

2010

Japan's Lost Decade: Escaping Liquidity Trap and Preventing Deflation

Robert A. Milburn

Western Connecticut State University

Follow this and additional works at: <http://repository.wcsu.edu/ssj>

Recommended Citation

Milburn, Robert A. (2010) "Japan's Lost Decade: Escaping Liquidity Trap and Preventing Deflation," *Social Sciences Journal*: Vol. 10 : Iss. 1 , Article 12.

Available at: <http://repository.wcsu.edu/ssj/vol10/iss1/12>

This Article is brought to you for free and open access by WestCollections: digitalcommons@wcsu. It has been accepted for inclusion in Social Sciences Journal by an authorized editor of WestCollections: digitalcommons@wcsu. For more information, please contact ir@wcsu.edu.

Japan's Lost Decade: Escaping Liquidity Trap and Preventing Deflation

Robert Milburn

Japan's "Lost Decade," between 1991 and 2002, was a period of prolonged economic recession in which deflation and liquidity trap plagued the economy. The Bank of Japan's (BOJ) inability to apply significant expansionary monetary policy has been the primary focus for scholarly debate. Most scholars agree that the BOJ retained significant powers which although unconventional are necessary in times of financial crisis. The current importance of understanding the Japanese experience throughout the 1990s is paramount to understanding current justifications for the United States' (US) expansionary monetary policy. Therefore, this paper will explore the problems facing policy-makers in Japan throughout the "Lost Decade," the scholarly debate focused on policy options for the BOJ, what US policy-makers have taken from Japan's Lost Decade, and how those policy-makers applied that acquired knowledge. The "Lost Decade" has provided insight into the prevention of deflation and the escape from liquidity trap.¹ In particular, the failure of the Bank of Japan (BOJ) to respond quickly and effectively to the problems facing the Japanese economy and the inability of the Japanese legislature, the Diet, to pass comprehensive expansionary policy when confronted with significant debt, contributed significantly to an environment of uncertainty, the result a phenomenon called the Ricardian equivalence, and stagnation.

This paper will begin with a brief historical account of the events which transpired before the inherent implosion of the Japanese economy, as summarized by Economist Charles Horioka's *The Causes of Japan's 'Lost Decade': The Role of Household Consumption*, which will demonstrate the problems facing policymakers and provide a framework for debate amongst scholars. Next, the paper will pose the primary policy suggestions which scholars have proposed were at the BOJ's disposal. This section will focus primarily on expansionary monetary, a brief fiscal policy, proposals to prevent deflation and liquidity trap. The prominent scholars within this area research cited within this paper include; Svensson, Bernanke, Posen, Kuttner, Blanchard, Leigh, and Krugman; all of which have written extensively on the topic. Finally, the paper will conclude with a discussion of the current situation within the US and the effects the Japanese experience has had on the policy decisions of Federal Reserve (Fed), in particular Fed Chairman Ben Bernanke (cited above).

The '80s and the Japanese Economy

In the 1980s, Japanese per-capita real GDP grew from 74 percent of the US level in 1980 to 86 percent in 1991, but between 1991 and 2002 the US economy's per-capita real GDP growth began to accelerate, 2.0 percent, and by contrast Japanese per-capita real GDP growth "was a mere 0.6 percent per year" (View Figure 3).²

In Charles Horioka's account of the events which transpired before the implosion of the Japanese economy, he describes the "bubble period" from 1980 to 1991 and the "post-bubble period" from 1991 to 2003.³ Dr. Horioka's research reveals that the stagnation of investment, primarily private fixed investment, was the main "culprit of the prolonged slowdown of the Japanese economy in the 1990s. The following table from Horioka's paper exemplifies his findings perfectly.

Table 1: The Average Annualized Real Growth Rate and the Contribution to Real GDP Growth of Each Component of GDP, 1980-2003

Component of GDP	Average Annual Real Growth Rate (percent)		Contribution to Real Growth Rate of GDP					
	1980-91	1991-2003	1980-91	1991-2003				
Actual final consumption of households	3.59	3	1.56	3	57.24	1	85.40	1
Government actual final consumption	3.54	4	3.22	2	5.45	3	18.64	2
Private gross domestic fixed capital formation	6.11	2	-0.59	5	34.09	2	-11.49	6
Housing	(2.44)		(-2.48)		(3.54)		(-9.27)	
Plant and equipment	(7.44)		(-0.14)		(30.54)		(-2.22)	
Public gross domestic fixed capital formation	0.85	5	-0.24	4	1.67	4	-1.26	4
Dwellings	(-0.53)		(-0.89)		(-0.04)		(-0.15)	
Plant and equipment	(-2.85)		(-1.06)		(-1.56)		(-1.18)	
General government	(2.45)		(0.02)		(3.26)		(0.07)	
Changes in inventories (inventory investment)	9.56	1	na	6	1.14	5	-4.35	5
Net exports of goods and services	0.78	6	6.39	1	0.42	6	13.07	3
Exports of goods and services	(4.61)		(4.26)		(9.68)		(37.78)	
Imports of goods and services	(5.94)		(3.63)		(9.26)		(24.71)	
Gross domestic expenditure (product)	3.89		1.14		100.00		100.00	

¹ Deflation: a situation in which GDP deflator, measure of aggregate prices, is falling; Gordon, 198. Liquidity Trap: a situation in which the central bank loses its ability to reduce the interest rate; Gordon, G-4.

