U.S. Economy in Balance Sheet Recession: What the U.S. Can Learn from Japan's Experience in 1990–2005

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Similarities between the U.S. today and Japan 15 years earlier

The global recession that began in 2008 is characterized by many unusual features. They include massive budget deficits, the need for fiscal stimulus, the inability of monetary policy easing to turn the economy or asset prices around, government guarantees and capital injections to banks, and threats by rating agencies to downgrade the credit ratings of governments running large deficits. Indeed the seeming inability of zero interest rates and massive quantitative easing to revive the U.S. and U.K. economies flies in the face of conventional economics, which suggests that monetary accommodation of such magnitude should elicit a strong response from both the economy and asset markets. These difficulties, in turn, have made people more cautious, as they realize that something about this recession is very different from past recessions.

All of these unusual characteristics, however, were observed in Japan during its Great Recession from 1990 to 2005. In fact, what is happening in the U.S. today seems like a replay of the Japanese drama, with the same confusion and sense of uncertainty reflected in the policy debate. Even the path of house prices in the U.S. today and Japan 15 years ago is remarkably similar, as shown in Exhibit 1.

The shocking similarities between the two recessions are no coincidence. Both recessions were triggered by the bursting of debt-financed asset-price bubbles. The collapse in asset prices left millions of private-sector balance sheets in tatters as the liabilities incurred to purchase those assets remained

at their original values. With their balance sheets in a shambles, people had no choice but to reorient their economic priorities from the usual profit maximization to debt minimization in order to put their financial houses in order.

This shift, in turn, nullified the effectiveness of economic theories and policies based on the assumption that the private sector always seeks to maximize profits. The biggest casualty here has been monetary policy. Businesses and consumers suffering from a debt overhang are not interested in increasing their borrowings at any interest rate, and few banks want to lend money to borrowers with impaired balance sheets. As a result, liquidity injections by both the Federal Reserve recently (Exhibit 2) and by the Bank of Japan since 1990 (Exhibit 3) have failed to increase money and credit available to the privates sector.

Moreover, those whose balance sheets are underwater will try to pay down debt as quickly as possible to restore their credit ratings, regardless of the level of interest rates. By 1995 Japanese interest rates were almost at zero, but instead of borrowing more, Japan's corporate sector became a net repayer of debt until 2005—fully 10 years later—as shown in Exhibit 4. In some years, net debt repayment reached 30 trillion yen, or 6 per cent of Japan's GDP.

The U.S. economy is in a balance sheet recession

No economics or business textbook recommends that the private sector pay down debt when interest rates are at zero, but that was precisely what happened in Japan for a full ten years. The textbooks never mentioned such a possibility because they assumed that private-sector balance sheets would always be sound. But that assumption no longer holds after a nationwide debt-financed bubble bursts. And that is what happened to Japan after 1990, and to the world after 2008.

It is also no coincidence that one hears so much about 'deleveraging' in those countries, such as the U.S. and the U.K., where the effectiveness of monetary easing has diminished most dramatically. In fact, the U.S. now has a higher

household savings rate than Japan even with interest rates at zero (Exhibit 5). The private sectors in these countries are now minimizing debt instead of maximizing profits, and that shift has thrown the affected economies into a *balance sheet recession*, a very rare type of recession that happens only after the collapse of a nationwide asset-price bubble.

When someone saves money or pays down debt in a national economy, GDP will shrink unless someone else steps in to borrow and spend those saved or repaid funds. In a normal economy, the task of equating savings and borrowings is performed by interest rates. But in a balance sheet recession, demand for funds can remain far less than the supply even with interest rates at zero because there are so few borrowers. As a result, unborrowed funds remain trapped in the financial system, constituting a leakage from the income stream and a deflationary gap in the economy. If left unchecked, this gap will throw the economy into a deflationary spiral as the economy loses demand equivalent to the saved but unborrowed funds each year. And that is exactly what happened during the Great Depression, the last great balance sheet recession, where U.S. GDP was cut in half in just four years.

Fiscal policy is the only real remedy for a balance sheet recession

Since consumers and businesses have no choice but to repair their damaged balance sheets, the only way for the government to keep GDP from falling is to return excess savings to the economy's income stream by borrowing and spending those savings in the private sector. This is why fiscal policy centered on government spending is so essential in this rare type of recession. Because the private sector is deleveraging, there is no danger of government spending crowding out private investment or producing a misallocation of resources. After all, without government action, those resources would go unused, which is the worst form of resource allocation.

The money supply also shrinks when the private sector de-levers because bank deposits, which is the main component of money supply, is drawn down to repay debt. During the Great Depression, the U.S. money supply shrank by nearly 30 percent largely for this reason (Exhibit 6). Post-1990 Japan managed to keep its money supply from declining in spite of private sector

deleveraging because government borrowing took the place of private sector borrowing and kept banks' assets from contracting. This is shown in Exhibit 7. The post-1933 U.S. money supply also stopped shrinking and started growing again because the government began borrowing money for its New Deal programs, as shown in Exhibit 6. Fiscal policy is therefore essential in keeping both GDP and the money supply from contracting during a balance sheet recession.

Japan suffered a staggering 87 per cent nationwide drop in the value of commercial real estate when its bubble burst, but was able to sustain GDP above bubble-peak levels throughout the recession, as shown in Exhibit 8, because the government borrowed and spent the excess savings generated by the deleveraging of the private sector. In the process, government debt increased by over 460 trillion yen, or more than 90 per cent of GDP. But that action helped sustain over 2,000 trillion yen of GDP over the fifteen-year period—without government action, Japan's GDP could easily have fallen to the pre-bubble level of 1985. Spending 460 trillion yen to support 2,000 trillion yen represents a huge success by any standard.

