

# Speech

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## Inflation targeting and bubbles

Adam Smith seminars in Paris

Since the mid-1990s, inflation has stabilised at very low levels in the industrial nations. From an average inflation rate of 6 per cent during the period 1975 to 1994, the rate of price increase has been slightly below 2 per cent over the past 6 years. This entails a return to the same low inflation rate as prior to 1970. Inflation has also been reduced considerably in most other countries in, for instance, Asia and Latin America.

There are many factors that have contributed to this. Firstly, price stability has become an explicit objective for monetary policy in many countries. An increasing number of central banks are orienting their monetary policy towards a fixed inflation target. This includes the Riksbank, which, after the fixed exchange rate was abandoned in November 1992, established an inflation target of 2 per cent with a deviation interval of plus/minus one percentage point. The orientation of monetary policy has in many countries been supported by a fiscal policy aimed at budget consolidation. Independence for the central banks in Europe, convergence criteria for EMU membership, the stability pact in Europe and the ban on financing budget deficits through printing new banknotes are all examples of measures that have helped increase confidence in the price stability target. Increased competition in the wake of globalisation has probably also subdued inflation temporarily. The improvements in productivity registered in many countries at the end of the 1990s have further contributed to reducing inflation.

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While inflation has stabilised, the fluctuations in asset prices and exchange rates have scarcely declined. The rise in asset prices, the decline in private savings and the credit boom that took place in many countries at the end of the 1990s created fears that major financial imbalances would accumulate. This applied in particular to the USA, but similar patterns were demonstrated in other countries, including Sweden. There was concern that if asset prices fell, this could trigger processes that would eventually result in a very deep and prolonged economic downturn. If monetary policy were strictly oriented towards an inflation target and inflationary pressure were low, this would lead to relatively low nominal interest rates. It could mean that the scope for using monetary policy to stimulate the economy in a deep recession was limited – problems with the “zero bound” could arise. Comparisons with developments in Japan in the late 1980s and afterwards seem appropriate here. Even in a minor economic downturn, credit restrictions at the banks caused by large losses could reduce the effectiveness of monetary policy.

Measures that could prevent financial bubbles arising and reduce their consequences were thus discussed. Was there, for instance, reason and opportunity as a preventive measure to take into account asset prices when formulating monetary policy? Could solicitude for financial stability motivate interest rate changes? What role was played by the supervisory authorities and the design of regulatory systems in preventing serious effects on the real economy from asset price bubbles?

Share prices have now fallen considerably since the middle of 2000. Recently the very inflated dollar rate has weakened considerably. Contrary to what many analysts feared earlier, the repercussions on the real economy nevertheless appear to be slight. Most economic analysts believe in a normal rate of recovery, after only one year of weak growth. Why has the fall in share prices had so little effect on the real economy? And what are the risks of lasting financial imbalances creating problems in the future?

These are questions I intend to discuss in my speech.

### **Why worry about asset prices?**

A fundamental issue is why fluctuations in asset prices should comprise cause for concern. In a market economy the prices of both financial assets and goods and services have the role of providing information. They shall give signals regarding the distribution of resources in the economy. This means that fluctuations in share prices and exchange rates are useful as long as they reflect changes in expectations regarding the fundamental development of the economy. Optimistic expectations of future growth in the entire economy or in a particular industry can be expressed, for instance, in the form of rising share prices, as there are then expectations of a strong development in profits and a high real return on investment. A technological innovation could thus motivate a large rise in share prices.

However, history shows that investors are often over-optimistic regarding future profits and that share prices rise more than is later proved to be motivated. Financial bubbles can also be created by imperfections in the financial markets.

Bonus systems designed to enable brokers to benefit when the stock market rises, while others have to bear the costs of a fall in share prices, are examples of this type of imperfection.

If households increase their consumption as a result of exaggerated increases in the value of shares and property, it could lead to the build-up of large real and financial imbalances. Companies can increase their investments as a result of lower financing costs on a risk capital market with over-valued share prices, but also because a rise in the value of the companies' assets increases their credit ratings. At the same time, financing consumption, investment, property and financial assets through loans will lead to an excessive credit boom. The liquidity created when the banks increase their lending can further push up asset prices.

