

An Assessment of the Strengths and Weaknesses of the View that a Country's Monetary Policy Should be Conducted by an Independent Central Bank.

When, on 1st January 1999¹, the euro becomes the single currency of 11 countries in the European Union, control of monetary policy will be transferred from the governments and banks of those member states to the European Central Bank (ECB). This new central bank, while it still has much of its function to be defined, will be to many economists an ideal system of independent decision-making. However, there are some doubts as to the independence of the ECB, and also some as to whether independent central banks are the ideal political structure to administer economic policy.

To form an opinion of the merits of monetary policy run through an independent central bank, therefore, we must look carefully at the results from theoretical models, examining arguments for and against the use of independent authority. Once the theoretical arguments have been resolved, it will prove useful to look at statistical evidence to see whether the theory developed is correct.

Until recently, economists assumed currency and financial crises were due to mistakes in monetary policy. A standard monetarist argument (and one of the bases of original monetarist thought) is that real income fluctuations, and thus inflation, can be controlled through control on the money supply, through the fixed equation:

$$\frac{M}{PY} = \frac{1}{V}$$

Studies of the relationship between M and PY by Friedman and Schwartz² pointed towards a strong link, and in the 1970s and 1980s several governments put this theory into practice, altering money supply rates and inflation along the Philip's curve to increase output and employment. However, after a few years of following this policy, the recommendations seemed to fail, with high inflation despite a controlled money

¹ This essay was written in November 1998, and has been updated since

² *A Monetary History of the United States 1867-1960*, 1963

supply. This disparity had largely been claimed to be due to changes in the value of V , the velocity of money, which had previously been thought to be a constant.

There are, however, other arguments as to why the monetarist approach to committing to a fixed money supply policy may have failed. One of the main reasons put forward in recent years is that of consumers' expectations, and how the actual Phillips curve may shift as expected inflation changes. A core idea of the monetarist approach was that the Phillips curve was fixed, and that permanent increases in output could be achieved by increasing the money supply (in effect, reducing unemployment with an increase in inflation on the Phillips curve).

However, it was found that there was a lower increase in output than expected, but still a high inflation rate, with a return to the original rate of output in the longer term. This has been explained since by an acceptance that the Phillips curve's position will shift with different levels of expected inflation – it is the difference in inflation from the expected level that may determine the level of unemployment, and output.

The policy of increasing money supply was used by the British government in the late 1970s. When the population realised that inflation was rising, their expectations started to alter immediately, so the only way the government could increase output was to increase inflation again. This led to accelerating inflation, with rates up to 28% in 1978. A similar phenomenon can also be seen in France, after the end of the Second World War – the increased money supply to fund government spending led to inflation of around 65% for a few years, without a similarly large drop in unemployment.

Since this expansionary monetary policy has been dropped, inflation has fallen to a more reasonable level, but there have been several significant peaks in the general level over the past fifteen years. Looking at figure 1 below, we can see that there was a sudden peak in the inflation level around 1985, and another in around 1988.

Although there may be several reasons for these, it can be shown from other data³ that there were significant increases in money supply around two years before both upturns – times at which there was an upcoming election.

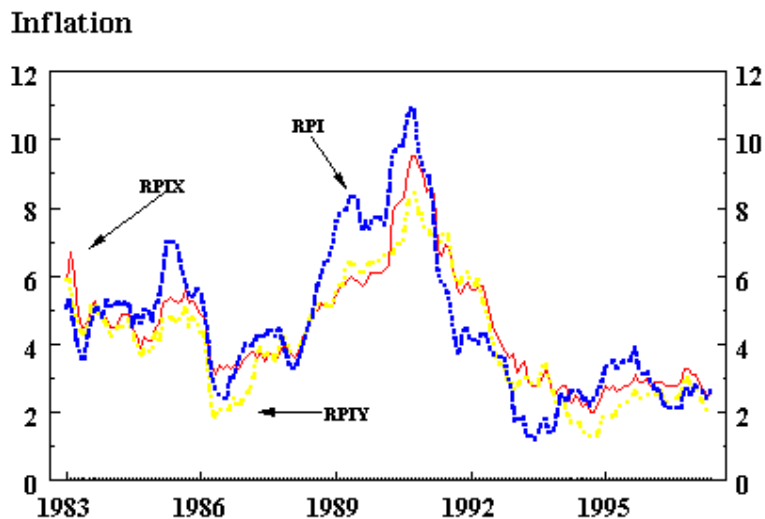


Fig 1 ... UK inflation 1983 - 1998 (source: HM Treasury)

