

# **JAPAN INSIDE THE BLACK HOLE**

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## **Abstract**

When the demand for money is infinitely interest elastic, injecting base money into the system is akin to money being sucked into a Black Hole. Economic activity will not be revived by driving the rate of interest to zero. Full employment can only be restored by a judicious combination of fiscal, monetary, trade and other policies. Fiscal and monetary policy should aim at raising Tobin's  $q$ , not lowering the cost of funds. Deflation can be good or bad. 'Stagdeflation' is bad whilst 'growthdeflation' is good. Targeting inflation treats only the symptom, not the disease. Trade liberalisation by Japan is superior to yen depreciation as a means of exploiting the foreign trade multiplier to the benefit of the global as well as the Japanese economy.

**JEL Classification:** E52, E31, E58, F41

**Key words:** monetary and fiscal policy, liquidity trap, inflation, deflation, stagflation, Japan

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## Introduction

Japan has had a rough ride in the last few years. Her real GDP in the September quarter 2002 is lower than that in the December quarter 2000. Unemployment rate has increased from a low of 2.0 percent in February 1992 to 5.3 percent in November 2002. Despite injecting a substantial amount of base money into the system and forcing the target call rate to zero percent since February 1999, the Bank of Japan has failed to lift the economy out of the doldrums. The CPI in November 2002 is approximately the same as that prevailing in July 1993. The 12-month percentage changes in the CPI have been mostly negative since February 1999. Expansionary monetary policy has failed to revive the economy. Japan has been sucked into a Black Hole.

John Maynard Keynes, had he lived today, would probably describe the current plight of Japan as being caught in a 'classic' liquidity trap.<sup>1</sup> The latter is characterised by (i) an infinitely elastic demand for money at a nominal rate of interest which is zero or close to zero, (ii) the rate of inflation is close to zero or may even be negative, (iii) the real GDP has stopped growing or may even be declining and (iv) the unemployment rate is high and possibly rising. The main policy implications are that expansionary monetary policy is impotent in stimulating economic activity and expansionary fiscal policy is the only hope for salvaging the economy. When the economy is languishing inside a liquidity trap, policymakers should abandon the monetary approach and adopt the expenditure approach instead.

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<sup>1</sup> See chapter 15 in Keynes (1936). Section 3 of chapter 14 in Patinkin (1965) provides an exposition of how the Keynesian liquidity trap works.

In this paper, we contend firstly that the Keynesian proposition that underemployment equilibrium can exist has been vindicated by the current Japanese experience. The monetarist and New Classical proposition that the economy will be at full employment and the natural rate of unemployment prevails when inflationary expectations are fully adjusted appears to have been invalidated. Rational expectations on the part of economic agents will not be sufficient to remove the risk that a country can be liquidity trapped for a long time.

Secondly, we distinguish between good and bad deflation. Good deflation is when the economy experiences economic growth and deflation, or 'growthdeflation'. Bad deflation is when deflation is accompanied by economic stagnation, or 'stagdeflation'.

Thirdly, we discuss measures which may assist Japan in getting out of the Black Hole. The remedy proposed by some economists, such as Krugman (1998a, 1998b), Svensson (2001) and Taylor (2000), that Japan should target a positive rate of inflation is considered to be neither necessary nor sufficient to help her escape the liquidity trap because it treats only the symptom, not the disease.

We discuss also the merits of some other schemes such as the use of expansionary fiscal policy, depreciation of the Japanese yen, trade liberalisation and the imposition of a carry tax on the holding of money balances. The most likely solution to the Japanese stagdeflation problem is to adopt an appropriate mix of fiscal, monetary and trade policies to target aggregate demand. As the paper deals with only

macroeconomic issues, the role of microeconomic reform, in particular, proposals to revamp the Japanese financial system, will not be canvassed.

### **Underemployment Equilibrium**

It is central to the debate between Keynes and the classics that an economy can stagnate for a lengthy period of time, according to the former, but any stagnation will only be temporary, according to the latter, because there exists innate market forces which will restore full employment. In his *General Theory*, Keynes (1936) argues that due to market imperfections such as commodity prices and nominal wages which may be rigid downward, interest rates which are subject to a zero lower bound (ZLB) and the absence of a Walrasian auctioneer, which renders the tatonnement process of groping for a set of market-clearing prices inoperative, a modern economy may experience prolonged periods of recession as in the Great Depression of the 1930s. In the classical system, any imbalance between supply and demand in a market, be it for a commodity or for labour, will be eliminated by price adjustment. Price will rise when there is excess demand. Price will fall when there is excess supply. Provided that the supply and demand schedules have the normal slopes, equilibrium will be automatic and stable as long as the Walrasian adjustment mechanism is allowed to operate.

In the 1970s, the world experienced stagflation, the coexistence of high inflation and high unemployment, a phenomenon which many economists consider to be incompatible with the Keynesian theory. The monetarists, led by Milton Friedman (1968), claim that the Phillips trade-off between inflation and unemployment is only a

short-run phenomenon when inflationary expectations lag behind changes in the actual inflation rate. In the long run, inflationary expectations will adjust and reflect fully the actual rate of inflation. In the absence of expectational errors, the long-run Phillips curve is vertical. His natural rate of unemployment (NRU) hypothesis has been widely accepted by academic economists and policymakers alike.<sup>2</sup>

Friedman's NRU hypothesis relies on adaptive expectations. It takes time for expectations to adjust to the actual changes in the rate of inflation. In the meantime, production can diverge from the full-employment level of output due to unanticipated changes in prices. The NRU hypothesis implies that inflation will accelerate when unemployment is below it and disinflation will accelerate when unemployment is above it. This accelerationist theory posits the existence of a non-accelerating inflation rate of unemployment (NAIRU).

With the advent of the rational expectations (RE) revolution in the 1970s, Lucas (1972) and others, have incorporated the RE hypothesis into a classical system of flexible prices and wages. The new school of macroeconomics becomes the New Classical Economics (NCE) which denies the existence of the Keynesian underemployment equilibrium. Anticipated policy changes will have no impact on the economy which tends to be at full employment except for random disturbances. Only unanticipated policy changes can affect real variables. The Lucas aggregate supply function postulates that there is a natural level of output ( $Y_n$ ) which corresponds to the NRU. Any unemployment which exists when the economy is operating at  $Y_n$  is, by

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<sup>2</sup> For instance, King, a Deputy Governor of the Bank of England, suggests that there is a consensus among the industrialised countries and emerging markets that "price stability is the overriding objective of monetary policy, ... [It] reflects the intellectual revolution which 'rediscovered' the absence of a trade-off in the long run between inflation and output" (1999, p. 398).

definition, voluntary. The actual level of output ( $Y$ ) may deviate from  $Y_n$  if the expected rate of inflation ( $\pi^e$ ) deviates from the actual rate of inflation ( $\pi$ ). Inflationary expectations are formed according to the RE hypothesis.

Examining the current state of the Japanese economy, we contend that the evidence supports the Keynesian notion of an underemployment equilibrium more than the NCE proposition that the output gap, the difference between the potential and actual levels of output, is only small and transitory. Figure 1 shows the real GDP. Figure 2 shows its year-ended growth rate. After the bursting of the stock market bubble in December 1989, Japan was placed in a much lower growth trajectory in the 1990s than in the previous decade. In particular, it experienced several episodes of recession in the second half of the 1990s.