² Gordon, Robert J. "Macroeconomics." 118.

³ Horioka, Charles. "The Causes of Japan's 'Lost Decade': The Role of Household Consumption," 2.

In the asset bubble period from 1980 to 1991, private gross domestic fixed capital formation, in column one on the third line, shows an average annual real growth rate of 6.11 percent, contributing 34.09 percent to real GDP growth.⁴

In the post-bubble period from 1991 to 2003, private gross domestic fixed capital formation shows an average annual real growth rate of -0.59 percent and a negative contribution to real GDP growth of -11.49 percent.⁵ The private housing investment component of private fixed investment shows an 81 percent negative contribution to private fixed investment “suggesting again that it was the primary culprit of the prolonged slowdown of the Japanese economy.” Meanwhile, government fixed investment (-1.26%) and inventory investment (-4.35%) were both negative.⁶ The post-bubble period shows, “household consumption made by far the largest contribution to real GDP growth (85.40%). Government consumption made the second largest contribution (18.64%), and net exports made the third largest contribution (13.07%).”⁷

Analysis of Horioka's data suggests that the stagnation of investment was the major problem plaguing the Japanese economy, while household consumption, government consumption and net exports helped GDP growth. Although household consumption was a significant contributor to GDP growth throughout the post-asset bubble period, the stagnation of household consumption [stagnation in terms of change from the asset bubble period] was due primarily to the stagnation of household disposable income, the decline in household wealth (which in turn was due primarily to the collapse of land and equity prices).⁸

Literature Review

Lowering Interest Rates and the Failure of Fiscal Policy

The precipitous collapse of the Japanese economy is largely the result of ineffective responses to the crisis. Much has been written about this topic and how the BOJ should have handled the situation, the end result being that some form of expansionary policy could have effectively helped the Japanese economy out of crisis.

The problem that plagued Japan was that the BOJ essentially lowered the nominal interest rate to zero hoping that expansionary monetary policy would provide enough liquidity to the market resulting in gains in output. When these attempts failed to bring to bear the desired result and deflation persisted, Japanese leaders could not figure out how to solve the problems inherent within the economy. Lars Svensson writes,

The gist of the Bank of Japan's argument [against more expansionary policy]. . . seems to be that, since one cannot be absolutely sure that any given policy action or change in the monetary policy regime will succeed in getting the economy out of the liquidity trap, it safer not to try.⁹

Svensson, in his paper “Escaping from a Liquidity Trap and Deflation: The Foolproof Way and Others,” summarizes the problems of an economy facing persistent deflation; the real value of nominal debt rises. Commercial bank's balance sheets deteriorate when collateral loses value and loans turn bad and financial instability may threaten. Unemployment may rise as real wages increase. All this may contribute to a further fall in aggregate demand, a further increase in deflation, a further increase in the real interest rate, and it may bring prices and the economy in a deflationary spiral.¹⁰ Thus, deflation can cause a vicious cycle in which persistent deflation causes more deflation.

The effectiveness of Japanese fiscal policymakers to solve the crisis with complementary expansionary fiscal policy to its expansionary monetary policy was confounded by national debt which by the end of 2001 was “close to 150 percent of GDP” and still increasing.¹¹ According to Kuttner and Posen, in their paper entitled “Passive Savers and Fiscal Policy Effectiveness in Japan,” “The ample variation in Japanese fiscal policy, moving from contractionary to expansionary back to contractionary . . . all tax cuts were preceded and accompanied by loud declarations by government officials that eventually taxes would have to

⁴ Ibid, 32.

⁵ Ibid.

⁶ Ibid, 4.

⁷ Ibid.

⁸ Ibid, 20.

⁹ Svensson, Lars. “Escaping from a Liquidity Trap and Deflation,” 162.

¹⁰ Ibid, 147.

¹¹ Ibid, 148.