When the bubble bursts and asset prices fall, it could lead to heavily indebted households and companies increasing their savings considerably and to a fall in consumption and investment. A decline in demand would reduce companies' profits and increase the number of bankruptcies. Bankruptcies lead to losses in the banks, while the value of the assets taken as collateral for loans would decline. A deterioration in bank profits can reduce the supply of loans and mean that investments that would have been profitable do not get off the ground. In the worst possible scenario, systemically-important banks would suffer a bank crisis.

Falling asset prices thus risk triggering processes that could eventually lead to a recession. Psychological factors strengthen both an upturn and a downturn in asset prices and real demand. Sweden, like many other countries, as you know has experience of this type of development. The costs to society during the years following the bank crisis were very high.

However, rapidly rising asset prices do not constitute a problem in themselves that requires measures. Deciding factors here are whether there is reason to regard asset prices as fundamentally exaggerated and whether the bubble has led to excessive demand in the real economy, as well as misallocation of resources and excessive indebtedness.

However, a financial bubble that only creates winners and losers among the financial operators without spreading to the real economy is hardly cause for concern, as long as the financial system can carry out its tasks efficiently.

### **Inflation targeting stabilises production**

Although there may be reason in certain situations to counteract exaggerated asset prices and the imbalances they create, the question is what measures are available. There is always a risk that intervention by authorities may in itself create more problems than one is trying to solve.

However, first and foremost I would like to point out that monetary policy aimed at stabilising the inflation rate should basically reduce the risk of over-valued asset prices leading to an exaggerated real demand. Fluctuations in the level of resource utilisation and in the output gap are traditionally assumed to be reflected in the inflation rate. If inflated asset prices stimulate demand in the economy, without a corresponding increase in the potential growth rate, inflation will rise. If the

central bank anticipates this, monetary policy will normally be tightened to ensure that demand is compatible with long-term sustainable growth. And as long as demand in the economy increases at a rate compatible with long-term growth, there is less risk of exaggerated indebtedness. Inflation targeting should thus, at least in theory, reduce the risk of extensive financial imbalances accumulating.

However, even with an otherwise successful inflation target policy, real and financial imbalances created by exaggerated asset prices can build up.

If there are exaggerated expectations regarding growth in productivity and profits in a particular country, this can lead to a strong inflow of capital and strengthening of the currency. The increase in real demand, which is caused by exaggerated increases in asset prices, can thus be partly met by increased imports, while the currency strengthens and domestic inflationary pressure is reduced.

There are also other factors not connected with the expectations that push up asset prices and can temporarily lead to the increase in demand that is created by exaggerated asset prices not being expressed as inflation and thus not being counteracted by tighter monetary policy. A high level of credibility for the central bank can also create low and stable inflation expectations, which can mean that inflation will not rise for a period of time, despite strained resource utilisation. Deregulation on globalised markets can also temporarily subdue inflationary pressure.

### **Is there reason to change strategy?**

The question is whether it is possible to raise ambitions for monetary policy to prevent financial bubbles arising?

Most people advocate a strategy where asset prices are merely taken into account to the extent that they affect inflation forecasts during the normal forecast horizon. However, there are also advocates of a strategy where monetary policy also prevents the occurrence and effects of financial bubbles.

Those who maintain that monetary policy cannot counteract the occurrence of financial bubbles point out that the central bank has no possibility of determining whether or not asset prices are fundamentally motivated. They also point out that it is difficult to motivate an interest rate hike that is essentially aimed at counteracting an excessively large expansion in credit and an overly high real demand if the assessments of inflation do not at the same time show that the target level will be exceeded. Interest rates must be raised before overly large imbalances accumulate. The motive would be to reduce the risk of a recession and low inflation during the period following a fall in asset prices. If the central bank is successful, it is not possible to demonstrate afterwards that one has been right. A further argument is that it is difficult to determine what change in the interest rate is required to achieve the desired objective.

However, the advocates of the more ambitious strategy, where monetary policy more explicitly takes asset prices into account, claim that although it is difficult to judge whether a bubble is involved, this is not more difficult than estimating potential growth, for instance. If one extends the target horizon, the inflation

target may in itself motivate tightening monetary policy, despite the fact that this would mean that inflation fell below the target level for a period of time. Based on purely theoretical reasoning, the target horizon is the entire future. The problem is that forecasts become more uncertain the further ahead they look. Many central banks with a strict inflation target policy therefore talk as though the forecast and target horizon were the same.