FIGURE 1

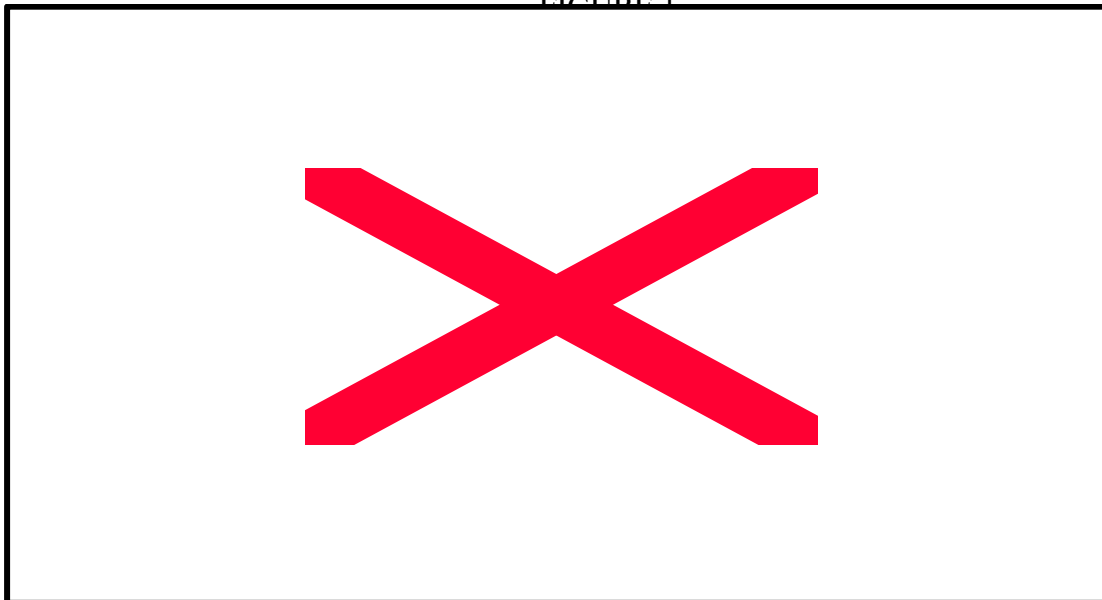
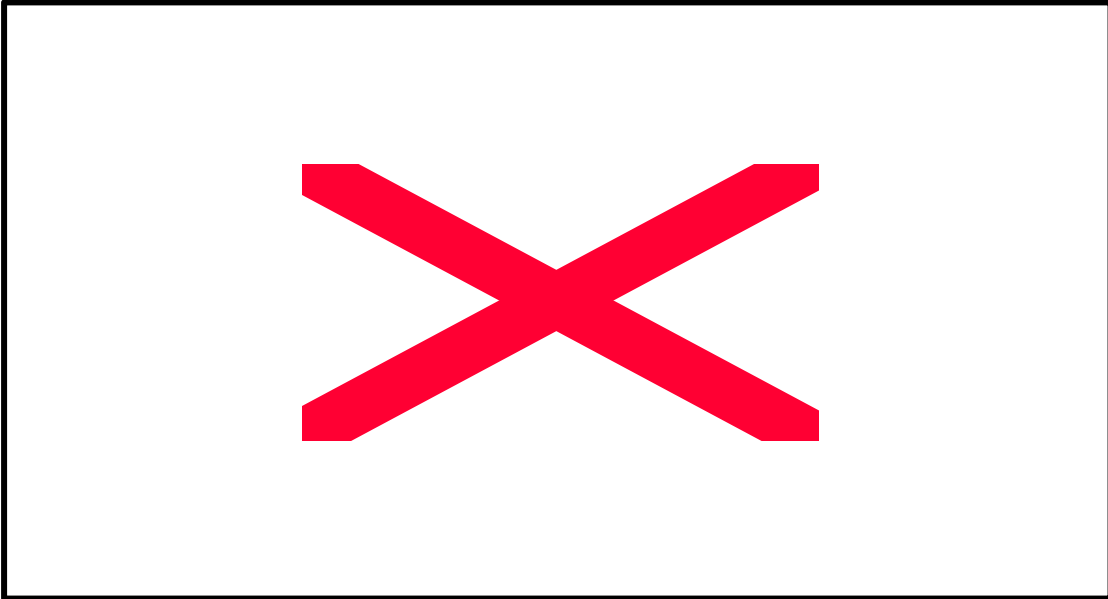


FIGURE 2



Figures 3 and 4 show the behaviour of the CPI from January 1960 to October 2002. The CPI was 100.0 in August 1993 (1995 = 100) and was 99.8 in October 2002. This was a period of remarkable price stability. The fluctuations in the annual percentage change in the CPI ranged from a high of 2.49 percent to a low of -1.58 percent during the period. When prices were so stable, forecasters of CPI were unlikely to make substantial mistakes. Whether they adopted adaptive or rational expectations became almost immaterial. The impact of expectational errors on investment and production decisions would be minor. Yet the output gap between potential and actual real output in Japan has been estimated at 8 percent or more in 1998 by Krugman (1998a), 6 to 7 percent by Taylor (2000) and 8 to 11 percent by Kuttner and Posen (2001). Figure 5 shows the unemployment rate moving up from a low of 2.0 percent in February 1992 to a high of 5.5 percent in October 2002. Figure 6 shows the capacity utilisation rate obtained from business survey. Both sets of data tend to confirm the widening output gap in the late 1990s.

FIGURE 3

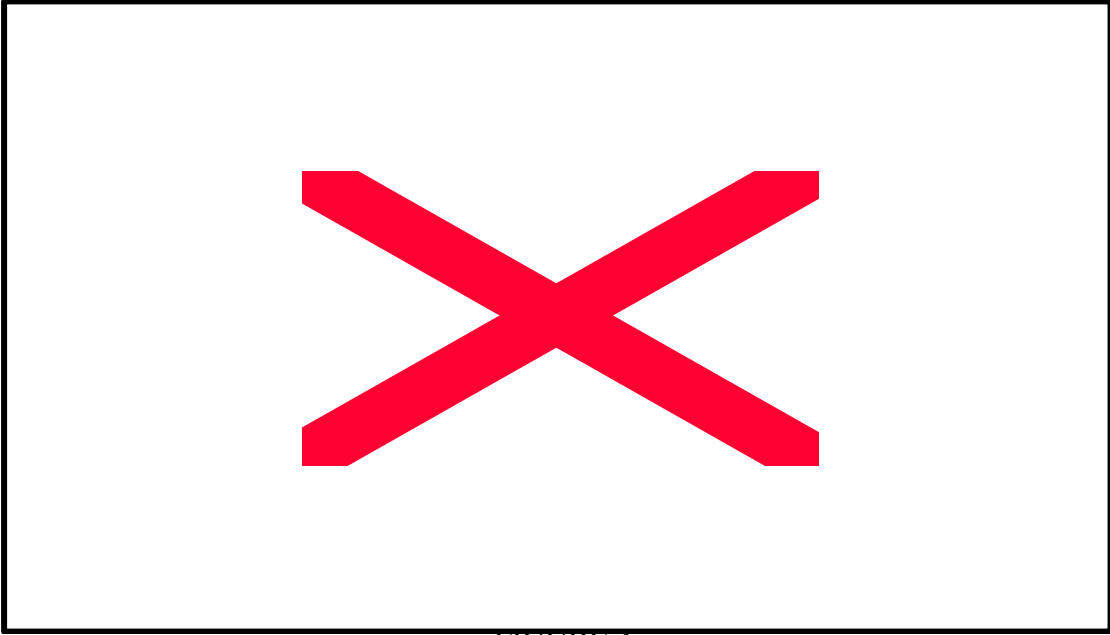


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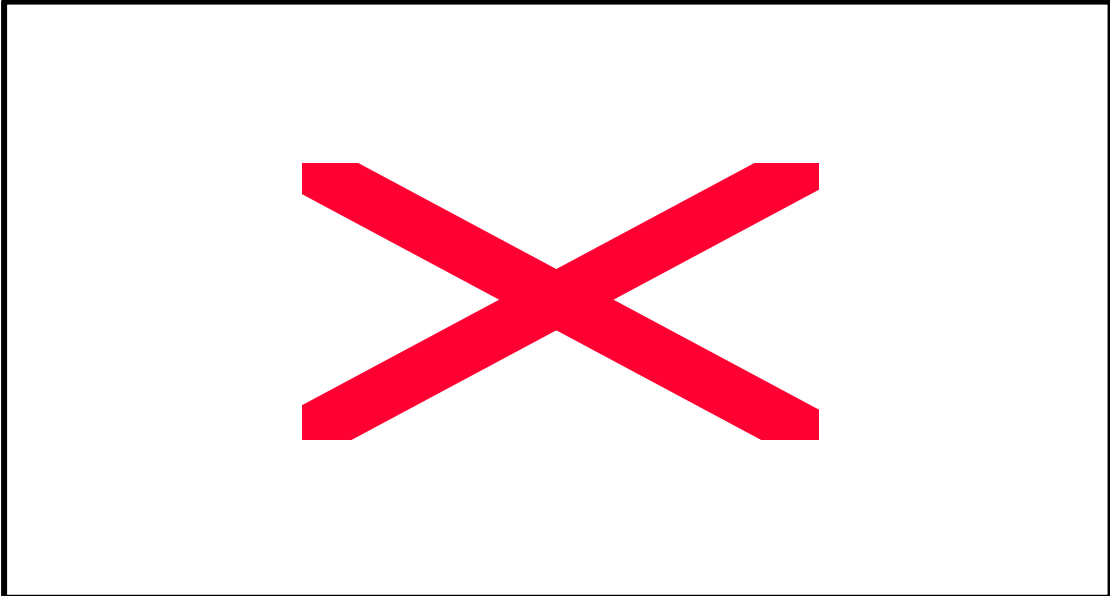