Policy makers around the world are beginning to realize the importance of the Japanese experience and are now implementing fiscal stimulus following urgent pleas by Japanese Prime Minister Taro Aso, who also used Exhibit 8 at the emergency G20 meeting held in Washington in November 2008. The IMF has also been pushing for global fiscal stimulus since early 2008. Some of these actions are already producing positive results.

Ending the panic is the easy part; rebuilding balance sheets is the hard part

It should be noted that the global financial panic, triggered by the mistaken decision to let Lehman Brothers fail, sparked a global economic collapse that was far more severe than would have been suggested by balance sheet problems alone. This panic-driven part of the collapse had to be countered with all the monetary policy tools that can be mobilized, and the Federal Reserve, together with governments and central banks around the world, put in some 8.9 trillion dollars worth of liquidity and guarantees to financial institutions. Since the panic was caused by the government's decision not

to safeguard the liabilities of a major financial institution, the economic activities that disappeared due to the panic returned once the mistake was reversed. That was the V-shaped recovery observed in some quarters since the spring of 2009. With the panic subsiding, it is also appropriate that some of the extraordinary measures taken since the Lehman shock are in the process of being phased out.

Although the panic has subsided, all the balance sheet problems that existed before the Lehman shock are still with us. These problems are likely to slow down the recovery or smother it altogether unless the government offsets the deflationary pressure from private sector deleveraging. In other words, the recovery so far was the easy part ((B) in Exhibit 9), and the hard part of repairing millions of impaired balance sheets has just begun ((A) in Exhibit 9). This is no time to be complacent and cut fiscal stimulus; that should not happen until it is certain that the private sector deleveraging process is over.

The dangers of premature fiscal tightening

Indeed the key lesson from the Japanese experience is that fiscal support must be maintained for the *entire* duration of the private-sector deleveraging process. This is an extremely difficult task for a democracy in a peacetime, because when the economy begins to recover, well-meaning citizens who dislike reliance on government will argue that since fiscal pump-priming is clearly working, it is time to reduce (what they see as wasteful) government spending. But if the recovery is actually due to government spending and the private sector is still in balance-sheet-repair mode, premature fiscal reform will invariably result in another meltdown, as the Japanese found out in 1997 and the Americans in 1937.

The Japanese mistake in 1997 not only produced five quarters of negative growth but also *increased* government debt by nearly 100 trillion yen or 30 percent and prolonged the recession by at least five years. The U.S. mistake in 1937 was so devastating that it took the massive military expenditures of the Second World War to pull the country out of recession.

With the deficit as large as it is, any responsible citizen will want to see the deficit reduced. But for such effort to actually succeed, policy makers must make certain that funds left unborrowed by the government will be borrowed and spent by the private sector. Otherwise they risk triggering the kind of economic collapse seen in the U.S. in 1937 and in Japan in 1997. With businesses, financial institutions, and households all reducing debt in the U.S. despite record low interest rates, this is not the time to contemplate an exit strategy for fiscal stimulus.

Ending the credit crunch and fixing the banks must be sequenced

Balance sheet recession caused by a nation-wide collapse in asset prices is almost always accompanied by a banking crisis. The resultant credit crunch makes already difficult situation even worse as amply demonstrated in the U.S. recently and in Japan during 1997 to 1999. Here the key point to remember is that the two goals of ending the credit crunch and making individual banks lean and mean actually contradict with each other. This is because, if all banks moved to dispose of non-performing loans (NPLs) at the same time, everybody will be selling and nobody will be buying. That could result in prices of those assets falling to such an extent that the banks and the economy are weakened even further.

Banking authorities faced with this dilemma should put the first priority on ending the credit crunch by injecting capital (with little or no conditions attached) to the banks and deal with individual bank's problems only after the lending function of the banks has normalized. Injecting capital to banks without attaching conditions is politically unpopular. But the alternative of banks rejecting injection as happened in Japan in February 1998, or returning the capital quickly as happened in the U.S. recently because of burdensome conditions, would leave the debilitating credit crunch unresolved with highly undesirable consequences.

When Japan enacted the initial capital injection program with many conditions attached, not a single bank applied for capital. Realizing that the two goals mentioned above cannot be attained with one tool, the government discarded the conditions in order to end the credit crunch. The

revamped program, which managed to inject capital in March 1998 and again in March 1999, succeeded in ending the credit crunch that erupted in late 1997. This is shown in Exhibit 10.

A credible 10-year NPL amortization program is needed

As for the disposal of NPLs, it is clear that no quick resolution is possible when so many banks face the same problem. In this kind of systemic crisis, where the financers and purchasers of distressed assets are in dangerously short supply relative to the number of sellers, government regulators must *go slowly*. What is needed is a credible ten-year NPL amortization program where banks are given a realistic time frame to write off problem assets using earnings under strict government supervision. Once a credible program is in place, the market will no longer need to worry about the banks, which in turn will enable banks to lend money without fretting about the possibility of sudden disruptions to their funding.

This is the essence of the program implemented by Paul Volcker, then chairman of the Federal Reserve, in response to the devastating Latin American debt crisis of 1982. Although the cleanup process took nearly a dozen years, the crisis did not trigger a credit crunch because banks were allowed to quietly write off their problem loans over time.

Contrary to the popular but incorrect perception held by many overseas observers that Japanese banks were slow to dispose of NPLs, the banks were actually recording losses on bad loans almost as soon as they surfaced in the late 1990s, as shown in Exhibit 11. In fact, over 83 percent of the losses were written off before Financial Services Minister Heizo Takenaka garnered headlines by publicly urging banks to dispose of their NPLs starting in 2002. But that did not help the economy because borrowers were disappearing faster than lenders.