It can, of course, be argued that this timing was entirely coincidental, but there certainly exists the possibility of a government manipulating money supply for a temporary output increase, which would be damaging to the economy in the long run – it could be guessed that the high inflation in 1991 was due to a similar occurrence; however, there were also other factors in the economy at this time.

Thus, it would seem reasonable under this argument to have monetary policy operated by a non-elected body, which would not be tempted to vary the level of money supply at any time. Indeed, recent macroeconomic work reveals that the optimum environment for growth in the economy is one of stable money supply and low inflation, indicating that monetary policy operated by an independent central bank would be an ideal solution.

There are, of course, other arguments in favour of an independent monetary policy setting body. Another of the main arguments is that of government consistency, and

³ from Government (ONS) statistics

the state financial constraint. The government must, as with any economic agent, follow a budget constraint; in this case this is given by:

$$\frac{\Delta M_t}{P_t} + B_t + T_t = G_t + rB_{t-1} + B_{t-1}$$

where B_t is the amount of bonds sold in period t , T and G are taxes and government expenditure respectively, and ΔM_t is the growth in money supply. It is argued that people are rational and forward looking, and will be able to spot any inconsistency in the policies followed by government – thus if the government were to announce a policy of keeping money supply constant, but government spending did not equal potential taxes and bonds (for example, bond supply may have to be increased indefinitely, whereas people will not continue to buy bonds), the population would be able to see that money supply would eventually have to alter.

When expectations over inflation are incorrect, the above argument (leading to increasing inflation) will apply even if inflation levels are not at the expected level. As serious, perhaps, are the implications for interest rates; if expected inflation is 10% higher than normal, say, the real interest rate will have to rise by 10% to keep nominal interest on bonds constant.

When an independent body sets monetary policy, however, the population can at least be sure that this element of the budget constraint will not be altered to allow further government spending, and this gives the economy added stability. Governments will instead have to finance government through taxation and issuing more bonds. However, because the interest rate would also be fixed by the independent authority, the only effective and possible long-term strategy would be that of increasing taxation, in effect directly charging for the public goods provided and the merit goods subsidised.

Again, therefore, the existence of a separate body to set monetary policy would aid in the success of the economy. For many emerging countries especially, initial credibility is hard to form, and those countries (such as the UK) which have in the past

experienced inflationary policy will also find it hard to establish belief amongst the population that such a policy is no longer being followed. By giving control of policy to an independent central bank public confidence is more likely to be restored. This is not, of course, the only solution – many emerging countries prefer to use currency boards, for example (which is a firm form of fixed exchange rate, where money is only printed if it is backed by other currency – like the gold standard in the UK last century), although in effect these also hand monetary policy to an independent body, albeit another government.

Much of the above theory can be incorporated in public choice theory, an approach adopted by Mervyn King to looking at the issue of the independence of the Bank of England⁴. Until a few years ago, economists aimed to find how the economy works and invent policies to optimise this – and then tell the governments to do so. However public choice theory recognises that the government will not always act for the good of the economy, and has its own agenda. Indeed, the government will act as a consumer and seek to maximise not economic performance but its own utility function, which may comprise of many factors such as popularity, fame for individuals, and financial gain.