FIGURE 5

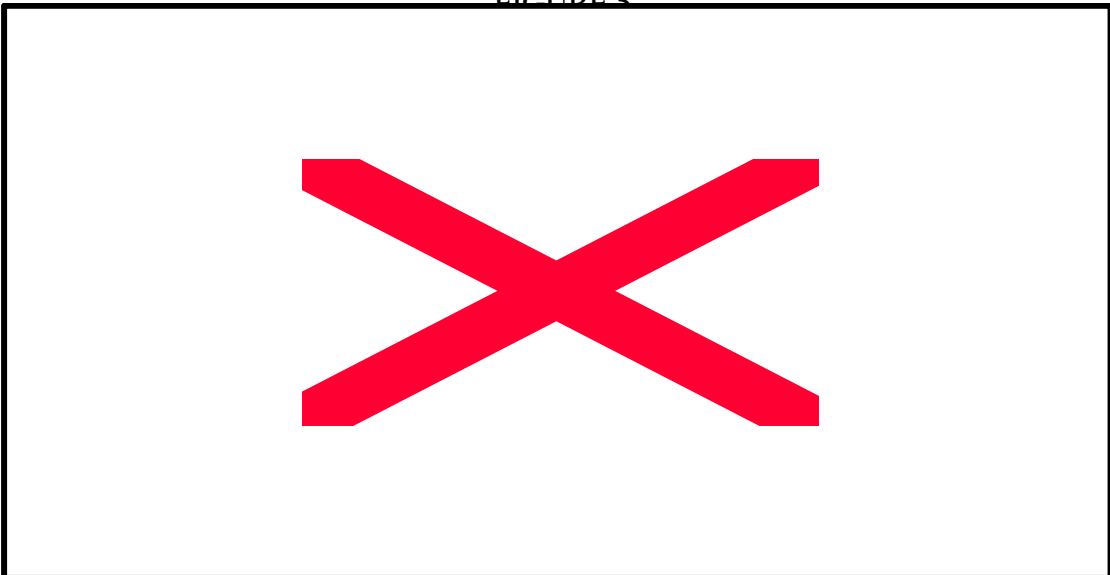


FIGURE 6

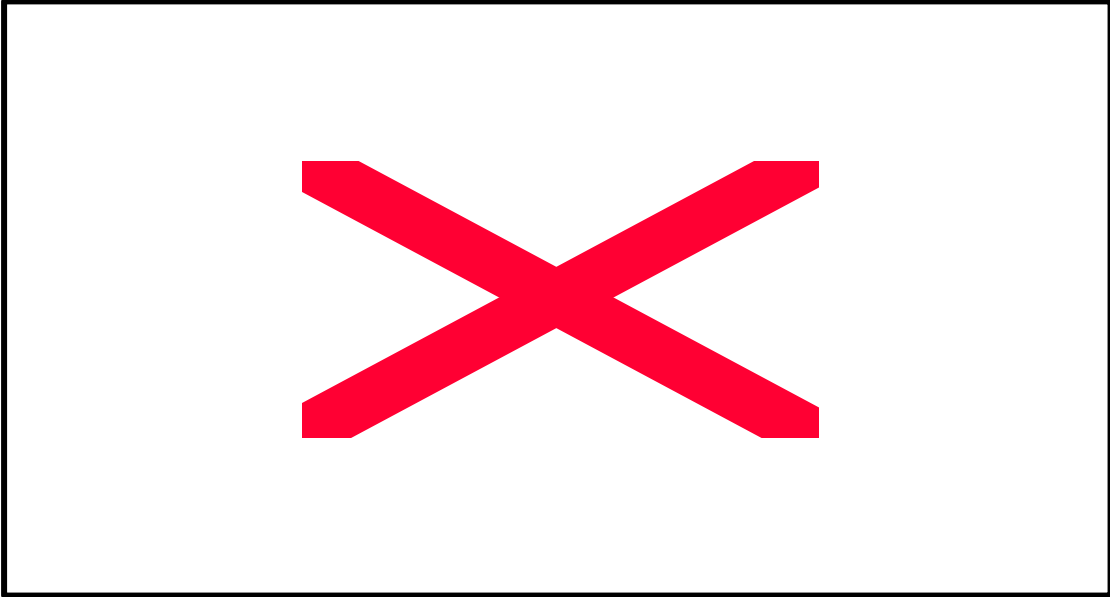


Figure 7 shows the uncollateralised overnight call rate which has been at or close to zero since March 1999. Figure 8 shows the level and Figure 9 the growth rate of broad money which is defined as  $M2 + CD$ . Except for the above-trend increase in the early 1990s, its behaviour in the second half of the 1990s followed the trend established in the 1970s and 1980s.

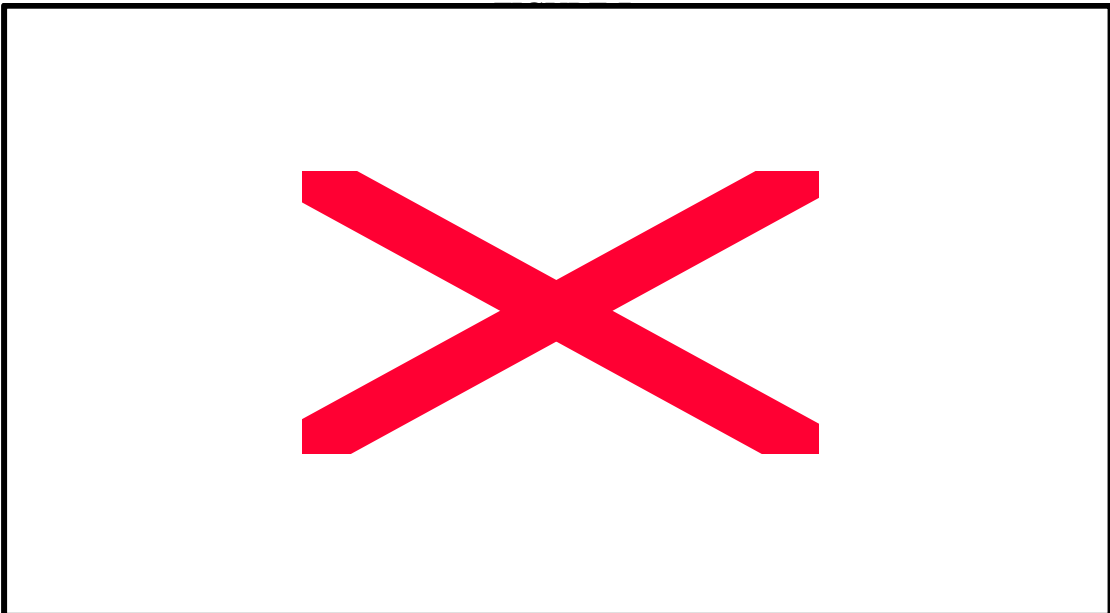


FIGURE 8

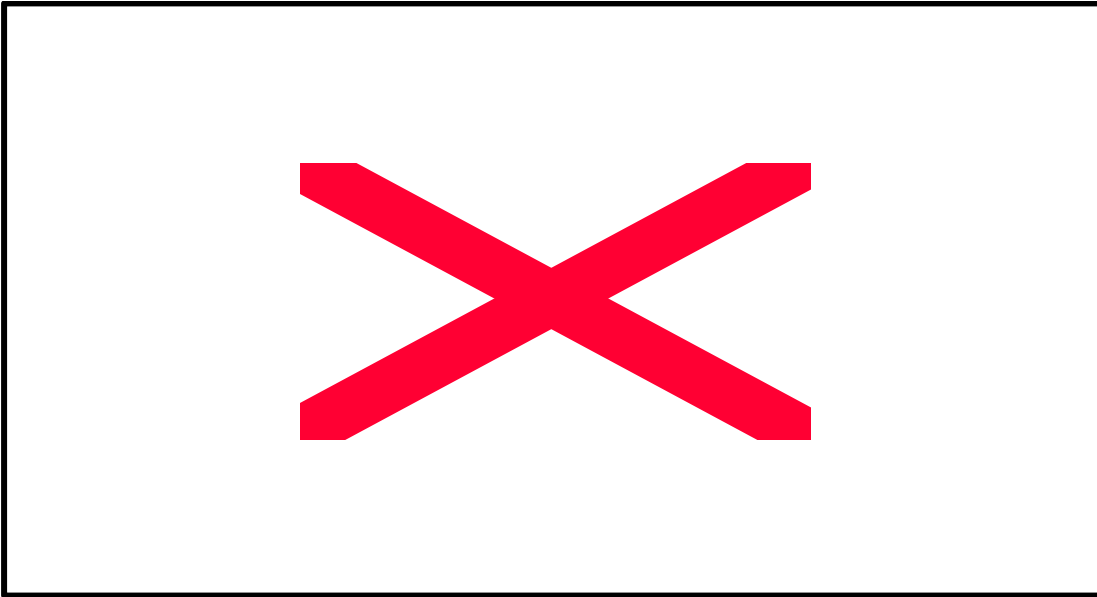
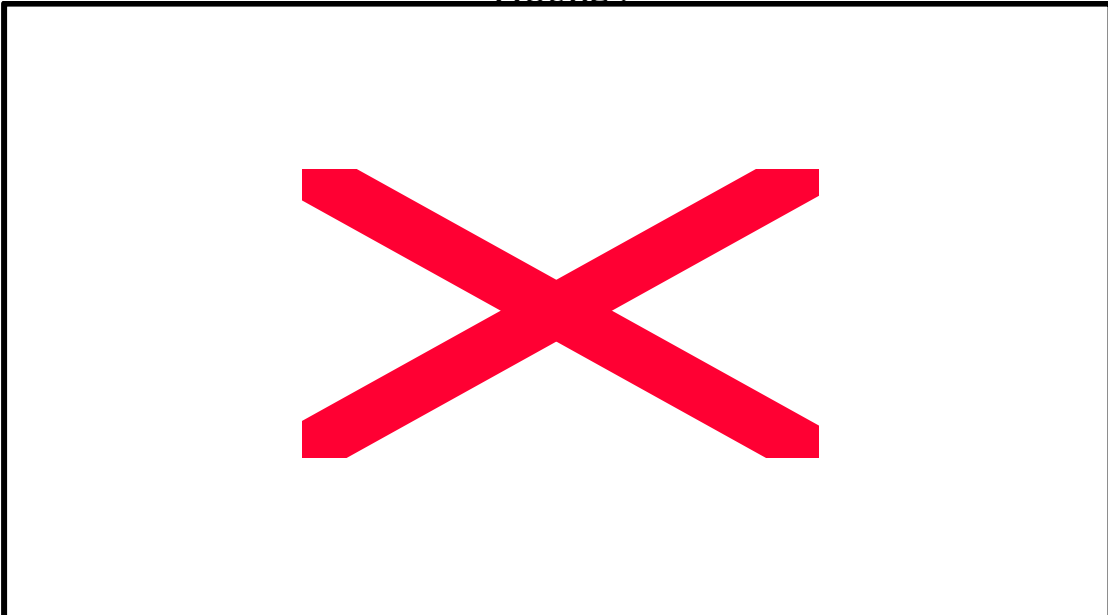