Conclusion

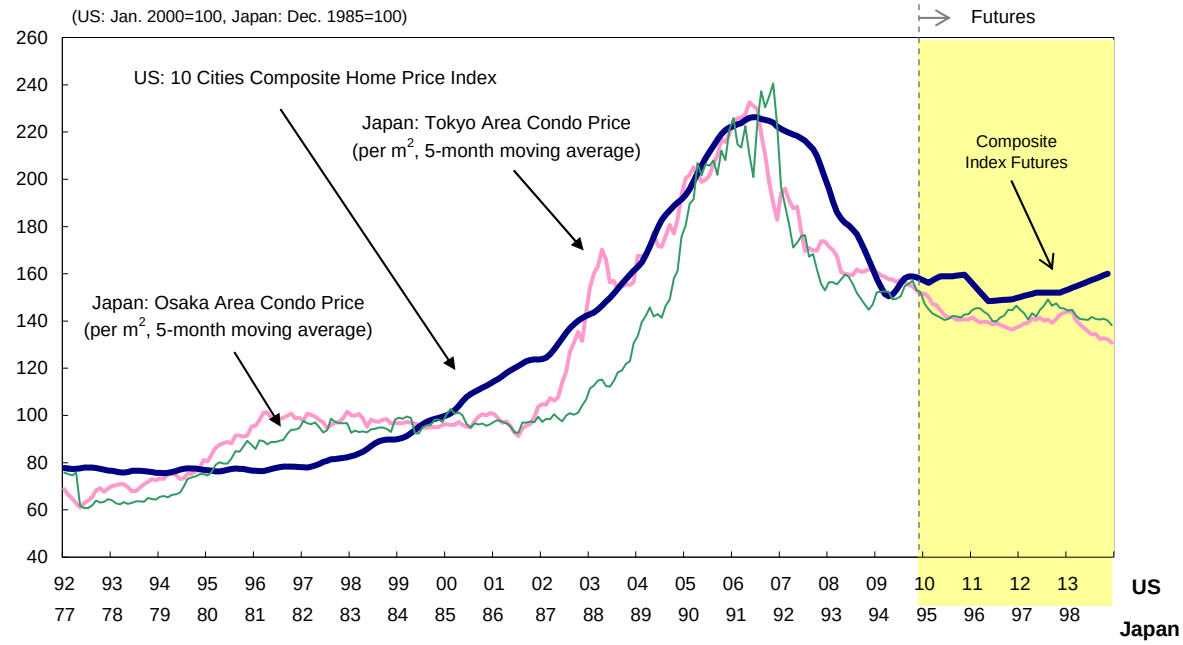
Balance sheet recession is always a two-front war, with both borrowers and lenders repairing balance sheets instead of maximizing profits. Whereas

bankers not lending money is front page news, borrowers not borrowing money is seldom reported. In terms of policy response, however, the former situation, which can be addressed with capital injection (without too many conditions attached), is far easier to deal with than the latter, which requires substantial and seamless government borrowing and spending to offset the deflationary impact of private sector deleveraging.

Although government deficit spending should be avoided when the private sector is healthy and forward looking, once in several decades when the private sector gets carried away in a bubble and damages its financial health, a prompt and sustained fiscal medicine from the government is essential in minimizing both the length of recession and the eventual bill to the taxpayers. The differences between the usual world of profit maximization and the world of balance sheet recessions are high-lighted in Exhibit 12.

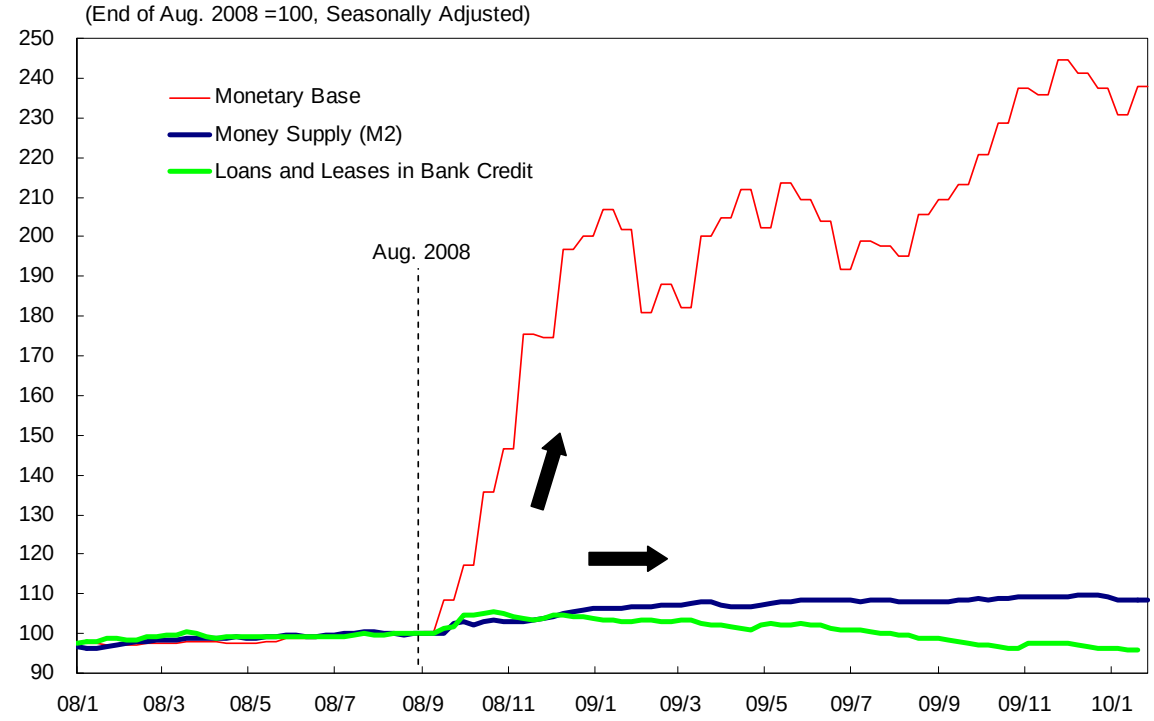
Japan took 15 years to overcome its balance sheet recession because it was not known at that time that such disease existed. As a result, much time was wasted trying all sorts of remedies while fiscal stimulus, the only effective cure for the disease, was applied only intermittently, lengthening the recession unnecessarily. Now that the experience of Japan is available for anyone to see, there is no reason for the U.S. to repeat the same mistake. The Federal Reserve may want to remove some of the extraordinary monetary measures put in place to defuse the panic caused by the Lehman shock. But the U.S. government should not embark on fiscal retrenchment until it is absolutely certain that the private sector is healthy enough to borrow and spend the funds left unborrowed by the government.