In the asset bubble period from 1980 to 1991, private gross domestic fixed capital formation, in column one on the third line, shows an average annual real growth rate of 6.11 percent, contributing 34.09 percent to real GDP growth.⁴

In the post-bubble period from 1991 to 2003, private gross domestic fixed capital formation shows an average annual real growth rate of -0.59 percent and a negative contribution to real GDP growth of -11.49 percent.⁵ The private housing investment component of private fixed investment shows an 81 percent negative contribution to private fixed investment “suggesting again that it was the primary culprit of the prolonged slowdown of the Japanese economy.” Meanwhile, government fixed investment (-1.26%) and inventory investment (-4.35%) were both negative.⁶ The post-bubble period shows, “household consumption made by far the largest contribution to real GDP growth (85.40%). Government consumption made the second largest contribution (18.64%), and net exports made the third largest contribution (13.07%).”⁷

Analysis of Horioka's data suggests that the stagnation of investment was the major problem plaguing the Japanese economy, while household consumption, government consumption and net exports helped GDP growth. Although household consumption was a significant contributor to GDP growth throughout the post-asset bubble period, the stagnation of household consumption [stagnation in terms of change from the asset bubble period] was due primarily to the stagnation of household disposable income, the decline in household wealth (which in turn was due primarily to the collapse of land and equity prices).⁸

Literature Review

Lowering Interest Rates and the Failure of Fiscal Policy

The precipitous collapse of the Japanese economy is largely the result of ineffective responses to the crisis. Much has been written about this topic and how the BOJ should have handled the situation, the end result being that some form of expansionary policy could have effectively helped the Japanese economy out of crisis.

The problem that plagued Japan was that the BOJ essentially lowered the nominal interest rate to zero hoping that expansionary monetary policy would provide enough liquidity to the market resulting in gains in output. When these attempts failed to bring to bear the desired result and deflation persisted, Japanese leaders could not figure out how to solve the problems inherent within the economy. Lars Svensson writes,

The gist of the Bank of Japan's argument [against more expansionary policy]. . . seems to be that, since one cannot be absolutely sure that any given policy action or change in the monetary policy regime will succeed in getting the economy out of the liquidity trap, it safer not to try.⁹

Svensson, in his paper “Escaping from a Liquidity Trap and Deflation: The Foolproof Way and Others,” summarizes the problems of an economy facing persistent deflation; the real value of nominal debt rises. Commercial bank's balance sheets deteriorate when collateral loses value and loans turn bad and financial instability may threaten. Unemployment may rise as real wages increase. All this may contribute to a further fall in aggregate demand, a further increase in deflation, a further increase in the real interest rate, and it may bring prices and the economy in a deflationary spiral.¹⁰ Thus, deflation can cause a vicious cycle in which persistent deflation causes more deflation.

The effectiveness of Japanese fiscal policymakers to solve the crisis with complementary expansionary fiscal policy to its expansionary monetary policy was confounded by national debt which by the end of 2001 was “close to 150 percent of GDP” and still increasing.¹¹ According to Kuttner and Posen, in their paper entitled “Passive Savers and Fiscal Policy Effectiveness in Japan,” “The ample variation in Japanese fiscal policy, moving from contractionary to expansionary back to contractionary . . . all tax cuts were preceded and accompanied by loud declarations by government officials that eventually taxes would have to

⁴ Ibid, 32.

⁵ Ibid.

⁶ Ibid, 4.

⁷ Ibid.

⁸ Ibid, 20.

⁹ Svensson, Lars. “Escaping from a Liquidity Trap and Deflation,” 162.

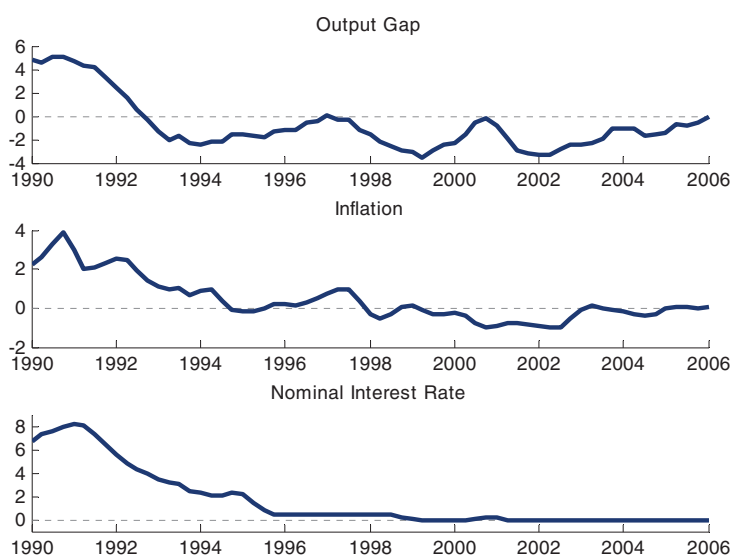
¹⁰ Ibid, 147.

¹¹ Ibid, 148.

go up.”¹² Therefore, Japanese government essentially created an environment of Ricardian equivalence.¹³ Furthermore, Kuttner and Posen write that throughout the post-asset bubble period a series of income tax reductions were often accompanied by offsetting government spending cuts, consumption tax increases and increases in contribution rates to social security. Some of the tax cuts were even repealed because of increasing government debt.¹⁴ In 2001, then-Finance Minister Kiichi Miyazawa announced that Japan’s finances “are very close to collapsing.”¹⁵

With fiscal policy constrained by increasing government debt, scholars have pointed to further expansionary monetary policy as the solution. As mentioned above, the BOJ felt constrained by an extremely low interest rate. As Svensson points out, the obvious response to low or negative inflation, deflation, is to lower the central bank’s “instrument rate.” “A lower short

Figure 1. The Japanese Economy Since 1990



nominal interest rate, combined with sluggish private sector inflation expectations will lower the short real interest rate.”¹⁶ The lower interest rates would stimulate demand and output to bring the economy out of recession.

