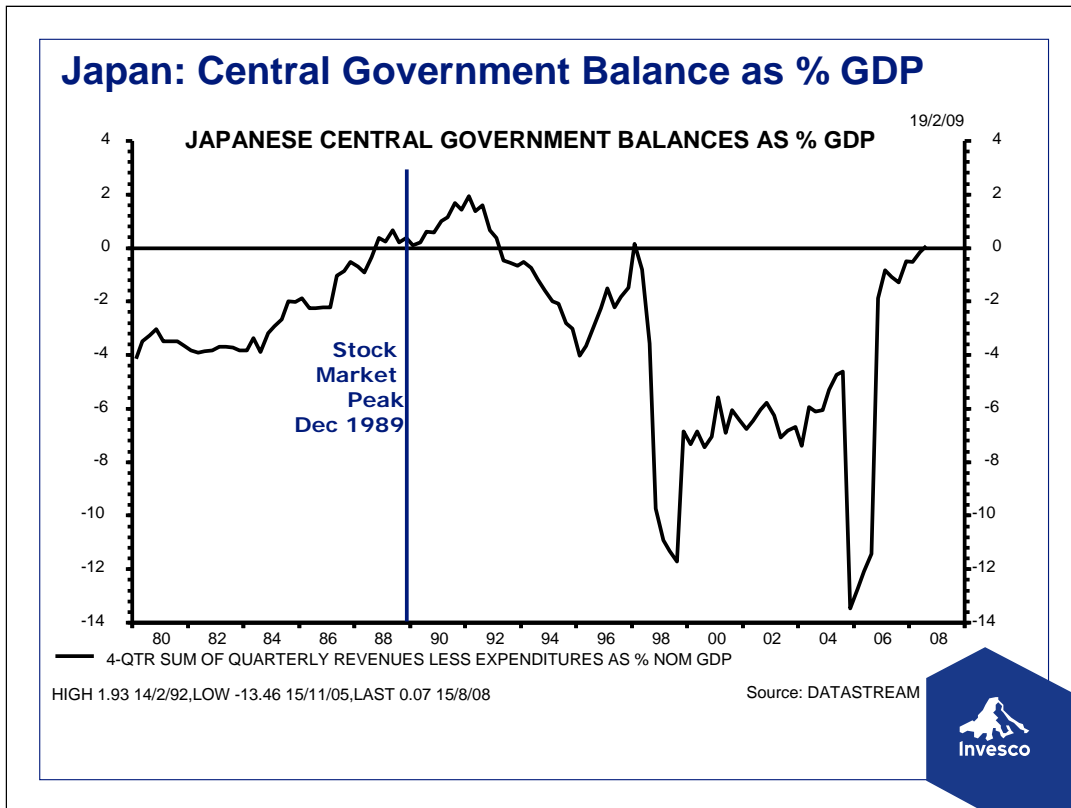
% of GDP in Calendar Year



If lending to the private sector was continuously falling through much of the 1990s and 2000s, how was it that the Japanese money supply continued to grow?

The answer is that the Japanese government ran very substantial budget deficits, helping to support overall spending, and financed a significant proportion of this spending by borrowing from the banking system.

The table above shows the supplementary spending programmes of the Japanese authorities from 1992 to 2002 as percentages of GDP. These programmes were in addition to the normal central government budgeting process that were announced towards the end of the calendar year and progressed through the Diet (Japanese parliament) between January and March, ready for the start of the new fiscal year beginning in April.