Exhibit 1. U.S. House Price Trend Echoes That of Japan



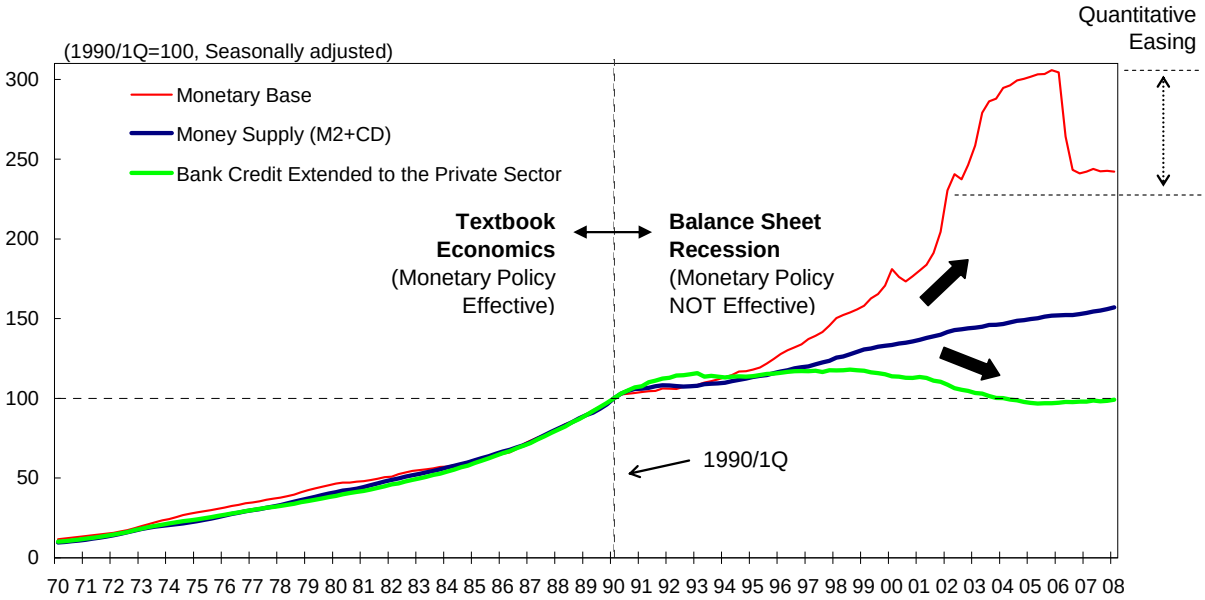
Sources: Bloomberg, Real Estate Economic Institute, Japan, S&P, S&P/Case-Shiller® Home Price Indices, as of Jan. 25, 2010

Exhibit 2. Fed's Monetary Expansion Failed to Increase Money and Credit Available to the Private Sector



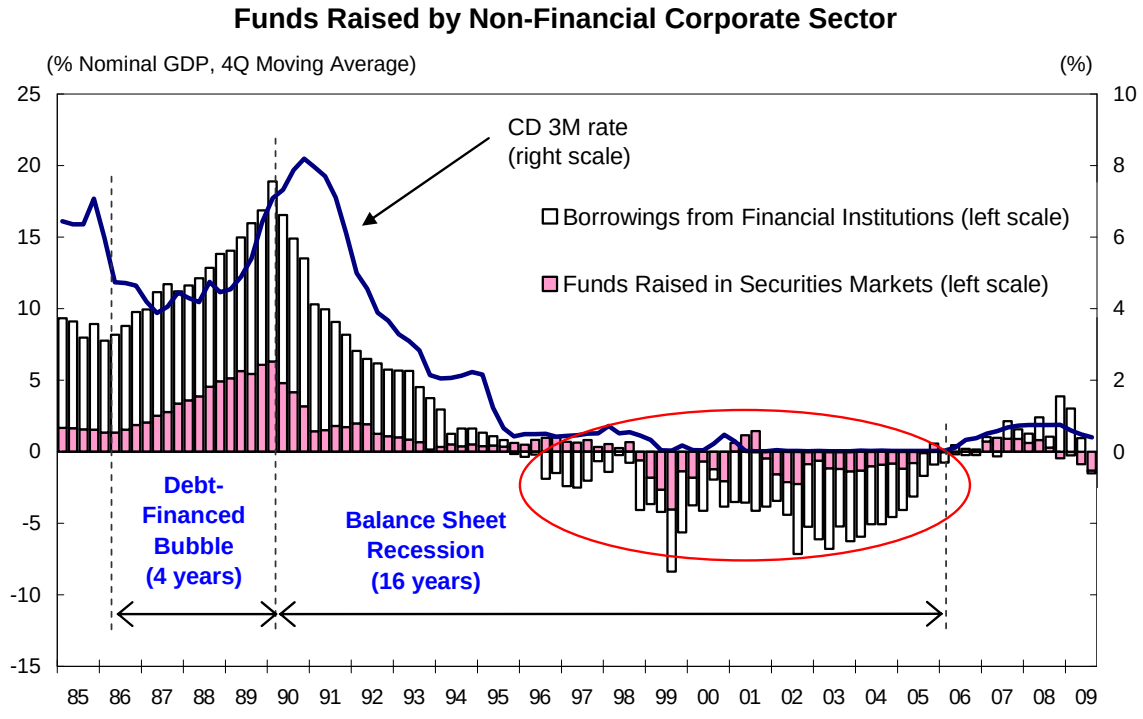
Source: Board of Governors of the Federal Reserve System