From 2001 to 2003, after long indecisiveness, the BOJ attempted “quantitative easing” in which it expanded its monetary base by about 50 percent. The problem in the Japanese dilemma was that the nominal inflation rate was already low, thus the central bank had essentially no room to lower the interest rate further. Coupled with deflation, lenders would rather hold cash than lend at essentially negative interest rates. Thus, liquidity trap and deflation caused the real interest rate to remain high, and hence the economy sank further into a prolonged recession and deflation (exhibited by figure 1 above from Leigh pg. 4).¹⁷ Therefore, even after expanding the monetary base by 50 percent, deflationary expectations caused the real interest rate to remain positive and too high to stimulate any kind of recovery.

Japanese Monetary Policy Options

While the BOJ was unsure whether any other options would be effective, scholars were arguing about what the BOJ should do. Economist Paul Krugman was one of the first to attempt to address the problem. In 1998, Krugman’s paper, “It’s Baaack: Japan’s Slump and the Return of the Liquidity Trap,” argued that lowering the BOJ’s short term instrument rate was not effective because once the recession and deflation was over, the central bank might renege on its promise of future expansion and keep inflation low. Therefore, the private sector expectations would remain low and recession and deflation would continue. Krugman’s solution was through legislation giving the BOJ an inverted version of the price stability targets now in force in a number of countries: it would be enjoined to achieve an inflation rate of not less than x percent over y years.¹⁸ The BOJ would thus commit to a target inflation rate and communicate that commitment to the private sector. He suggested an inflation target which “would need to close a remaining gap [output gap] of, say, four to five percentage points.” Thus, he sug-

¹² Kuttner, Kenneth and Posen, Adam. “Passive Savers and Fiscal Policy Effectiveness in Japan,” 7.

¹³ Ricardian Equivalence: An economic theory that suggests that when a government tries to stimulate demand by increasing debt-financed government spending, demand remains unchanged. This is because the public will save its excess money in order to pay for future tax increases that will be initiated to pay off the debt.

¹⁴ Kuttner, Kenneth and Posen, Adam. “Passive and Fiscal Policy Effectiveness in Japan,” 9-10.

¹⁵ Ibid, 11.

¹⁶ Svensson, Lars. “Escaping from a Liquidity Trap and Deflation,” 162.

¹⁷ Ibid, 147.

¹⁸ Krugman, Paul. “It’s Baaack: Japan’s Slump and the Return of the Liquidity Trap,” 181.

gested a prescription of 4 percent inflation for fifteen years.¹⁹ The purpose of this inflation target would be to “anchor inflation expectations well above zero and avoid deflation. . . a higher inflation target implies a higher steady-state nominal interest with more room for interest-rate cuts before reaching the zero bound.”²⁰

Ben Bernanke, in his influential paper “Japanese Monetary Policy: A Case of Self-Induced Paralysis?,” writes, “[He] does not deny that important structural problems . . . constraining Japanese growth. . . . The Japanese economy is also suffering today from an aggregate demand deficiency. If monetary policy could deliver increased nominal spending,” structural problems would not seem so difficult.²¹ Bernanke says that the negative rate of price increase points support his diagnosis of an aggregate demand deficiency (as shown in earlier graphs). Furthermore, he cites nominal and real yen-dollar rates which have “generally strengthened over the period, which is consistent with the deflationist thesis.” (View Table 2)²²

After identifying deflation as the problem, Bernanke argues that “monetary policy retains considerable power to expand nominal aggregate demand.” In February of 1999, the BOJ announced that it would maintain its zero rates “until deflationary

Table 2: Nominal and Real Yen- Dollar Rates

Year	(1) Yen/\$ rate	(2) Real Yen/\$ rate	(3) Land prices (% change)	(4) Stock prices (% change)	(5) Real GDP (% change)
1991	129.5	72.2	0.55	2.38	2.41
1992	123.0	69.4	-5.11	-32.03	0.14
1993	108.1	62.4	-5.13	16.91	0.47
1994	98.8	58.5	-3.82	0.47	0.66
1995	101.5	61.5	-4.30	-4.90	2.49
1996	112.8	71.2	-4.43	5.47	4.66
1997	125.2	79.6	-3.62	-20.85	-0.61
1998	119.8	77.0	-4.38	-15.37	-2.94
1999	113.6	78.3	-5.67	23.00	0.91

concerns subside.”²³ Bernanke believed that this announcement was positive, but argued that the phrase “until deflationary concerns subside” was too vague. Similar to Krugman, Bernanke suggests an inflation target of three to four percent “to be maintained for a number of years” to confirm its intent on maintaining the price gap but also to “make up some of the ‘price-level gap’ created by eight years of negative inflation.”²⁴ In a speech to the Japan Society of Monetary Economics, Bernanke also argued “once the price-level target was reached [by filling the ‘price gap’] the objective for policy would become a conventional inflation target or a price-level target that increases over time at the average desired rate of inflation.”²⁵

Bernanke’s next policy prescription called for depreciation of the yen through “large open-market sales of yen.” Through its effects on import-price inflation, on the demand for Japanese goods, and on expectations, significant yen depreciation would go a long way toward jump-starting the reflationary process in Japan.”²⁶ He argues this is possible by BOJ effectively printing yen to acquire foreign assets.