FIGURE 9



Whether we prefer to call the current state of the Japanese economy a situation of low-employment equilibrium or underemployment equilibrium *à la* Keynes may be a matter of semantics but it does not alter the fact that the economy is no where near full employment.<sup>3</sup>

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<sup>3</sup> Krugman (1998a, 2000) suggests that if the marginal propensity to consume is not constant, it is possible to have multiple equilibria and liquidity trap represents a low-level equilibrium.

## Good versus Bad Deflation

It is a perception held by many economists that deflation is bad for business.<sup>4</sup> When prices are declining, firms tend to be making losses. They lack incentives to invest. Production contracts and unemployment increases. Since Japan has been experiencing mild deflation for a number of quarters, many eminent economists have proposed that what Japan needs is to target a positive low single-digit rate of inflation.<sup>5</sup> When the short-term interest rate is close to zero, the monetary authority has very little room to manoeuvre. There is a zero lower bound (ZLB) below which the central bank cannot force the official call rate to fall. Expansionary monetary policy becomes impotent to raise aggregate demand when the demand for real balances is infinitely interest elastic at the ZLB.

There are, however, two sides to a coin.<sup>6</sup> Deflation may or may not be bad, depending on why prices are falling. If prices are falling due to insufficient demand, this is bad because production drops and employment declines.<sup>7</sup> On the other hand, prices may have dropped because labour productivity has risen, management has become more efficient, favourable weather has produced a bumper harvest or competition has become more intensified. The cost of production may decline due to technological progress or the discovery of a cheaper source of raw materials. As a

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<sup>4</sup> See Palley (2000) for the case for positive low inflation and DeLong (1999, 2000) on the merits and demerits of deflation.

<sup>5</sup> The list includes Krugman (1998a), Kuttner and Posen (2001), McCallum (2000, 2001), Taylor (2000) and Svensson (2001), among others. Some officials from the BOJ have been converted also to the view that a positive inflation rate is essential to help Japan to recover from the current recession.

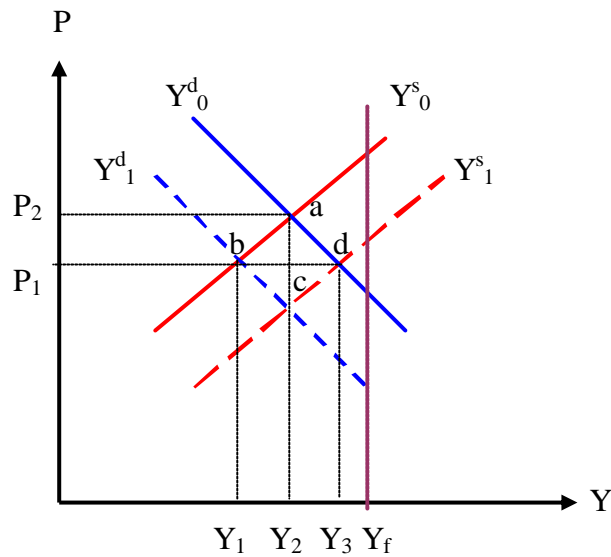
<sup>6</sup> Stevens (2002), Deputy Governor of the Reserve Bank of Australia, discusses both good and bad deflation. He prefers price stability to even 'good deflation' because the latter, if unanticipated, involves income redistribution from the debtors to the creditors.

<sup>7</sup> Kuttner and Posen (2001) contend that the current Japanese Great Recession is due to shrinking aggregate demand, which causes deflation, and there is evidence to confirm "its demand-side origin" (p. 94).

new product becomes mature over its product life cycle, there is a natural tendency for its price to drop. The product may be manufactured in small quantities initially at home. As it becomes widely accepted, it may be mass-produced. Price tends to decline as the production runs lengthen and average cost decreases. In later stages of its life cycle, the production facilities may be relocated overseas so as to take advantage of cheaper labour. When the price falls, demand increases and output rises. Deflation brought about by shifting of the supply curve downward and to the right is good deflation and should not be regretted.

Figure 10 shows an upward-sloping aggregate supply ( $Y^s$ ) schedule, a downward-sloping aggregate demand ( $Y^d$ ) schedule and the full-employment level of output is at  $Y_f$ . Suppose output is initially at  $Y_2$  and the price level is at  $P_2$ . If deflation is due to a lack of aggregate demand, shifting from  $Y_0^d$  to  $Y_1^d$ , output declines from  $Y_2$  to  $Y_1$  and the price level drops from  $P_2$  to  $P_1$ . Deflation in this case is considered to be 'bad' as employment also decreases. However, suppose technological progress induces  $Y_0^s$  to shift to  $Y_1^s$ . Output increases from  $Y_2$  to  $Y_3$  and the price level declines from  $P_2$  to  $P_1$ . Deflation in this case is 'good' as the higher aggregate demand will bring down unemployment also.

FIGURE 10



The accepted terminology to describe the case of shifting the aggregate supply curve upward and to the left while the aggregate demand curve is stationary is 'stagflation'. In the present circumstances when the aggregate demand curve can shift downward and to the left whilst the aggregate supply curve is stationary, using the term 'stagflation' will be imprecise and can be misleading. Therefore, it may be more appropriate to dub the case of a movement from  $(Y_2, P_2)$  at a to  $(Y_1, P_1)$  at b as 'stagdeflation' whilst the movement from  $(Y_3, P_1)$  at d to  $(Y_2, P_2)$  at a as 'stagninflation'.

To complete the taxonomy, we shall call the movement from, say,  $(Y_1, P_1)$  at b to  $(Y_2, P_2)$  at a, 'growthinflation' and from  $(Y_2, P_2)$  at a to  $(Y_3, P_1)$  at d, 'growthdeflation'. The welfare implications are that 'stagdeflation' is bad but 'growthdeflation' is good. Similarly, 'growthinflation' may be regarded as 'good inflation' whereas 'stagninflation' is 'bad inflation', when issues of income redistribution are ignored. Proponents of inflation targeting as a means of overcoming problems

associated with the liquidity trap presumably have 'growthinflation' instead of 'staginflation' in mind.

Inflation ( $\pi$ ) and price level (P) targeting is welfare-enhancing only when inflation is generated by excess demand in the goods market. Given  $Y^*_0$  and  $Y^d_1$  in Figure 10, targeting  $P^* = P_2$  or  $\pi^* = (P_2 - P_1)/P_1$  means targeting growth of real output from  $Y_1$  to  $Y_2$ . However, if equilibrium is initially at  $(Y_3, P_1)$  and inflation is caused by cost-push, targeting  $P^*$  or  $\pi^*$  means targeting contraction in real output from  $Y_3$  to  $Y_2$ , which signifies a decline in economic welfare. If cost-push inflation is accommodated by monetary expansion, then it is possible to have an underemployment equilibrium at  $Y_1$ ,  $Y_2$  or  $Y_3$ , which is compatible with a certain inflation target,  $\pi = \pi^*$ , selected by the central bank. This is achieved by simultaneous shifting of the  $Y^s$  and  $Y^d$  schedules upward.