Exhibit 3. BoJ's Monetary Expansion Failed to Increase Money and Credit Available to the Private Sector



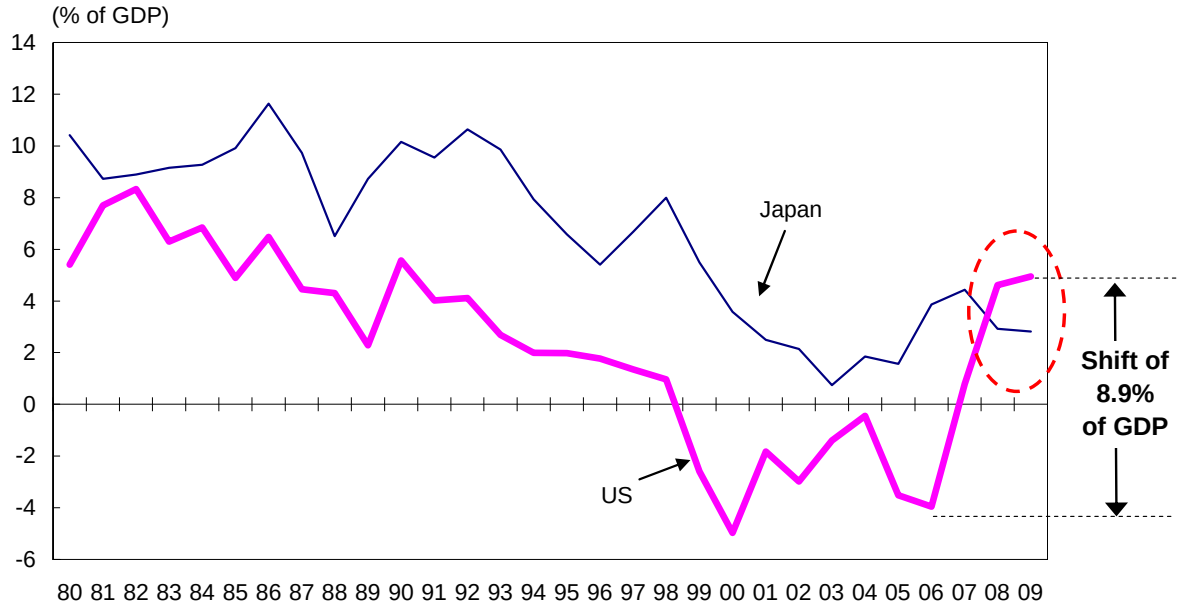
Note: Private sector borrowings seasonally adjusted by Nomura, adjustments made for discontinuities in line with BOJ's "Monetary Survey"
Source: Bank of Japan

Exhibit 4. Japan's Deleveraging Under Zero Interest Rates Lasted for 10 Years



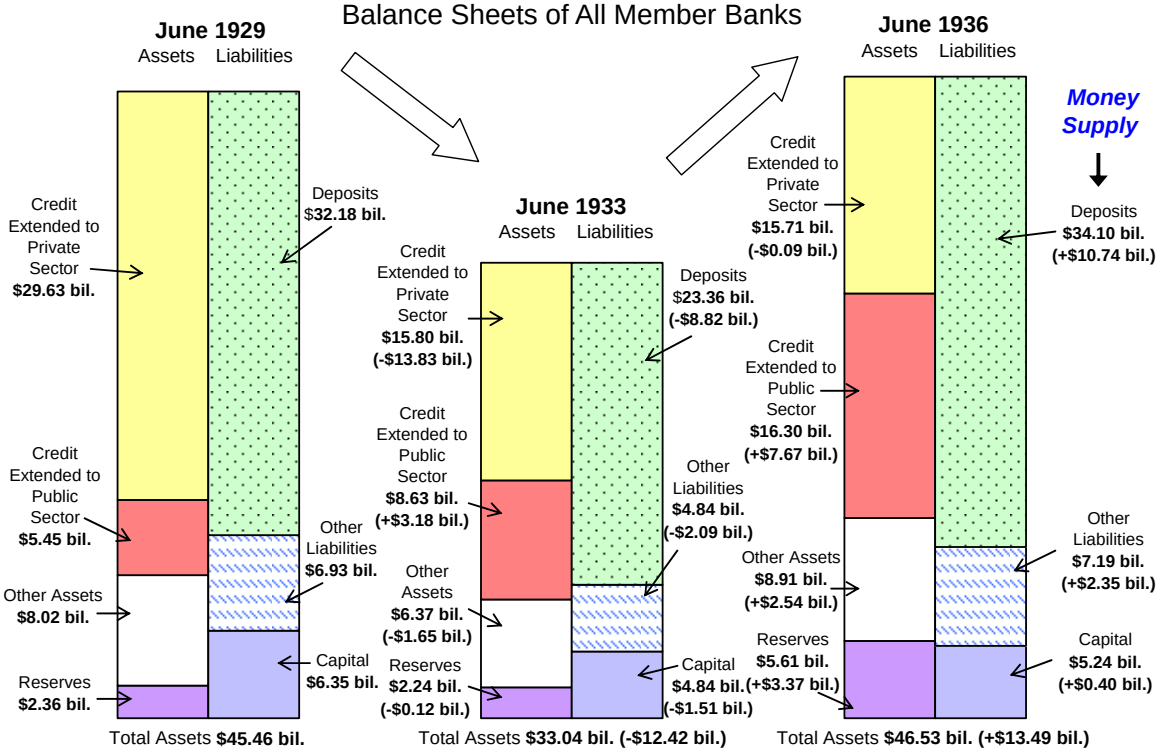
Sources: Bank of Japan, Cabinet Office, Japan