King's papers have theorised that a government will have a loss function which they aim to minimise, which is centred around some rate of employment above the natural rate (say the natural rate is y^* and the optimal rate for government is ky^* , where $k > 1$) and zero inflation. The further the government deviates from this point, the worse off it is, and since we assume that negative inflation is as bad as positive, and very high levels of employment are as bad as low levels, we may represent the government's preferences as a form of indifference curve, with ky^* as a bliss point:

⁴ King (1996/7)

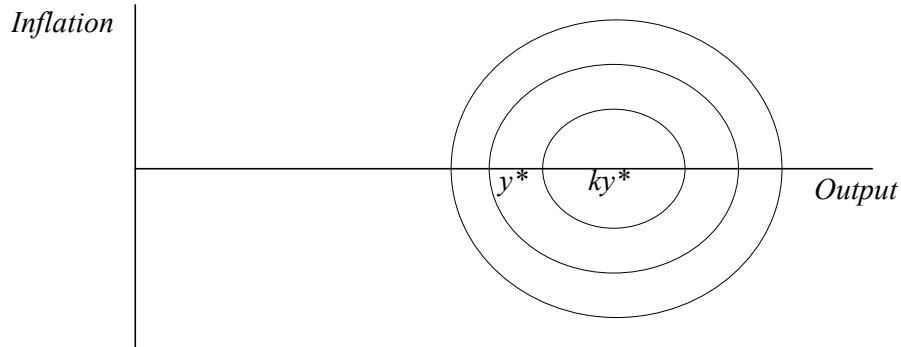


Fig 2 ... Government indifference curves

The shape of the indifference curve will, of course, depend on the government's (and country's) preference for inflation or unemployment.

The existence of these indifference curves can be used to show how governments will fail to choose socially optimal positions when looking at monetary policy. To analyse this, King first assumed a basic natural rate model, with occasional supply shocks (fluctuations in the natural rate), where agents form expectations before the shocks occur and the government will form monetary policy after the shock has happened. Looking first at Friedman's X% money supply rule (where the government should increase money supply by X% regardless of anything else – we may simplify this further and place it at 0%), we can see that, assuming the shocks are equally likely in both directions, there will continue to be zero expected inflation, and the economy will continue to operate at this level, fluctuating between ① and ② in the diagram below:

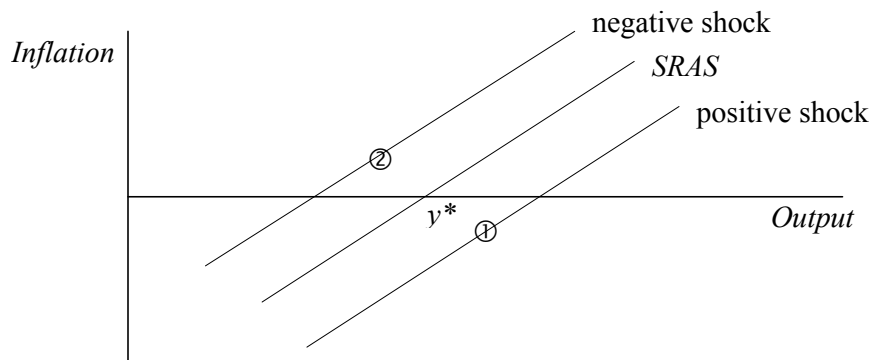


Fig 3 ... Random supply shocks

It may be, of course, that these fluctuations are not wholly desirable, and that society may wish to minimise fluctuations in either inflation or output. This is what King called the optimal state-contingent rule, where monetary policy can be varied to suit society's indifference curves (which will look similar to figure 2, but be based around y^* and will not necessarily be the same shape as the government's). It may be that society prefers a lower, inflation rate, so the government may contract the money supply in the event of a negative shock, and expand if the shock is positive, leading to fluctuations between points ③ and ④. On the other hand, the economy may prefer fluctuations in inflation to those of output, so the government could choose to reverse the above decisions on monetary policy, leading to fluctuations between ⑤ and ⑥.