Another Bernanke policy proposal included a money-financed tax cut which would combine fiscal and monetary policies. The BOJ would purchase government securities equal to the cost of the tax cut “to reduce the net interest cost of the tax cut to the government.”²⁷ The result would be an increase in aggregate demand and prices. Therefore, since the BOJ “purchased government debt in the amount of the tax cut – no current or future debt service burden has been created to imply increased future taxes.”²⁸ Thus, Bernanke’s argument avoids a situation of Ricardian equivalence. Also, the policy would reduce debt-to-GDP ratios as the purchases would leave “nominal quantity of debt in the hands of the public unchanged, while nominal GDP

¹⁹ Ibid.

²⁰ Leigh, Daniel. “Monetary Policy and the Lost Decade: Lessons from Japan,” 19.

²¹ Bernanke, Ben. “Japanese Monetary Policy: A Case of Self-Induced Paralysis?” 6.

²² Ibid, 7.

²³ Ibid, 16.

²⁴ Ibid, 17.

²⁵ Bernanke, Ben. “Some Thoughts on Monetary Policy in Japan,” 3.

²⁶ Bernanke, Ben. “Japanese Monetary Policy: A Case of Self-Induced Paralysis?” 18.

²⁷ Ibid, 23.

²⁸ Bernanke, Ben. “Some Thoughts on Monetary Policy in Japan,” 8.

would rise owing to increased nominal spending.”²⁹

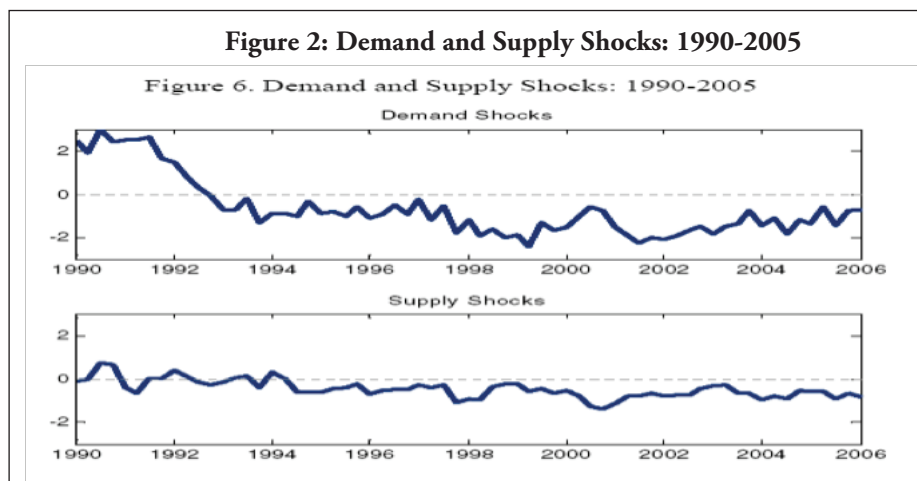
Bernanke’s final proposal was for non-standard open-market operations. To this he proposed the BOJ purchase “long-term government bonds. . . commercial paper, corporate bonds, and asset-backed securities under repurchase agreements, or to lend allowing these assets as collateral.”³⁰ He says this money-financed “gift” to the private sector would expand aggregate demand similar to his earlier proposal for a money-financed tax cut.

Olivier Blanchard, in his paper “Bubbles, Liquidity traps, and Monetary Policy,” begins by agreeing with the assertion of Krugman and Bernanke that central banks can affect real rates even with zero nominal interest rates. He argues that an inflation target of “two percent per year for the next 10 years should in principle be enough to decrease the long real rate today by two percent. In practice however, financial markets tend to believe deed more than words.”³¹ Therefore, alternatively to the Krugman/Bernanke approach of inflation targeting he suggests an increase in the stock of “high powered money today by, say, 20 percent, and commit not to reverse the increase in the future.”³² Blanchard states that this could be a more credible way to show the commitment to inflation. “One can argue that monetary policy works mostly – entirely? – through its effects on expectation.”³³ The emphasis is put on the expected future price level, rather than changes in future expected nominal interest rates.