Exhibit 5. U.S. Households Now Have Greater Financial Surplus Than Japanese Households



Note: Fiscal year (April to March) for Japan, calendar year for US.
Sources: BoJ, *Flow of Funds* , FRB, *Flow of Funds Accounts of the United States*

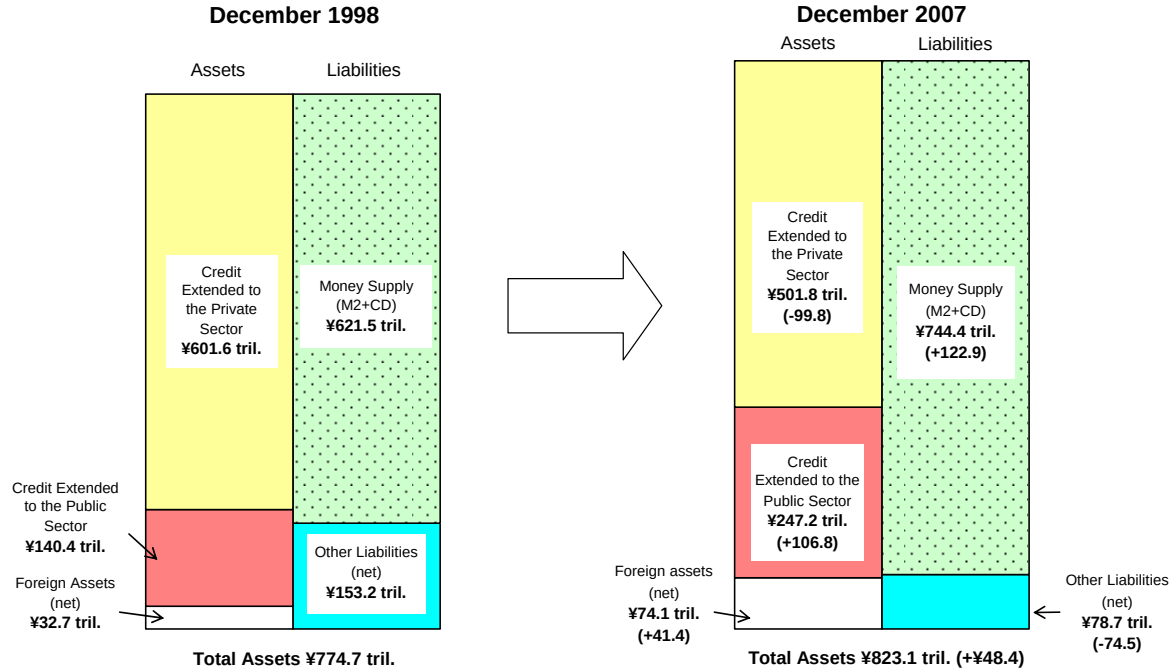
Exhibit 6. U.S. Money Supply in 1930's Decreased Due to Private Sector Deleveraging and Increased Due to Government Leveraging



Source: Board of Governors of the Federal Reserve System (1976), *Banking and Monetary Statistics 1914-1941* , pp. 72-79

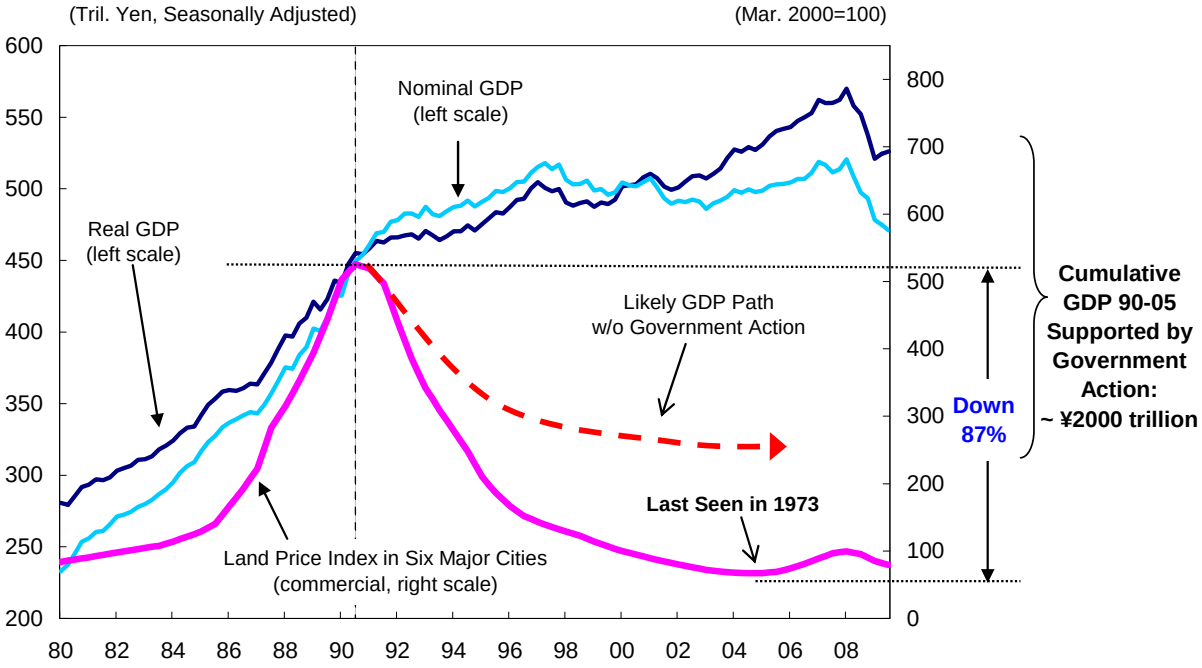
Exhibit 7. Japan's Money Supply Has Been Sustained by Government Borrowings