The current price stability achieved in Japan is probably due to a combination of factors. The extremely low interest rates, for a start, will reduce the costs of borrowing for financing working capital, undertaking investment and personal consumption using credit cards, for instance. The Bank of Japan observes that "(1) low inflation in the 1990s largely reflected weak demand amid the economic slowdown, and (2) such supply-side factors as technological innovation, deregulation, intensification of global competition, and the distribution revolution have more recently put additional downward pressure on prices." (2000, p.2) Be that as it may, observation (2) signifies that the aggregate supply schedule has shifted downward and

to the right. This is ‘good’ deflation.<sup>8</sup> On the other hand, output has not grown much in the last seven years. The real GDP index increased from 100 in 1995 to only 108.0 in September 2002. Unemployment rate rose from 3.0 percent in January 1995 to 5.3 percent in November 2002. With a widening output gap and a substantial amount of excess capacity, the aggregate demand curve must have shifted to the left. This will result in lower prices, a decline in output and a drop in employment. This is ‘bad’ deflation. In terms of Figure 10, the balance of the two forces means that the Japanese economy may have remained close to  $Y_2$  but the price level has declined from  $P_2$  to  $P_1$ .

### **How Japan can get out of the Black Hole**

Patinkin (1948) has observed long time ago that the inability of the nominal interest rate to fall below zero may result in savings ( $S$ ) exceeding investment ( $I$ ) at the full-employment level of output ( $Y_f$ ). This is one of the causes of underemployment equilibrium in the Keynesian tradition. The real rate of interest ( $r$ ), which is the difference between the nominal rate of interest ( $i$ ) and the expected rate of inflation ( $\pi^e$ ), however, is not subject to such a constraint. If  $i = 0$  and  $\pi^e = 4$ , then  $r = i - \pi^e = -4$  percent.

In a simple closed economy, let  $I = I(Y, r)$ ,  $I_Y > 0$ ,  $I_r < 0$  and  $S = S(Y, r)$ ,  $S_Y > 0$ ,  $S_r > 0$ . When the system is in a liquidity trap,  $i$  is driven to, say, zero. Suppose there

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<sup>8</sup> After an extensive review of the statistical evidence, Kuttner and Posen (2001) conclude that the case for "good deflation" in Japan is not strong. In their opinion, there is a *prima facie* case that the chronic deflation is caused by a shortfall in demand.

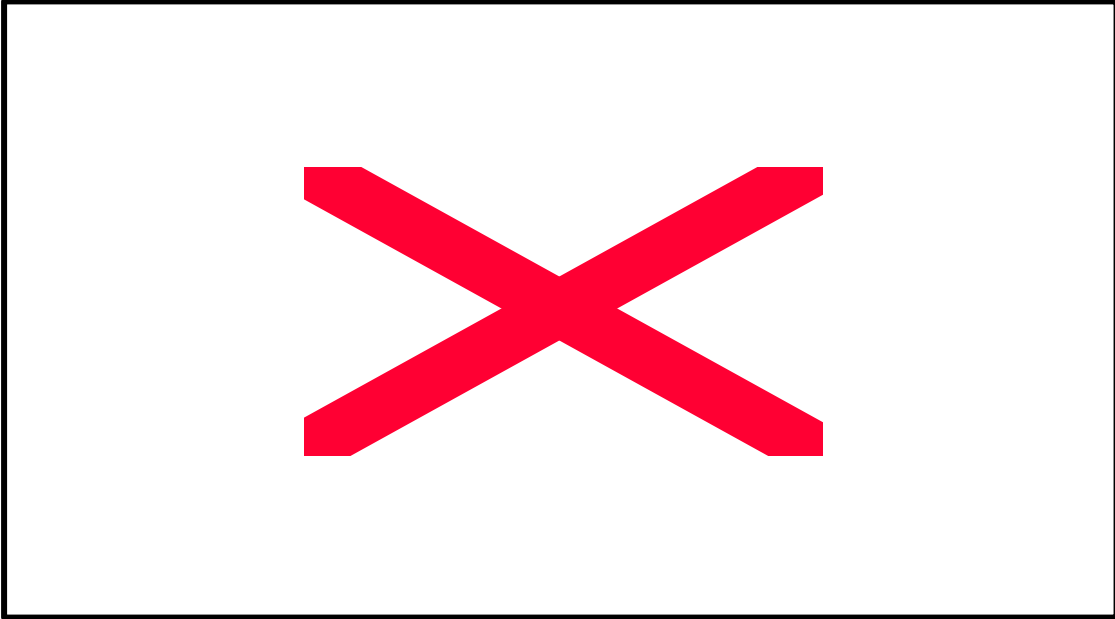
is no inflation.  $r = 0$ . If  $S(Y_f, 0) > I(Y_f, 0)$ , then full employment equilibrium cannot be achieved.  $Y$  must drop to, say,  $Y_e$ , so that  $S(Y_e, 0) = I(Y_e, 0)$ , where  $Y_e < Y_f$ .

In order to circumvent the ZLB constraint, Krugman (1998a) advocates pumping base money into the system and targeting an inflation rate of, say, 4 percent per annum for 15 years. Presumably, this will achieve  $S(Y_f, -4) = I(Y_f, -4)$ . Leaving aside the merits of targeting inflation for the moment, we are not convinced that forcing  $r$  to be negative will do the trick. During the 1970s, many countries experienced staginflation. The adjustment in nominal interest rate lagged behind the rate of inflation. When the rate of inflation exceeded the nominal rate of interest, the real rate of interest became negative. The latter, however, did not bring about a rise in aggregate demand. The rate of unemployment was kept high and showed no signs of declining.<sup>9</sup> Figure 11 shows the growth rate of real GDP and the real rate of interest, which is defined as the 10 year bond rate less the rate of change of the GDP deflator, in Japan between March 1989 and September 2002. The relationship between the two variables seems to be positive except for the period December 1991 to December 1995. Thus lowering the real interest rate does not always produce a higher growth rate of real GDP.

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<sup>9</sup> Sumner (2002) observes that President Roosevelt devalued the dollar in April 1933 and caused the CPI to rise by 10 percent and WPI by 20 percent. However, unemployment did not decline in the U.S. even though the real rate of interest was negative.

FIGURE 11



In a multi-asset model, abstracting from the risk factor, the returns on holding money, bonds and physical capital should be the same when the system is in equilibrium. If the yield from holding capital is negative in real terms, then there may be no incentive for capitalists to invest. Aggregate demand may not be raised by adopting Krugman's strategy.<sup>10</sup>

The ZLB constraint on nominal interest rate poses no problem if investment depends not only on  $Y$  and  $r$  but also on other variables, such as Tobin's  $q$ .<sup>11</sup> The latter is defined as the market price relative to the replacement cost or the actual rate of return ( $r_K$ ) relative to the desired rate of return, which Tobin calls the supply price of capital (SPC) of an asset. When  $q > 1$ , i.e.,  $r_K > SPC$ , net investment will be positive. If the actual and desired rates of return take into account not only the inflation effect but also the tax effect, then the fiscal authority can manipulate the tax

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<sup>10</sup> Meltzer (1999) argues that in a multi-asset model liquidity trap will not occur because monetary policy remains effective as the central bank can buy and sell assets which do not have a zero yield.

<sup>11</sup> See Tobin (1969) for an exposition of his 'q' theory.

rate to alter  $q$ . The policymaker may be able to choose a Tobin's  $q = q^*$  so as to achieve  $S(Y_f, 0) = I(Y_f, 0, q^*)$ .

The monetary authority does not have to expand money supply needlessly in order to achieve Krugman's inflation target. We can have 'good' deflation with moderate decline in the price level and steady or rising output. The Bank of Japan may be correct in not following the advice of Krugman, Svensson and others in targeting a positive rate of inflation.<sup>12</sup> Deflation is the symptom and not the disease. To get Japan out of the Black Hole, we need to coordinate monetary, fiscal, exchange rate, trade and other policies and target aggregate demand and not the rate of inflation.

When the LM curve is horizontal, the way to raise output is to shift the IS curve to the right. The obvious remedy in the Keynesian tradition is to adopt expansionary fiscal policy. It appears that Japan has attempted to stimulate the economy by engaging in massive government expenditure and tax cuts but the impact on economic activity has not been encouraging. Part of the blame is attributed to wasteful and ineffectual public works programs which do not create the desired multiplier effects. Another consideration is the Ricardian equivalence argument that public expenditure merely displaces private expenditure and leaves aggregate demand unchanged. A third concern is that increasing government budget deficits may lower the credit rating of the Japanese government and raise the risk premium built into Japan's public debt.<sup>13</sup>

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<sup>12</sup> After an extensive review of official pronouncements, Kuttner and Posen (2001) find that BOJ considers targeting a positive rate of inflation as "suboptimal", "harmful" and "dangerous".