Svensson exemplifies Blanchard’s argument saying inflation targets may not be enough especially if “for a central bank like the Bank of Japan or the Federal Reserve that have for many years publicly resisted announcing an inflation target.” He says that this would be regarded as “an unconvincing ‘gallows speech,’ to be disregarded when the liquidity trap is over.”³⁴

Blanchard also argues against Bernanke’s proposal for the BOJ to purchase government securities. He cites that his proposal to increase the ratio of high powered money was credible because its ratio to GDP in Japan was around 12 percent; therefore increasing the quantity of high-powered money by 20 percent would represent a change equal to only 2.4 percent of GDP. Meanwhile the ratio of government bonds to GDP was approaching 100 percent, thus “whether the increase in money is used to buy short or long term government bonds is unlikely to make much difference to their relative equilibrium rates of return.”³⁵

Daniel Leigh, in his paper Monetary Policy and the Lost Decade: Lessons from Japan, identifies negative real demand shocks, which reflect a decline in investment spending, banking crisis, consumption hike, and the Asian financial crisis, and supply shocks. These shocks “reduce inflation can, when nominal interest rates are at the zero lower bound, raise real interest rates and thus depress output.”(View Figure 2)³⁶



²⁹ Ibid, 9.

³⁰ Bernanke, Ben. “Japanese Monetary Policy: A Case of Self-Induced Paralysis?” 23.

³¹ Blanchard, Olivier. “Bubbles, Liquidity traps, and Monetary Policy,” 10.

³² Ibid.

³³ Ibid, 11

³⁴ Svensson, Lars. “Escaping from a Liquidity Trap and Deflation,” 151.

³⁵ Blanchard, Olivier. “Bubbles, Liquidity traps, and Monetary Policy,” 13.

³⁶ Leigh, Daniel. “Monetary Policy and the Lost Decade: Lessons from Japan,” 18-19.

As a result, Mr. Leigh analyzes several policy prescriptions such as inflation targeting, stronger output gap response, and price level targeting. His analysis indicates that a combination of inflation targeting and output gap response would be more desirable than one or the other, while price-targeting “would have delivered more stable macroeconomic performance than a higher inflation target and more vigorous output-gap response combined.”³⁷

Japanese Implications for Current U.S. Economic Crisis Policy

Although the bubbles of the US and Japan are extremely different in the means with which they were fueled, the implications of the Japanese lesson can be applied to the US. As Ben Bernanke, Chairman of the Federal Reserve, has written extensively on Japan's Lost Decade and scholars have developed a great list of measures to prevent both liquidity trap and deflation, the US has benefitted greatly from hindsight.

Chairman Bernanke and the Federal Reserve have taken drastic measures to combat deflation, lowering the federal funds rate to effectively zero (currently 0.13 percent).³⁸ Mr. Bernanke understands, through his analysis of Japan, that the essentially zero federal funds rate is “eliminating the possibility of further stimulating the economy through cuts in the target rate,” but has committed to “a number of actions and initiated a series of new programs that have increased the size and changed the composition of the Federal Reserve's balance sheet.”³⁹

All asset purchases and lending in the recent economic crisis has caused the Federal Reserve's balance sheet to more than double, from less than \$900 billion before the crisis began to about \$2.2 trillion today.⁴⁰ The programs which have expanded the Fed's balance sheet are summarized in Bernanke's speech “The Federal Reserve's Balance Sheet: An Update:”

- (1) short-term lending programs that provide backstop liquidity to financial institutions such as banks, broker-dealers, and money market mutual funds;
- (2) targeted lending programs, which include loans to nonfinancial borrowers and are intended to address dysfunctions in key credit markets;
- (3) holdings of marketable securities, including Treasury notes and bonds, the debt of government-sponsored enterprises (GSEs) (agency debt), and agency-guaranteed mortgage-backed securities (MBS); and
- (4) emergency lending intended to avert the disorderly collapse of systemically critical financial institutions. I will say a bit more about each of these in turn.⁴¹

Short-term lending program assets currently total about \$264 billion, which is about 12 percent of the assets on the Federal Reserve's balance sheet. The category of assets consists mainly of loans made directly or indirectly to sound financial institutions, which mature in 90 days and “they involve very little credit risk.”⁴²

The second program of targeted lending, unlike the first category, includes nonfinancial borrowers. This category comprises the Commercial Paper Funding Facility (lending to “high quality commercial paper issuers”) and the Term Asset-Backed Securities Loan Facility (TALF-purchase of credit for households and small businesses, including auto loans, credit card loans, student loans, loans guaranteed by the Small Business Administration and commercial mortgage-backed securities to the program). The current amount of credit outstanding under these programs is about \$84 billion, or four percent of the assets held by the Federal Reserve.⁴³

Purchases of Longer-Term, Marketable securities include; Treasury securities (“bring Treasury debt back to roughly the level of before the crisis”), agency debt, and agency-backed mortgage backed securities (to “lower the cost and improve the availability of credit for households and businesses”). These holdings currently total about \$1.6 trillion, or about 75 percent of Federal Reserve assets.⁴⁴

The emergency lending program used the Fed's emergency lending powers facilitated the acquisition of Bear Stearns by JPMorgan Chase and Company and also prevented the “imminent” default of the insurance company AIG, amounting to

³⁷ Ibid, 26.