Balance Sheets of Banks in Japan



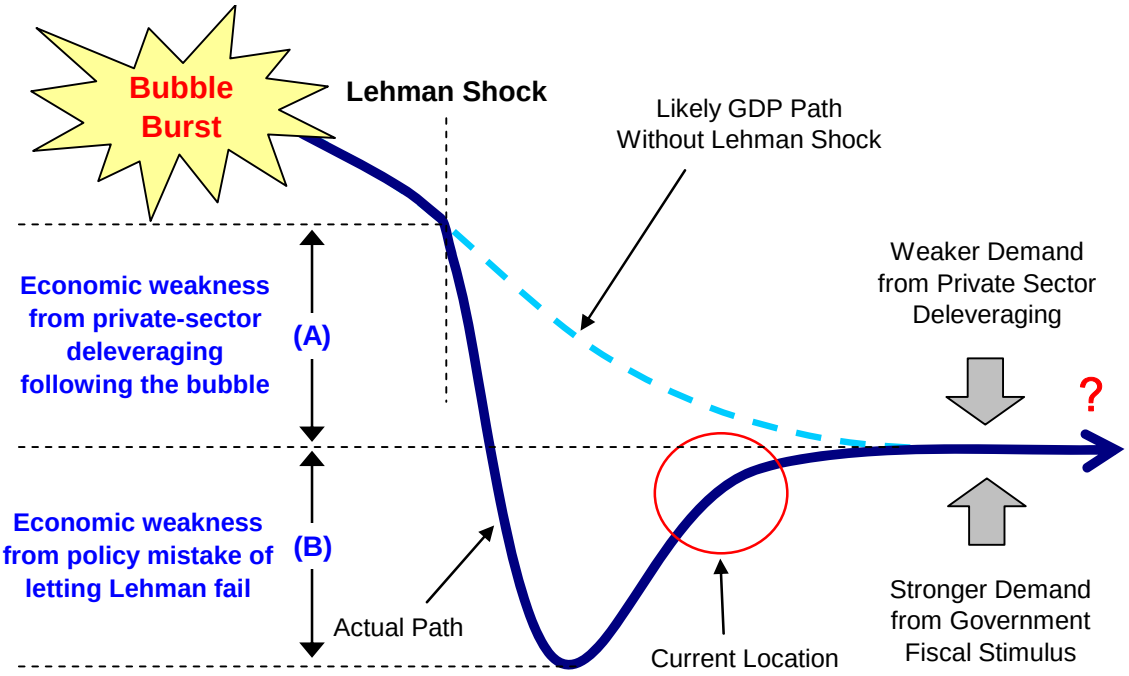
Source: Bank of Japan "Monetary Survey"

Exhibit 8. Japan's GDP Grew Even After Massive Loss of Wealth and Private Sector Deleveraging



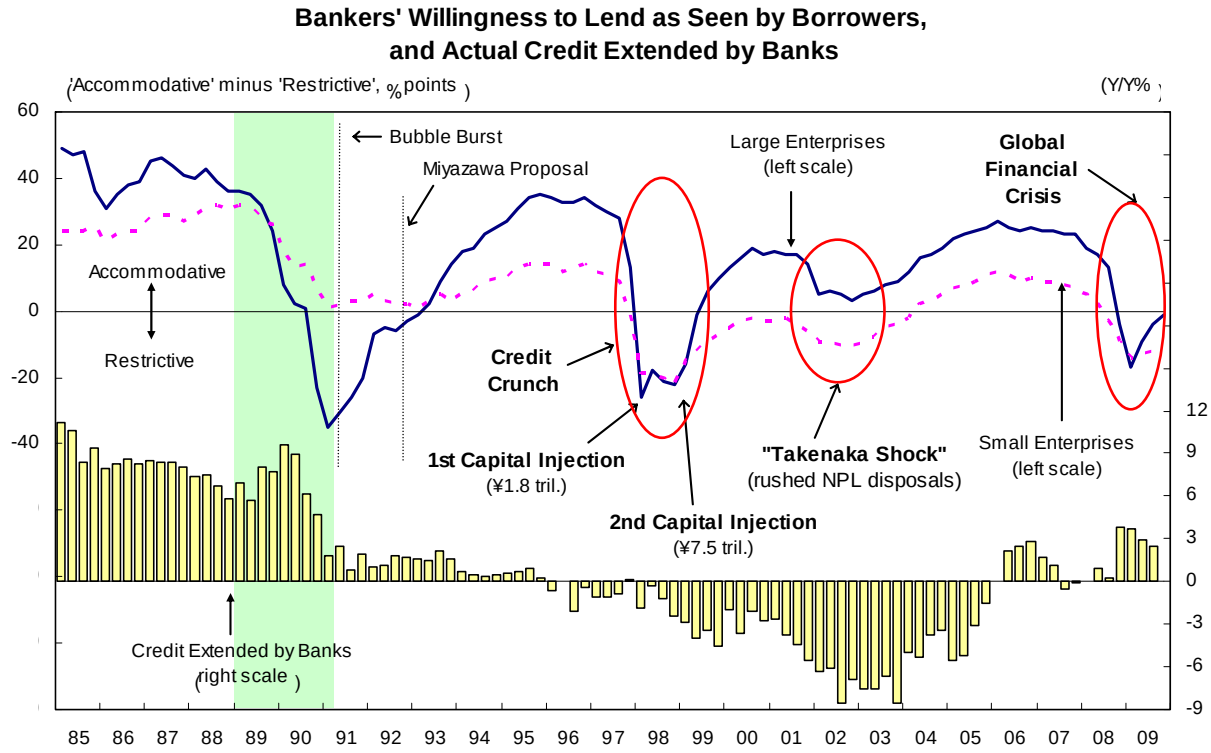
Sources: Cabinet Office, Japan Real Estate Institute