It is difficult to take a clear stand in favour of one of the strategies. None of the arguments can be dismissed. As always, this proves that monetary policy is more of an art than a science. One problem with the first strategy is that central banks in practice have tended to rapidly ease up on monetary policy when there is a large fall in asset prices, in order to reduce the risk of a recession. When asset prices rise, there is a tendency to wait until one is more certain this will have an effect on inflation before raising interest rates. An asymmetrical monetary policy entails a risk of indebtedness and liquidity in the economy becoming too high, when regarded over a longer time period. Sooner or later there will be an adjustment and the risk is that the imbalances will have grown so large that the cost of adjustment will be high.

One can thus conclude that the consequences for the real economy of an asset price bubble can be serious. In my opinion, there is thus good reason to analyse and assess to the best of our ability to what extent asset prices are fundamentally motivated, how households' and companies' real demand will be affected, and where the liquidity created by bank lending goes. If the analysis shows that there is a significant risk of very negative consequences for the real economy, there may be good reason in exceptional cases to take this into account when formulating monetary policy – even if the assessments for the immediate future show that inflation will be in line with the target level. One can say that there is sometimes reason to take account of what will happen beyond the normal forecast horizon.

However, in order to uphold confidence in, and support for, monetary policy it is important to give a detailed report of when such factors are taken into account. This is a strategy the Riksbank follows. So far, the Riksbank has not found reason to take account of what happens beyond the normal forecast horizon when formulating its monetary policy, although it does normally produce surveys of the economy for longer periods. However, I have argued on several occasions in 1999 and 2000 that there was reason to raise the instrumental rate, taking into account the effects in a longer term perspective.

Nevertheless, asset prices should not be included in the formulation of monetary policy targets. There is otherwise a risk that the central bank would counteract adjustments that were fundamentally motivated. This would reduce the efficiency of the resource allocation and probably subdue growth.

### **Other measures**

In addition to price stability, most central banks have a responsibility for financial stability. According to a narrow definition, financial stability is equal to a lack of crises in systemically-important banks. The banks have important functions with regard to the payment system and the supply of capital. It is easy to see that without

an efficient payment system and capital supply the economy would be unable to function. Monetary policy would have no effect in this situation. Large shocks to the functioning of the financial system would also reduce the effectiveness of monetary policy, as the transmission mechanism is affected by the efficiency of the capital supply and the mediation of payments.

The fact that there are close links between the central banks' two tasks becomes particularly evident when the effects of financial bubbles are discussed. An important part of the process leading up to large imbalances is credit granting by the banks. The fact that households and companies demand loans for increased consumption and investment when asset prices are rising is one thing, but it also requires that the banks increase their supply of loans. If the banks have well-developed risk systems, and rules and supervision are designed to motivate the banks to utilise them, the risk of exaggerated lending will be reduced.

The way that capital adequacy rules are designed and applied is of great significance. The new capital adequacy rules, Basel 2, are aimed at reflecting to a greater extent than now the risks the banks actually take. However, valuating credit risks over a whole economic cycle is very difficult. The indications are that both internal credit risk models and credit rating agencies tend to underestimate credit risks during an upturn in economic activity and to overestimate them during a downturn. There is thus a risk that the banks will tend to strengthen the fluctuations in economic activity, even with the new capital adequacy rules. To counteract this, there is discussion of alternatives such as using stress tests to a greater extent, making dynamic reservations and reducing the possibility to utilise an overly rapid increase in the value of an asset as collateral for a loan.

The connections between a central bank's two objectives are thus many and complex. There is a pressing need to increase our knowledge of these mechanisms. Interest in financial stability has also increased in recent years. The Riksbank has published regular reports on the financial stability of the banking system for several years now. Many have followed our example, which shows that a large number of us realise the importance of maintaining stability in the financial system.

### **Other economic policy implications**

In most of the financial crises that have occurred, the shaping of economic policy has played an important role both for the build-up of financial imbalances prior to the crisis and in triggering the crisis.

The bank crisis in Sweden at the beginning of the 1990s can be seen as an example. It was preceded by deregulation of the financial markets, a tax system that favoured borrowers, an overly expansionary fiscal policy given the fixed exchange rate regime, and a monetary policy that could not be utilised to reduce overheating, credit booms or the rise in property prices. At the same time, the banks were unused to managing credit risk and the supervisory authorities were not prepared for operating on deregulated financial markets.