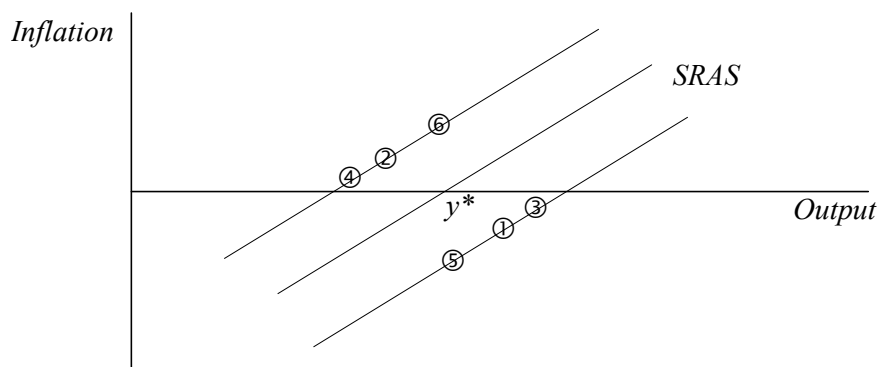


Fig 4 ... Socially optimal fluctuations

It is, however, highly unlikely that such a scenario would occur, due to the government preferences described above. When considering that governments will wish to be on the closest indifference curve to $(ky^*, 0)$, it is unlikely that even in the natural state the economy will be allowed to settle at the starting point assumed above.

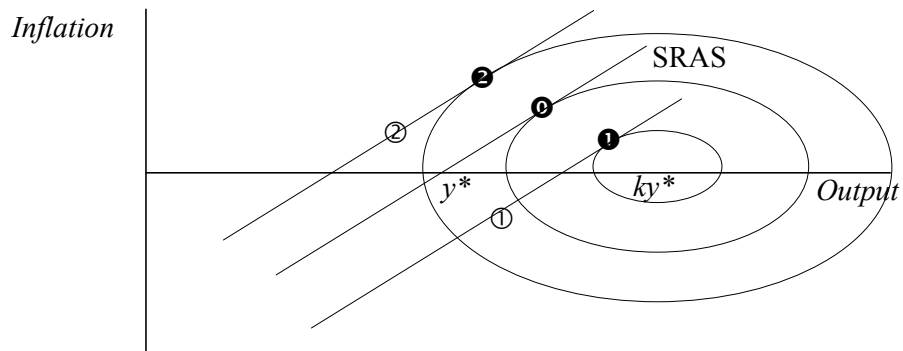


Fig 5 ... Initial government optimal fluctuations

If the government has indifference curves shaped as in figure 5, at the time when there were no shocks the economy would lie at ①, with fluctuations between ① and ②, rather than ① and ②. This would almost certainly be less beneficial for society, as all three points lie further away from the socially optimal point at $(y^*, 0)$. This may, of course, not be true if society had perverse indifference curves.

It should be noted, however, that, if the shocks are purely random (and so the average shock is zero), here the average rate of inflation is not zero. Over time, therefore, economic agents will realise this, and adjust their expectations accordingly. This increase in expected inflation will lead to a rightwards shift in the aggregate supply curve, until the point at which the point ① is at the inflation level expected – that is, the supply curve given an expected inflation of $n\%$ is tangent to a government indifference curve at an inflation level of $n\%$.