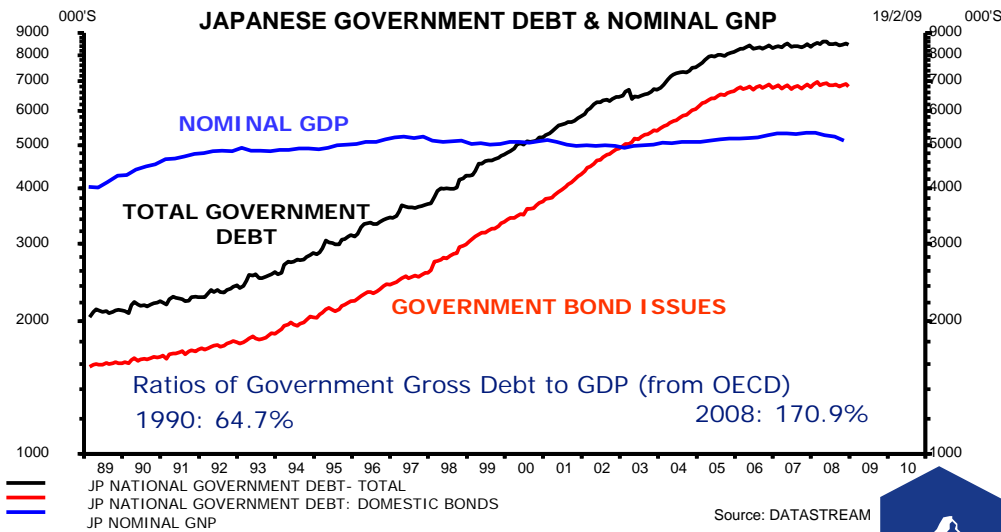


The outcomes in terms of budget balance as a percentage of nominal GDP is shown in the chart above.

Notice how the budget remained in surplus for three years after the peaking of the equity market, thanks in part to the later peaking out of the real estate market, and the continuation of capital gains tax flows as well as transaction taxes (stamp duties etc). However, once the asset markets and the economy had irreversibly turned down from 1993/94, budget deficits became the norm, expanding in some years to over 10% of GDP.

G5G6

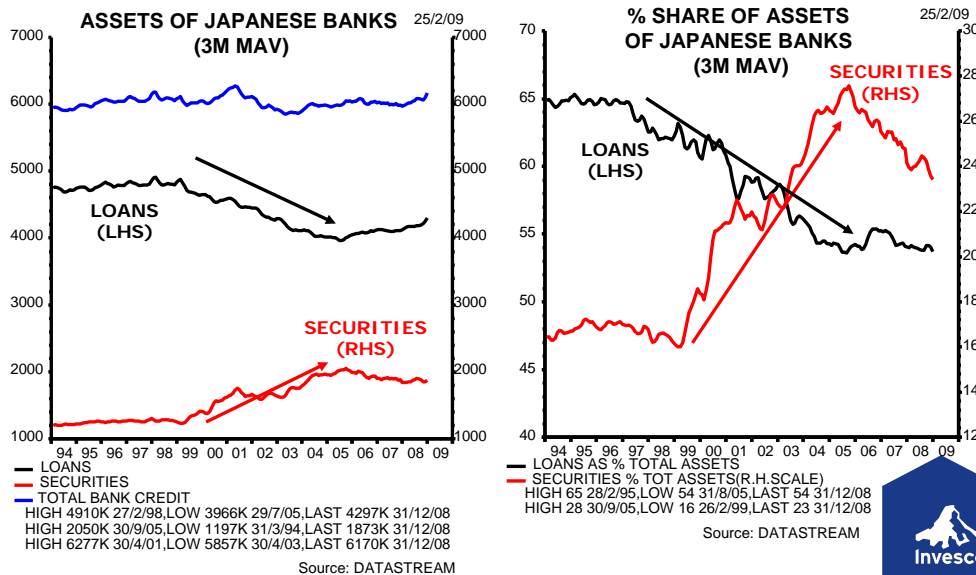
## The Result of Japanese Fiscal Spending Programmes



The long-term results of the slow response of the Japanese authorities to the crisis of the early 1990s were a huge accumulation of government debt as a result of the recurring, large-scale central government budget deficits. As a consequence, the ratio of gross government debt to GDP based on data from the OECD (rather than on the incomplete data shown in the chart above) increased from 64.7% in 1990 to 170.9% in 2008.