Exhibit 9. Short- and Long-term Trends in Global Economy



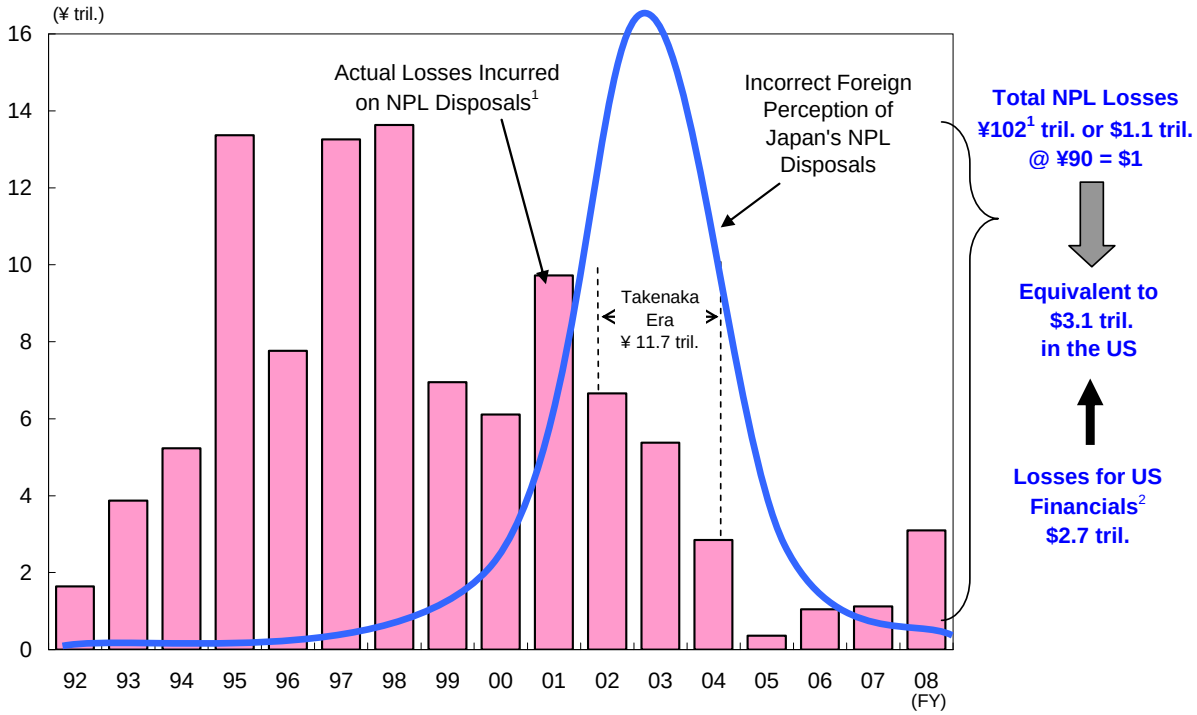
Source: Nomura Research Institute

Exhibit 10. Two Capital Injections Ended Japan's Credit Crunch



Sources : "Tankan", "Loans and Discounts Outstanding by Sector", BOJ

Exhibit 11. Myth and Reality of NPL Disposals in Japan: Losses on NPLs Were Taken *Long Before* the Takenaka Era



1: Includes commercial banks only; investment banks, insurance companies and other financial institutions are NOT included.
2: Based on IMF Global Financial Stability Report (Apr. 2009). Includes all financial institutions, including hedge funds.
Source: Financial Services Agency, Japan

Exhibit 12. Contrast Between Profit Maximization and Debt Minimization

Private sector behavior		***Profit Maximization***	***Debt Minimization***
1) Phenomenon		Textbook economy	Balance sheet recession
2) Fundamental driver		Adam Smith's "invisible hand"	Fallacy of composition
3) Corporate financial condition		Assets > Liabilities	Assets < Liabilities
4) Outcome		Greatest good for greatest number	Depression if left unattended
5) Monetary policy		Effective	Ineffective (liquidity trap)
6) Fiscal policy		Counterproductive (crowding-out)	Effective
7) Prices		Inflationary	Deflationary
8) Interest rates		Normal	Very low
9) Savings		Virtue	Vice (paradox of thrift)
10) Remedy for Banking Crisis	a) Localized	Quick NPL disposal Pursue accountability	Normal NPL disposal Pursue accountability
	b) Systemic	Slow NPL disposal Fat spread	Slow NPL disposal Capital injection

Source: Richard Koo, *The Holy Grail of Macroeconomics: Lessons from Japan's Great Recession* , John Wiley & Sons, Singapore, 2008

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Mr. Richard C. Koo is the Chief Economist of Nomura Research Institute, with responsibilities to provide independent economic and market analysis to Nomura Securities, the leading securities house in Japan, and its clients. Before joining Nomura in 1984, Mr. Koo, a US citizen, was an economist with the Federal Reserve Bank of New York (1981-84). Prior to that, he was a Doctoral Fellow of the Board of Governors of the Federal Reserve System (1979-81). In addition to conducting financial market research, he has also advised several Japanese prime ministers on how best to deal with Japan's economic and banking problems.

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Author of many books on Japanese economy, his latest book "The Holy Grail of Macroeconomics - Lessons from Japan's Great Recession" (John Wiley & Sons, 2008, revised 2009) has been translated into and sold in four different languages. Mr. Koo holds BAs in Political Science and Economics from the University of California at Berkeley (1976), and MA in Economics from the Johns Hopkins University (1979). Since 1998, Mr. Koo has been a visiting professor at Waseda University in Tokyo.

In financial circles, Mr. Koo was ranked 1st among over 100 economists covering Japan in the Nikkei Financial Ranking for 1995, 1996 and 1997, and by the Institutional Investor magazine for 1998. He was also ranked 1st by Nikkei Newsletter on Bond and Money for 1998, 1999 and 2000. He was awarded the Abramson Award by the National Association for Business Economics, Washington D.C. for the year 2001. Mr. Koo, a native of Kobe, Japan, is married with two children.