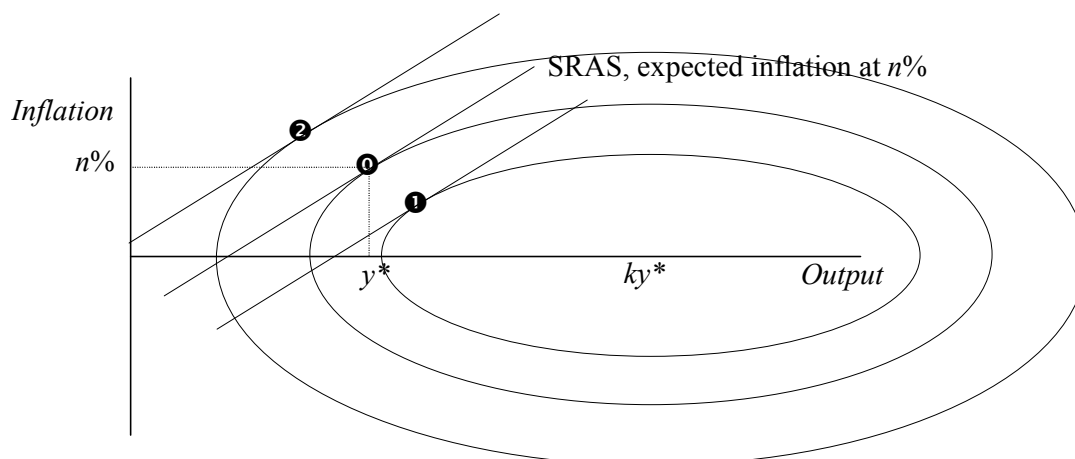


Fig 5 ... Final government optimal fluctuations

The way to combat this phenomenon, it is argued, is therefore to have monetary policy set by another body, one with significantly differently shaped indifference curves. If an authority has flatter curves, the level at which inflation will settle ($n\%$ above) will be lower, and thus less far removed from the socially optimal position. King termed this type of authority an ‘inflation nutter’, and theorised that a conservative central banker would be far more suitable to follow such policy than government.

The important thing to note, however, is that great care must be taken to select an authority with appropriately shaped indifference curves. If a central bank were to prefer more steady output, the argument for handing monetary control away from the government would be invalidated. This is, admittedly, unlikely – a central bank would naturally look for monetary rather than fiscal concerns – but other types of authority could possibly have this belief.

The arguments described so far all define monetary policy as comprising solely of setting money supply and interest rates. There are, of course, many other economic decisions that may be given to an independent central bank – but these may affect the definition of independence assigned. Both the Bundesbank and the Reserve Bank of New Zealand are termed ‘independent’, for example, but whereas the Bundesbank has a complex relationship of accountability and responsibility with the German

government, the RBNZ is entirely free to follow its own policy, with an aim to keep inflation between 0 and 2 percent.

There are, however, some forms of independence that can be economically proved to be undesirable. Many of these fall under the inconsistency argument outlined above – for example, a country cannot commit to a fixed exchange rate unless it can rely on the central bank to buy or sell from its foreign currency reserves to keep the exchange rate constant. Were the central bank purely independent, the government could not rely on this, and, more importantly, people in the economy would realise this and thus realise the fixed exchange rate was a future-inconsistent policy.

Indeed, this limiting of government options can be extended to the monetary policy area examined above. By handing control of money supply growth to an uninfluenceable authority, the ability of the government to raise funds for emergency spending is restricted, increasing the likelihood that the government will have to raise money by selling more bonds – a measure which would ultimately lead to a collapse in bond prices and a need for increased taxation. Indeed, this increased taxation would be predicted, and it is unlikely that the required number of bonds would be sold, meaning increased taxation would have to be introduced earlier.

There are, however, very few economic arguments as to why there should not be an independent central bank controlling monetary policy. They are significantly outnumbered by the non-economic reasons, such as public mistrust (from having the economy managed by a unelected body), the possibility of abuse of position within the bank, and a lack of communication between the bank and government. It is possible that the bank will not follow a suitable policy, either because it has not been given an aim to attain (this is not the case in the real world, where even the most independent banks are given inflation targets), or because of asymmetric information making it less accountable to government.

Finally, it is worth looking at the evidence gathered in recent years regarding the efficiency of independent central banks. On 6th May 1997, the Bank of England was

given a degree of independence to set the nation's interest rate and money supply, reporting to the Treasury and being accountable to that department. The most striking evidence we can look at is the bond price in England compared to that in Germany, which has had an independent central bank for many years (since 1946). From the analysis on consistency above, we can see that a lack of government credibility with regard to following steady monetary policy would lead to higher interest rates.