<sup>13</sup> After assessing the impact of fiscal packages implemented by the Japanese government in recent years, Kuttner and Posen (2001) find that both government spending and tax cuts have the desired expansionary effects. In a more general survey which examines the demand and supply effects and

The way to get around the problem is not to reject fiscal policy out of hand but to be more selective in the application of fiscal incentives and target areas which produce the maximum spillover effects on the private sector and the job-creating potential of government spending. China has been relatively successful in maintaining the momentum of economic growth in spite of the slump in world demand by instigating massive government spending. Australia has been one of the best performing OECD countries in terms of achieving a respectable growth rate in real GDP in the aftermath of the Asian financial crisis. Unemployment rate in Australia has edged downward from 8.6 percent in July 1996 to 6.0 percent in October 2002 and this has been achieved by engineering a budget surplus every year since 1996/97.

The above-par performance achieved by Australia is not obtained by driving the official cash rate to zero or by deficit spending. The depreciation of the Australian dollar in the wake of the Asian currency crisis had helped a great deal by cushioning the impact it had on her exports. Keeping the house in order in the sense of not engaging in deficit finance and maintaining a low rate of inflation had staved off any speculative attack on its currency, which had proved to be very damaging to its Asian neighbours. The buoyant housing market has had a tremendous spillover effect on domestic economic activity. The interest rate is kept low, which is feasible because the rate of inflation has been maintained between two to three percent since September 1996 (except for the period between September 2000 to June 2001 after the introduction of the Goods and Services Tax). The federal government initiated the

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institutional aspects of fiscal policy, Hemming, Kell and Mahfouz conclude that "Estimates of fiscal multipliers are overwhelmingly positive but small" (2002, p. 36).

policy of offering a substantial grant to first home buyers of newly-built houses, houses under construction or residential land intended for development within a year of the grant being approved. By using fiscal policy which targeted specific sectors of the economy and monetary policy which kept inflation and interest rates low, Australia has been able to avoid a slowdown in economic activity.<sup>14</sup>

A similar strategy could be adopted by the Japanese government to extricate Japan from the liquidity trap. Driving the interest rate to zero is neither a necessary nor a sufficient condition to revive the Japanese economy. When interest rate is in the low single digit, investment is not likely to be very sensitive to slight variations in the interest rate upward or downward. Firms will pay more attention to market sentiments and expected profitability of investment projects than the costs of external finance. The important variable in the investment function is captured by Tobin's  $q$  and not  $r$ . Fiscal policy can be devised to enhance Tobin's  $q$ , interpreted to take into account the after-tax real rate of return.

Instead of engaging in massive public works programs which can cause a blow-out in the budget, the Japanese government may proffer specific fiscal incentives to businesses and households to induce them to invest. For instance, investment may be allowed to depreciate at a faster rate. Introducing negative gearing or widening its application if it is already in existence may encourage investment in commercial, industrial and residential construction. Offering tax concessions on R & D expenditures may stimulate the undertaking of such investment. Liberalising restrictions on the inflow of foreign capital may promote foreign direct investment, a

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<sup>14</sup> Australian banks in the 1990s had learned from their experience in the 1980s in not extending excessive loans to corporate high fliers, which turned out to end mostly as non-performing loans.

key factor in China's success in maintaining the pace of economic growth and development.

It is interesting to note that real balances in Japan, defined as  $(M2 + CD)/GDP$  deflator, as shown in Figure 12, has been growing steadily in the last two decades, except for the late 1980s when Japan was affected by the bubble phenomenon. When its growth rate is compared to that of the growth rate of real GDP, as shown in Figure 13, there appears to be a loose correlation between their movements. In particular, when the growth rate of real balances in the 1980s was high, the growth rate of real GDP was also high. When the latter declined in the early 1990s, the former also declined. When the latter rose in the mid-1990s, the former also rose. In the late 1990s and early 2000s, Japan experienced two periods of recession even though the growth rate of real balances was maintained. The ratio of real balances to real GDP is the Cambridge  $k$ . Its value, as shown in Figure 14, has been rising steadily since the early 1980s. It does not appear to be affected by the current recession nor by the fact that the economy has fallen into the liquidity trap. The evidence from the behaviour of the two series in the last seven years suggests that the real balance effect, if it exists, is not strong and is unlikely to cause a consumption-led recovery in economic activity.

FIGURE 12

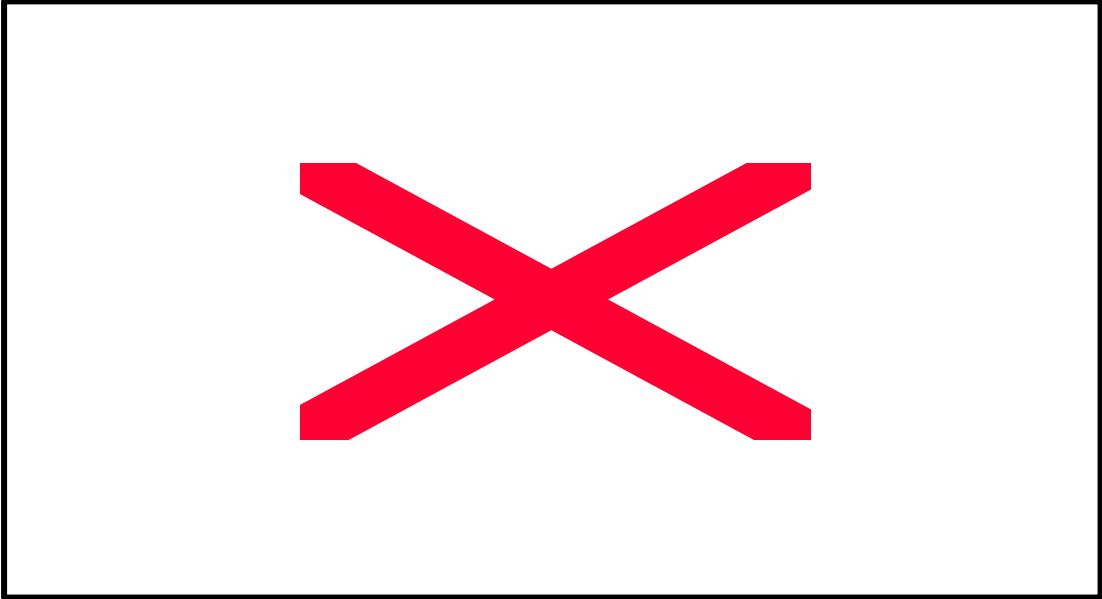
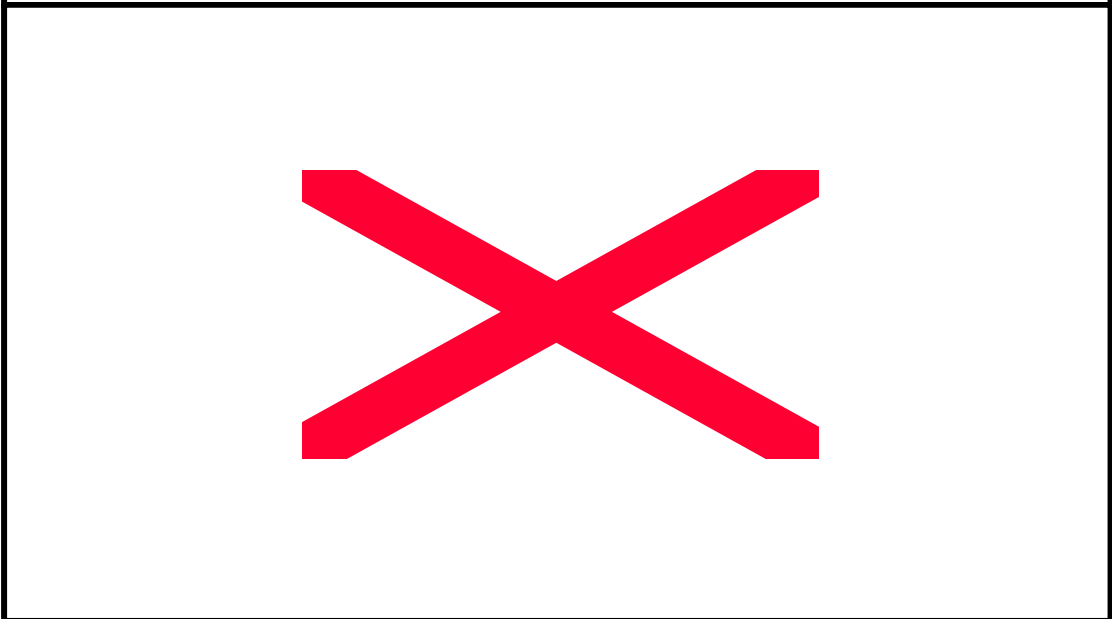
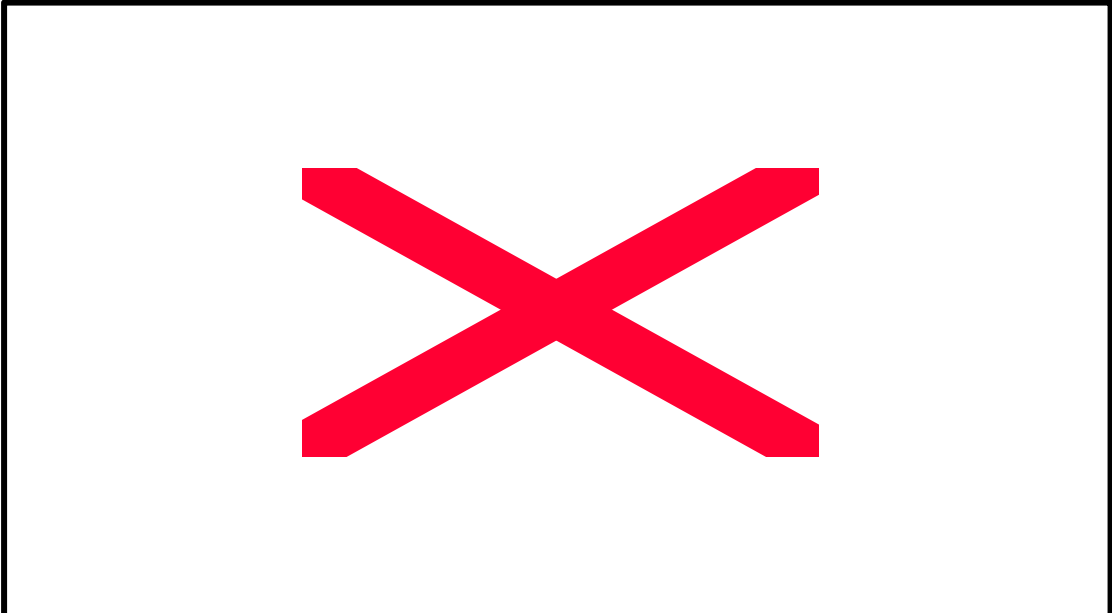
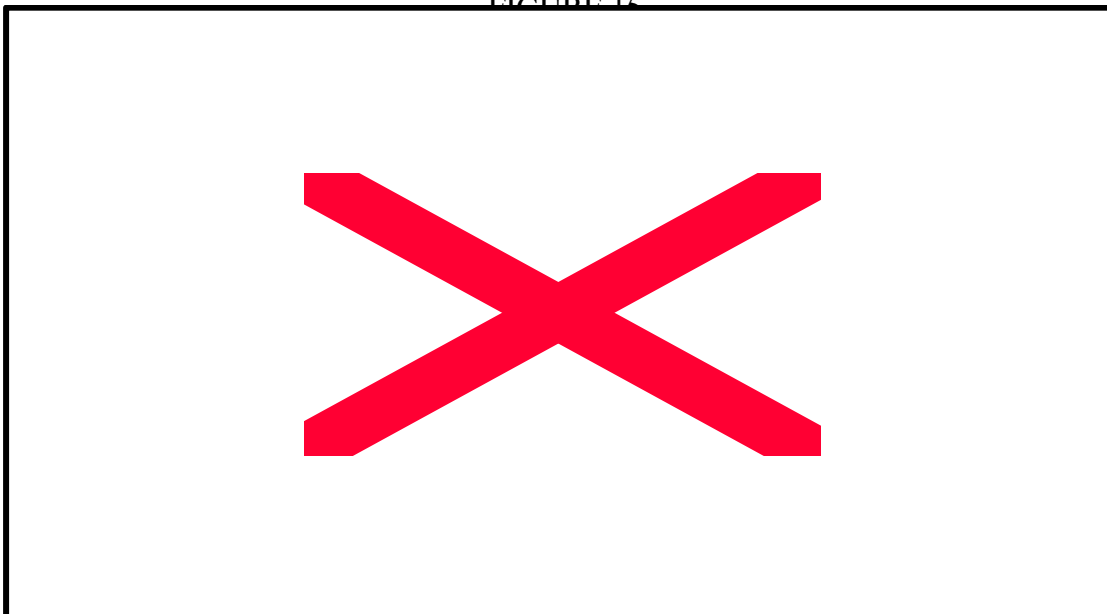