³⁸ BLS.gov. “Consumer Price Index 2007-2009.” Federal Reserve.gov. “Federal Reserve Statistical Release.”

³⁹ Bernanke, Ben. “The Federal Reserve's Balance Sheet: An Update.”

⁴⁰ Bernanke, Ben. “At the Economic Club of Washington D.C.”

⁴¹ Bernanke, Ben. “The Federal Reserve's Balance Sheet: An Update.”

⁴² Ibid.

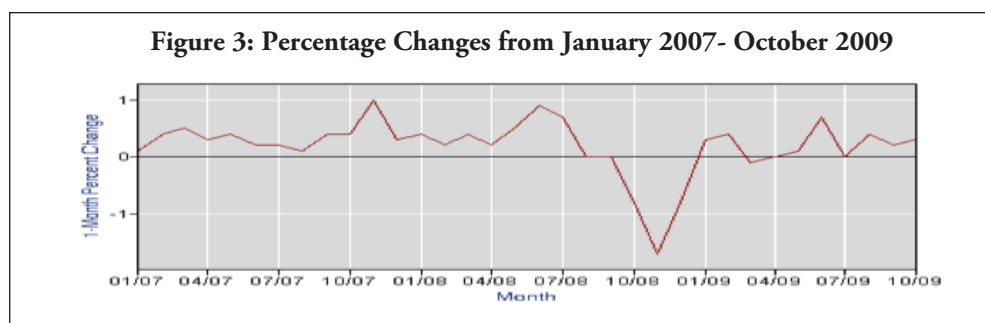
⁴³ Ibid.

⁴⁴ Ibid.

\$101 billion.⁴⁵ Chairman Bernanke's recent statements indicate his confidence in the measures taken in attempts to avert the crisis. Policymakers here and abroad had undertaken an extraordinary series of actions aimed at stabilizing the financial system and cushioning the economic impact of the crisis. Critically, these policy interventions succeeded in averting a global financial meltdown that could have plunged the world into a second Great Depression.⁴⁶ Bernanke indicates that expansionary monetary policies of this magnitude are important to the growth of the economy but maintains "We have been giving careful thought to our exit strategy. We are confident that we have all the tools necessary to withdraw monetary stimulus in a timely and effective way."⁴⁷

The Federal Reserve's significantly expansionary monetary policies are indicative of its awareness of the Japanese deflationary/liquidity trap dilemma. In Bernanke's analysis of Japan, he argued that the Japanese could effectively increase aggregate demand, price levels, and real economic activities through an inflation target, commitment to fill the price gap, lowering the exchange rate, a money financed tax cut (combining fiscal and monetary authority), and the direct purchase of commercial paper, corporate bonds, asset-backed securities, and long-term government bonds through nonstandard open-market operations.⁴⁸

Most of the programs listed above, which have drastically expanded the Fed's balance sheet, covering much of Chairman Bernanke's prescription for the Japanese economy in the 1990s. Although not overtly targeting inflation, the Fed has committed to maintaining extremely low interest rates. Recent questioning about the Fed's ability to reel in its expanded balance sheet when the economy begins to recover, many fearing high inflation, is indicative of future inflationary expectations which was Bernanke's ultimate justification for inflation targets in Japan, to lower real central bank interest rates into negative range. Recent, but low, increases in inflation indicate that the Fed is reducing the prospect of deflationary expectations.⁴⁹



Federal Reserve purchases of Treasury securities to bring Treasury debt back to roughly the level of before the crisis, was a similar argument proposed by Bernanke in the Japanese to purchase government securities. Although the treasury is not overtly funding a tax cut to American citizens or lowering the exchange rate of the US dollar, the Fed is allowing the Treasury Department more flexibility to efficiently perform (and essentially preventing future Treasury market interventions from being funded by US tax payers). Bernanke called for more monetary-fiscal cooperation because he thought, "by replacing interest-bearing debt with money, BOJ purchases of government debt lower current deficits and interest burdens and thus the public's expectations of future tax obligations."⁵⁰

Also notable, is the Fed's nonstandard open market operations in which Commercial Paper Funding Facility (lending to "high quality commercial paper issuers") and the Term Asset-Backed Securities Loan Facility programs along with purchases of longer-term, marketable securities fit the Bernanke policy proposals for the Bank of Japan. The Fed's facilitation of the acquisition of Bear Stearns by JPMorgan Chase and Company and prevention of the "imminent" default of the insurance company AIG, are indicative of the Fed's extreme commitment to using all its powers to stabilize the economy and prevent future stagnation, similar to the "Lost Decade," in the US economy.

⁴⁵ Ibid.

⁴⁶ Bernanke, Ben. "At the Economic Club of Washington D.C."

⁴⁷ Ibid.

⁴⁸ Bernanke, Ben. "Japanese Monetary Policy: A Case of Self-Induced Paralysis?"

⁴⁹ BLS.gov. "Consumer Price Index 2007-2009."