When economic activity took a downturn, inflation fell, the tax system was altered so that interest costs after tax rose and interest rates were increased to defend the fixed exchange rate, the bank crisis was triggered. The central government debt,

which was high at the start of the economic slowdown, soared even further. The fixed exchange rate policy had to be abandoned and was replaced by inflation targeting. A tough period followed, when confidence in the low inflation policy had to be established. This required a consolidation of central government finances, high real interest rates and at the same time, the capital supply from the banks did not function fully as a result of their consolidation requirements.

There are many lessons to be learned here. However, to sum up, one can say that the game rules need to be as predictable as possible to reduce the risk of imbalances accumulating over a long period of time. Balanced central government finances and price stability reduce uncertainty regarding the future. At the same time, the regulatory system must be designed to prevent overly large differences between what is profitable for society and what is profitable for the private sector. This creates good conditions to make realistic assessments of the future and to take the right decisions regarding investment, consumption and financial investments.

A very topical issue is how the accounting and auditing rules should be designed to create the best possible conditions for lenders and investors to form an opinion of a company's future profits and ability to pay. It is never possible to completely prevent unlawful actions, but is there something that can be done to avoid such scandals as have arisen with the fall of Enron and Worldcom? Transparency must in any case be our guiding star!

### **The present situation**

Finally, I should like to comment on the present situation.

Quite contrary to what many feared, the downturn in economic activity following the unusually strong and prolonged upturn that was driven by the US economy appears to be moderate and short-lived. Growth appears to be on the way up already this year. The heavy fall on the stock markets, terrorist acts, the crisis in Argentina and the Enron affair do not seem to have had excessively negative effects on the global economy. There is still some uncertainty, particularly with regard to the capacity of the US economy to once again take on its role as engine for growth. This uncertainty is partly connected with whether we have really seen the entire downside of the financial bubble, and partly with the consequences of the terrorist attacks.

Uncertainty has increased somewhat in recent weeks, but we can still assert that the turbulence in the financial markets does not appear to have had particularly major effects on the real economy. What could be the explanation for this?

An important difference compared with earlier financial crises that have been preceded by high asset prices, strong growth and a large credit boom is that economic policy has now provided better fundamental conditions for stability than before. Serious financial crises have often, as I mentioned earlier, been reinforced by the fact that various types of economic policy change have contributed directly or indirectly to forcing indebted households and companies to reassess their future ability to pay. The game rules have often been changed in a way that has meant that there were strong reasons for a downward revision of expectations for the future. The expectations on which companies and households have based their loan-

financed consumption and investment decisions have afterwards proved to be overly optimistic. Banks which have not been able to predict these changes and which have also had under-developed risk management systems, with a strong concentration of their assets in particular industries, have also been important elements in most financial crises that have followed on from a financial bubble. A high central government debt and high inflation from the start have also reduced the possibilities for stimulating the economy.

The optimism that pushed up share prices and growth during the previous economic boom was largely based on expectations that information technology would increase production capacity in the economy. The over-optimism that arose was broken when companies could not demonstrate the profit levels that were expected, but no economic-policy game rules were changed.

Although there have been many overstatements in the discussion of the importance of IT developments, I believe that IT has the potential to increase the level of productivity in the economy. Computers and the Internet make gathering information simple, cheap and quick, as well as enabling contacts between buyers and sellers on almost all levels. Information technology should, for instance, reduce the cost of financing, handling inventories and procurement. It can have contributed to the fairly rapid return in households' and companies' confidence in the economy.

Another reason why the slowdown in the economy appears to be short-lived is the stimulation contributed by both monetary policy and fiscal policy. Low inflation and stable inflation expectations when the downward turn came meant that there was scope to lower interest rates in most countries. In addition, the central government debt had been reduced in most countries, which meant that fiscal policy could also be used to stimulate the economy.

It is possible that a further reason why the turbulence on the financial markets did not have such a large effect on the real economy was the development of risk management instruments and systems in the financial markets. Most of the earlier financial crises have been preceded by a large rise in property prices, at the same time as the banks have been strongly exposed to this sector. This time, it was the IT and telecommunications sector behind the stock market rise. The banks' exposure to this sector appears to be lower. New instruments and techniques for spreading risks probably lead to a general reduction in the risk of serious financial crises.

All in all, there are many indications that the real economy effects of the severe stock market fall will be limited. However, at the same time, it is not possible to write off the risk of financial imbalances having accumulated that could create problems in the future. It is possible that the asymmetry in monetary policy, which I have earlier mentioned, where the central banks act rapidly in response to a decline in asset prices, but have been more cautious when asset prices have risen, has contributed to this.