FIGURE 12



Even though the growth of broad money (M2 + CD) has been maintained after the busting of the bubble in 1990, domestic credit as shown in Figures 15 and 16 hardly expanded in the 1990s. Its value in February 2002 was only 88 per cent of its previous peak in June 1996, which was about the same as in September 1993. The decline in domestic credit can be explained in terms of both demand and supply factors. The slow down in the growth of real GDP would be responsible for the drop in demand. The weak balance sheets of the commercial banks and the huge nonperforming loans accumulated by the financial institutions would explain the cautious approach which banks have taken in extending credit to their corporate clients. Some characterise this situation as a "credit crunch".<sup>15</sup> The decline in the demand for and supply of domestic credit adds weight to the case for the fiscal authority to work on raising Tobin's q to make investment more attractive rather than relying on the Bank of Japan to "push on a string".

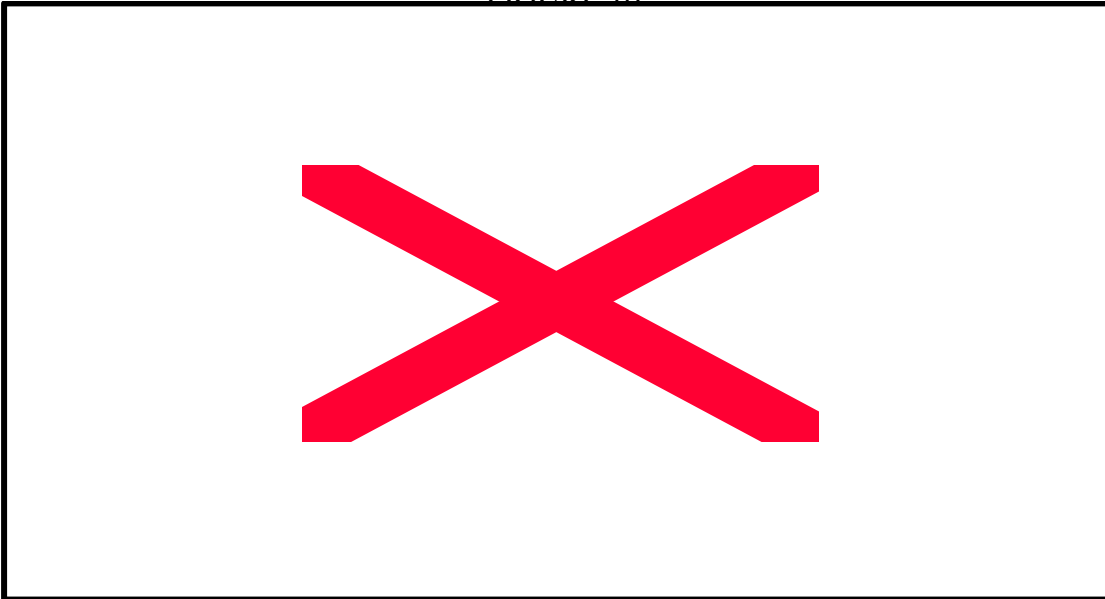
FIGURE 15



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<sup>15</sup> Hutchison (2002) argues that credit crunch is more important than the liquidity trap in explaining the current recession in Japan.

FIGURE 16



Proposal by Krugman and others to target a positive low single digit rate of inflation may not be easily implemented when the economy is sucked into a Black Hole. Increasing money supply which is held as idle balances will not raise aggregate demand. Friedman's adage that "Inflation is always and everywhere a monetary phenomenon" is true only if there is excess supply of money, which results in demand-pull inflation. There is too much money chasing too few goods. The postulated positive relationship between money and the price level may break down in a liquidity trap situation. This crucial insight may have led Keynes to abandon the monetary approach (based on the classical quantity theory of money) and embrace the expenditure approach by writing the *General Theory of Employment, Interest and Money* (Keynes, 1936).<sup>16</sup> The Keynesian Revolution was born in the midst of the Great Depression of the 1930s.

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<sup>16</sup> The classical quantity theory of money can be expressed as  $MV = PY$ , where  $M$  = money supply,  $V$  = velocity of circulation of money,  $P$  = price level and  $Y$  = real income. Raising  $M$  will not increase  $P$  nor  $Y$  if  $V$  varies inversely with  $M$ , which would be the case in a liquidity trap situation.

If demand-pull inflation is not easily implemented when there is slack demand and industry experiences excess capacity, the alternative is to engineer cost-push inflation. It can be achieved in a number of ways. One way is to grant wage increases in excess of productivity increases. This makes little sense to businesses which are complaining already that the recession is eroding their profit margins and they are resorting to laying off workers. Recession or not, it does not pose a constraint on the government to grant wage rises to its employees (and politicians). Inflation induced by wage increases belongs to the category of 'bad inflation' and is unlikely to be endorsed.