⁵⁰ Bernanke, Ben. "Some Thoughts on Monetary Policy in Japan," 9.

Conclusion

The “Lost Decade” has provided insight into the prevention of deflation and the escape from liquidity trap with direct implications for the handling of future economic crises. The US in particular has benefited from the Japanese experience as US policymakers have interpreted and applied scholarly analysis of the Lost Decade to the current economic crises within the US. In particular, current Federal Reserve Chairman Ben Bernanke contributed and applied many of his own policy prescriptions which were intended for Japan in the 1990s to the US.

In this way, understanding Japan's Lost Decade, the causes and consequences, is particularly relevant as November 2009 unemployment data reveals a high figure of 10.0 percent. The increasing importance of solving the problems plaguing the US economy will affect these unemployed, as policies attempting to bolster aggregate demand are crafted and applied. Although scholarly debate was relatively intense during the Japanese Lost Decade, the policies currently being enacted which reflect these different opinions are untested as the Japanese were either late in applying similar programs or did not apply them at all. Therefore, justification for massive expansionary monetary policy remains untested and long-term effectiveness is inconclusive.

Yet, as the Japanese experience reveals, doing nothing is not an option, as prolonged deflationary recession would likely result. Bernanke concludes his influential paper, “Japanese Monetary Policy: A Case of Self-Induced Paralysis?,” with a call for “Rooseveltian Resolve.” Bernanke applauds the President's Depression area “willingness to be aggressive and to experiment . . . for having the courage to abandon failed paradigms and to do what needed to be done.”⁵¹

Japanese monetary policy seems paralyzed, with a paralysis that is largely self-induced. Most striking is the apparent unwillingness of the monetary authorities to experiment, to try anything that is not absolutely guaranteed to work. Perhaps it is time for some Rooseveltian resolve in Japan.⁵²

It is unclear whether Chairman Bernanke and the Federal Reserve are prescribing the best policies for the US economy, but it has become increasingly evident that they will do all in their power to stimulate economic growth, applying “Rooseveltian resolve” through and through. It is unclear yet whether these measures will be effective.

References

Bernanke, Ben. “At the Economic Club of Washington D.C.” *Federal Reserve.gov*, 7 December 2009, <http://www.federalreserve.gov/newsevents/speech/bernanke20091207a.htm#fn6>.

———. “Japanese Monetary Policy: A Case of Self-Induced Paralysis?” *International Institute for Economic.com*. Within: Posen, Adam and Mikitani, Ryoichi, “Japan's Financial Crisis and its Parallels to U.S. Experience.” September 2000, pp. 149-166.

———. “Some Thoughts on Monetary Policy in Japan.” *Federal Reserve.gov*. May 2003, <http://www.federalreserve.gov/BoardDocs/Speeches/2003/20030531/default.htm>.

———. “The Federal Reserve's Balance Sheet: An Update.” *Federal Reserve.gov*, 8 October 2009, <http://www.federalreserve.gov/newsevents/speech/bernanke20091008a.htm>.

Blanchard, Olivier. “Bubbles, Liquidity Traps, and Monetary Policy.” January 2000, <http://econ-www.mit.edu/files/718>, pp. 1-13.

BLS.gov. “Consumer Price Index 2007-2009.” http://data.bls.gov/PDQ/servlet/servlet/SurveyOutputServlet?data_tool=latest_numbers&series_id=CUSR0000SA0&output_view=pct_1mth.

⁵¹ Bernanke, Ben. “Japanese Monetary Policy: A Case of Self-Induced Paralysis?” 25-26.

⁵² Ibid.

Federal Reserve. "Federal Reserve Statistical Release." *Federal Reserve.gov*. 7 December 2009, <http://www.federalreserve.gov/releases/h15/Current/>.

Gordon, Robert J. *Macroeconomics*, Pearson Education, Inc., 2009. International: Eleventh Edition, pp. 1-603.

Horioka, Charles. "The Causes of Japan's 'Lost Decade': The Role of Household Consumption." Center for Japan-U.S. Business and Economic Studies: Working Paper. November 2006. Forthcoming in *Japan and the World Economy*, Vol. 18, No. 4 (December, 2006), pp. 1-43.

Krugman, Paul. "It's Baaack: Japan's Slump and the Return of the Liquidity Trap." The Brookings Institute. *Brookings Papers on Economic Activity*, Vol. 1998, No. 2 (1998), pp. 137-205.

Kuttner, Kenneth and Posen, Adam. "Passive Savers and Fiscal Policy Effectiveness in Japan." 14 December 2001.

Leigh, Daniel. "Monetary Policy and the Lost Decade: Lessons from Japan." International Monetary Fund. IMF Working Paper. October 2009, pp. 1-32.

Svensson, Lars. "Escaping from a Liquidity Trap and Deflation." American Economic Association. *The Journal of Economic Perspectives*: Vol. 17, No. 4 (Autumn, 2003), pp. 145-166. <http://www.jstor.org/stable/3216935>.