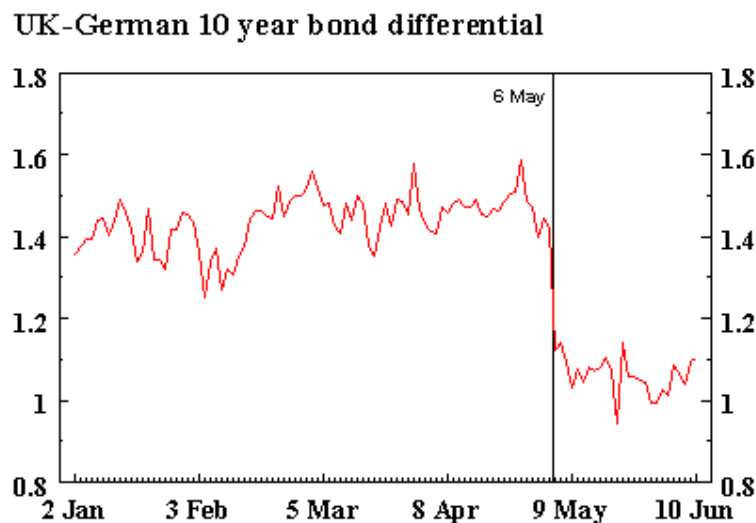


Fig 6 ... To compare UK/German credibility (source: HM Treasury)

From figure 6 it is quite obvious that the announcement that monetary policy would be set, from then on, by an independent central bank had a profound effect on the nominal interest rate in Britain, reducing it to levels near Germany's, since inflationary policy immediately became more credible.

A similar effect can be observed throughout 1992 (although not as clear cut) due to the new measures put in place after Britain's exit from the ERM, such as the Bank of England's Inflation Report, and the opening of minutes from the monetary policy committee.

We may also look at evidence from those countries that already have independent central banks. It can be clearly seen from figure 7 that there is a definite correlation

between the level of independence (given a numerical value relating to the power over monetary policy by the country's government) and the average inflation rate over time. Those countries with the lowest inflation rates tend to have the most independent central banks, though, as ever, there are some exceptions (most notably Japan, which has a history of low inflation and thus the government has a credible monetary policy without having to resort to independence).

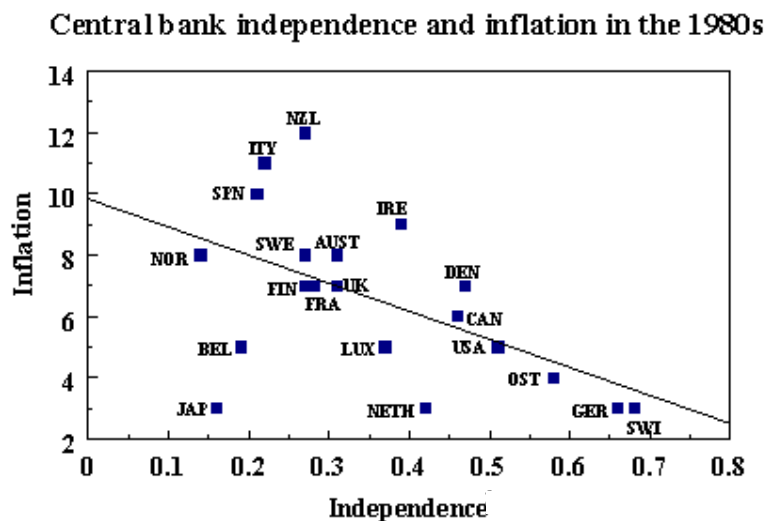


Fig 7 ... The effect of independence on inflation (source: HM Treasury)

In conclusion, therefore, we can see that there are strong economic arguments for the adaptation of an independent central bank, but there are a few non-economic objections. Although other possible political frameworks exist (such as government rules on increasing money supply (with Thatcher's Medium-Term Financial strategy as an example), or simply trust that governments will work out that money supply should be kept as constant as possible), none are so rigid and effective as establishing an independent body. Care should be taken, however, not to allow too much independence (and therefore a lack of accountability).

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Tim Miller, December 1998.