Another way to achieve an inflation target is to adopt policies which bring about exchange rate depreciation. It makes imported goods and services more expensive and firms may have no choice but to pass on the cost increases by marking up prices. This approach has been canvassed by many economists who perceive the depreciation of the yen as a means of stimulating exports and aggregate demand not so much as a way of achieving an inflation target. The drawback of such a proposal is that Japan's expansion of exports may be at the expense of cutback in production by her trading partners.

The use of exchange rate policy to jump-start the Japanese economy has been proposed by Svensson (2001), among others, who claims that depreciation of the Japanese yen is not a beggar-thy-neighbour policy.<sup>17</sup> Exchange rate depreciation,

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<sup>17</sup> Expansionary monetary policy results in currency depreciation under a flexible exchange rate regime. Krugman (1998a) argues that this is not a beggar-thy-neighbour policy because even though the Japanese yen may experience significant currency depreciation, the impact on Japan's current account will be small. Meltzer (2000) argues that deflation in Japan is caused by excess demand for money. He advocates increasing the supply of money and depreciation of the yen, which he believes is less expensive to its trading partners than Japanese deflation. McCallum (2000) suggests that the

*ceteris paribus*, should raise Japanese exports and lower her imports and thereby stimulate domestic economic activity. The catch is that other things may not be equal. Japan's trading partners may retaliate and result in competitive devaluation. Furthermore, countries competing with Japan for the dominant U.S. market may also devalue to protect their market shares. Svensson's defence that what is good for Japan is good for the world at large is not convincing in economic theory and is hard to sell politically to those who would be hurt by such a move. Depreciation of the Japanese yen to gain a competitive advantage over the domestic producers in the U.S.A. will be especially hard to swallow by the American workers when Japan is enjoying already huge and increasing trade surpluses *vis-à-vis* the U.S.A.<sup>18</sup>

One of the drawbacks of Svensson's proposal is that the exchange rate, e.g., yen-U.S. dollar rate, being the relative price of two currencies, cannot be set unilaterally by the BOJ even if the latter intends to exploit it as a policy instrument. Japan is not a small, open economy. Any change in the exchange rate of its currency will have repercussions on the economies of its trading partners. Furthermore, a small depreciation of the yen may not provide the stimulus that Svensson and other proponents hope for. Large devaluation of the yen is unlikely to be greeted with joy by its competitors around the world. Figure 17 shows the yen-USD rate between January 1980 and November 2002. The yen-USD rate went up from a trough of 98.5 in June 1994 to 144.8 in July 1998, declined to 102.8 in March 2000, rose to 133.7 in

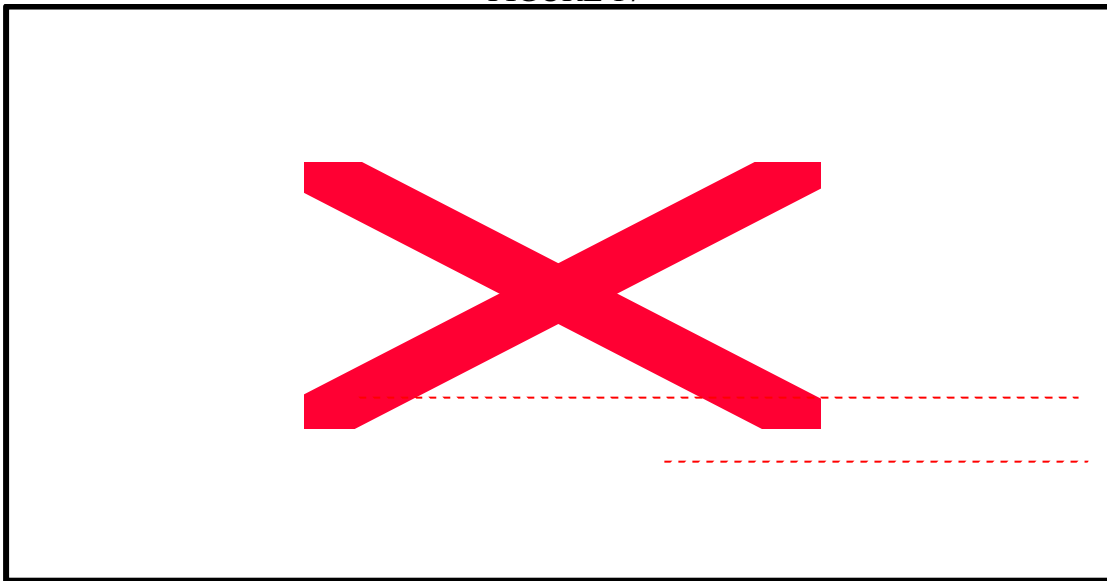
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exchange rate channel can replace the interest rate channel in reviving an economy constrained by a ZLB. Goodfriend cautions that the use of exchange rate depreciation as a means of salvaging a depressed economy "could be conceived as working at the expense of its trading partners" (2000, p. 1012).

<sup>18</sup> Svensson concludes his paper by claiming that, "To most observers, it seems rather uncontroversial that Japanese, Asian, and world welfare would all be well served by an expansion of the Japanese economy." (2001, p. 303) The vital question is how Japanese expansion is achieved. It will not be acceptable if Japanese unemployment is perceived to be exported abroad by manipulation of the value of the yen. Svensson hopes that it will be a win-win situation but it may be a zero-sum game.

February 2002 and was steady at 122.5 in November 2002. Compared to June 1994, the yen/USD rate has depreciated by 24.4 percent in November 2002. Japan's export performance has been maintained during the period but the economy is still languishing and the unemployment rate is relatively high by postwar standard. The *prima facie* evidence is that the exchange rate channel is weak as a mechanism for stimulating the Japanese economy.

FIGURE 17



Source: DXDATA

An alternative strategy which makes more economic sense is to liberalise trade. By reducing tariffs and other non-tariff barriers, Japan can import more from abroad. In turn her trading partners will be able to import more goods and services from her. By taking advantage of the foreign trade multiplier, all trading nations can benefit from a simultaneous expansion in economic activity. The drawback in this proposal is that it entails a redistribution of income within Japan. It may be a politically daunting task for the Japanese policymakers to enact legislation to compensate those who are hurt as a result of trade liberalisation.

One of the seven proposals which Blinder (2000) has enumerated to tackle the liquidity trap in Japan is the suggestion of imposing a 'carry tax' on the holding of money balances, as proposed by Buiter and Panigirtzoglou (1999), Goodfriend (2000) and others. Like Friedman's (1969) idea that the optimum quantity of money is achieved when the nominal rate of interest is driven to zero and the economy experiences deflation, the carry tax proposal is purely academic. It is costly to administer, inefficient, inequitable and politically suicidal for a political party to advocate.<sup>19</sup> Unless restrictions on capital flows are imposed, Japanese holding yens which are taxed at x per cent per annum may prefer to switch to US dollars which are not subject to a carry tax. Moreover, a carry tax reduces financial wealth, which discourages consumption and tends to be deflationary. Little wonder that an official from the Bank of Japan (BOJ) politely rejected the proposal by suggesting that "The idea may be useful for the Fed or the ECB, but not for the BOJ" (Ueda, 2002, p. 1108).

## **Conclusion**

Japan has been sucked into the Black Hole by adopting inappropriate monetary and fiscal policies. The economy has been languishing in an underemployment equilibrium for almost a decade. Forcing the rate of interest to zero by the Bank of Japan has not revived economic activity. When the demand for money is infinitely elastic, injecting base money into the system will not stimulate aggregate demand. What is required is coordination of fiscal and monetary policy to target the

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<sup>19</sup> Goodfriend suggests that "a carry tax could be imposed on currency by imbedding a magnetic strip in each bill." (2000, p. 1016) Considering that Japan is not willing to reform her currency by issuing new notes to replace the existing ones to rid of some of the bewildering zeros attached to any yen transactions, Japanese politicians would undoubtedly find the idea of inserting a magnetic strip in each bill rather far-fetched and amusing to say the least. The BOJ would probably abhor at his idea that the

real GDP and not the rate of inflation. Deficit spending *per se* will not return the economy to full employment. By judicious choice of spending and taxing policies, the Japanese government may be able to make investment expenditures more attractive. The policymakers should aim at raising Tobin's  $q$ , not lowering the cost of funds.

Stagdeflation is 'bad deflation' because output drops but 'growthdeflation' is regarded as 'good deflation' because both production and employment expand. Proponents of inflation targeting have in mind 'growthinflation' when (moderate) inflation is accompanied by expansion of output. The favourable outcome is not certain, however, because it is also possible to have 'staginflation' when cost increases result in higher prices, contraction in production and rising unemployment.

Trade liberalisation is preferred to exchange rate depreciation of the yen for the sake of not only the global but also the Japanese economy. The former will please Japan's trading partners and Japan may benefit in turn from the move via the foreign trade multiplier effect. The latter will antagonise her trading partners and invite retaliation, which could result in competitive devaluation, a repetition of what happened in the 1930s.

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'carry tax' could be made negative, i.e., paying interest on currency, when nominal interest rates exceed zero.

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