G3IL

## Japanese Banks' Holdings of Securities (mainly JGBs) Increased, Replacing Loans to Companies



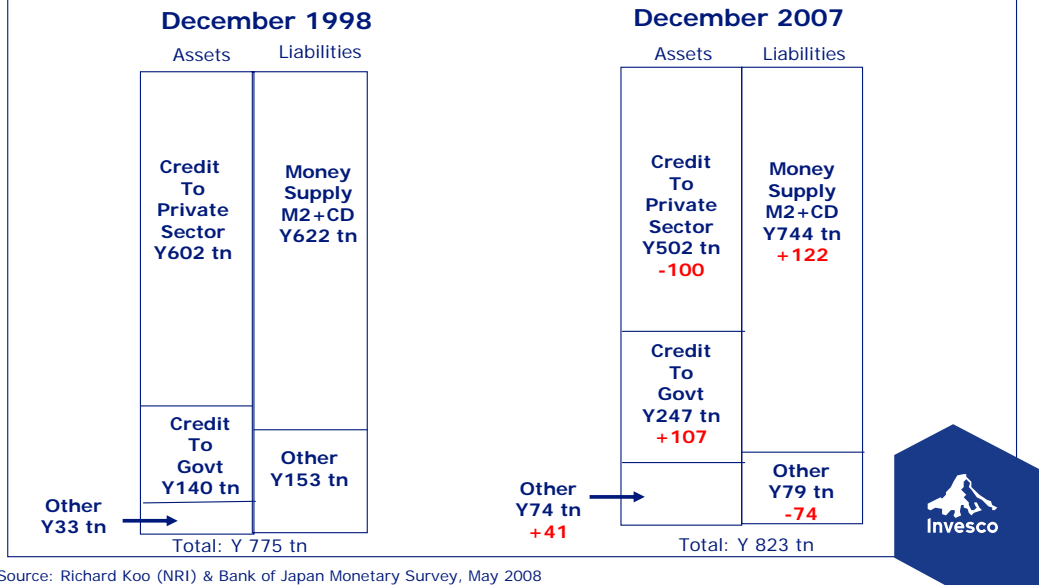
However, one benefit of these debt issues from the standpoint of monetary policy was that they provided the banks with a continuing supply of securities to purchase, enabling Japanese banks to at least partially replace their (declining) loans to firms and households with credit extended to the central government via purchases of JGBs and “teyata” (equivalent to Treasury bills).

As a result of this shift in the composition of bank balance sheets, loans fell from 65% of bank assets to 54%, while securities holdings increased from 16% to 28%.

GIPR, G3P0

## Nevertheless, Japanese M2 Growth Was Maintained by Banks Lending to Government

### JAPANESE BANK BALANCE SHEETS



The effect of these changes in the composition of bank balance sheets is illustrated in the diagram above, where the left hand column in each pair represents Japanese bank assets, and the right hand column in each pair represents bank liabilities.

Over the period from December 1998 to December 2007 the overall money supply (M2+CDs) increased by Yen 122 trillion, while lending to the private sector declined by a similar amount – Yen 100 trillion. The major compensating change that prevented Japanese bank balance sheets declining, or enabling them to grow modestly and support 2-4% annual growth of M2+CDs was the Yen 107 trillion increase in bank lending to the government, mainly via holdings of government securities.



## Application to the US and the UK: Alternative Strategies for Increasing the Money Supply

- **QE or CE may or may not be successful in easing the credit crunch in the US and the UK. The Japanese experience suggests that if the private sector lacks the appetite to borrow, QE or CE may not succeed in preventing a monetary contraction.**

- **The US and UK governments should therefore:**

**EITHER borrow directly from the banks, using the proceeds to buy back government debt primarily from non-banks.**

**OR induce or require the banks to hold substantial quantities of government securities. (The FSA in the UK is already proposing to do this as part of the revised regulatory regime that it proposes, but there are good monetary as opposed to prudential reasons for doing it.)**



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If the banks lend directly to the government, then when the government spends the proceeds of these loans, private sector deposits (which form the bulk of the money supply) will be increased. If firms or individuals choose to use these funds to pay down debt, then the government can simply borrow more from the banks. The key point is that there is no need for bank lending to the private sector to increase in order to ensure a reasonable rate of growth of the money supply.

Alternatively, if the banks can be induced or required to hold government securities, the government can again use the proceeds either for routine government expenditure, or to buy back outstanding debt held by non-banks (such as pension funds and insurance companies). In either case the public will end up holding more deposits which they can use to pay down debt or for normal expenditures. Some will wish to re-allocate these funds to other types of assets in their portfolios (equities, bonds etc.) This is the start of the traditional portfolio adjustment process that facilitates the transmission of monetary policy.

The banks will now have safe assets (loans to the government).

The government will not need to increase government debt; it will now borrow more from the banks and less from the non-banks.

## Conclusion and Prospects

- **Japan's lost decade came about for two reasons. Companies were over-indebted when the bubble burst, and spent the period 1998-2007 de-leveraging. At the same time, the macro-economic policy response was too timid to end the deflation or break the deflationary psychology.**
- **Fiscal expansion clearly failed, but at least it provided large quantities of government debt for banks to buy, which in turn prevented a sharp contraction of the money supply.**
- **Monetary expansion via QE or CE was reluctantly started, never pursued aggressively, and then prematurely withdrawn. It seems unlikely that western governments or central banks will repeat this mistake (unless long bond yields move up sharply).**
- **In the US and the UK more radical measures may still be required to increase the money supply directly (e.g. government borrowing from the banks, or inducing the banks to hold large quantities of government securities).**

