# Lorenzo Bini Smaghi: Careful with (the D) words!

Speech by Mr Lorenzo Bini Smaghi, Member of the Executive Board of the European Central Bank, at the European Colloquia Series, Venice, 25 November 2008.

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## 1. Introduction[1]

I would like to thank the organisers for having invited me here today to share with you my views on the economy, in Europe and worldwide, as the title of this session states.

I would first like to share with you the caution that policy-makers must have in uncertain times like those we are living in. Our words are carefully listened and read by economic agents and market participants, who try to get a better understanding of economic developments and possibly anticipate policy decisions. In these circumstances the safest thing would be to keep quiet, thus avoiding creating misunderstandings, with potential market impact. On the other hand, it is our responsibility to intervene in the policy discussions that are taking place in the current conjuncture, especially if these discussions take the wrong track.

The issue that I would like to address today has been raised in several quarters over the last few weeks. I do not intend with this speech to attract attention to it, but rather to react to what in my view has been an imperfectly informed discussion. It's important to make this clarification. When a policy-maker discusses an issue like deflation, which – rightly so – raises emotional feelings, the reaction might be to ask: "why did he discuss such an issue?" Indeed, when the issue of deflation started to be discussed, in late 2002, markets reacted negatively. They probably thought that policymakers were talking about deflation in order to prepare economic agents to such an event.

My motivation is different. I would like to discuss the phenomenon of deflation because several observers, journalists, analysts, academics, have started to talk about it in a way which, in my view, is imprecise. Calling things in the right way, using the appropriate words should be the start of any sound analysis. This is what I would like to do today. The intent is not to influence market expectations about future interest rate policy but to explain how central banks analyse the economic situation and interpret data with a view to detecting risks of deflation. As I already said in the past, it is way more useful for market participants to have a good understanding of the analytical framework supporting policy decisions than trying to dissect each and every speech of the various members of the policy making body to detect any indication about the next policy move.

One thing that I would like to anticipate from the start is that economic history has thought that deflation risks should be considered objectively, rather than emotionally. On the one hand, the underestimation of deflation risks might ultimately lead to deflation. On the other hand, the overestimation of deflation risks might sow the seeds of the next crisis.

## 2. What is deflation?

Deflation is defined as a decline in the price level, such as the consumer price index, which has three main characteristics. It is: i) *generalised*, i.e. it affects all prices; ii) *persistent*, i.e. it lasts for some time, over several years; and iii) *expected* by economic agents. It is often associated with a reduction in aggregate demand. An important sign of a deflation is the self-

[1] I thank L. Dedola, K. Forster, C. Kamps and M. Rostagno for their input in the preparation of these remarks.

perpetuating nature of the process.[2] The expectation of price reductions induces households to postpone consumption and firms to reduce wage costs and to delay investment, also in view of the higher rate of return. This depresses aggregate demand which puts further downward pressure on prices. The appreciation of the exchange rate might further exacerbate this tendency. A well-known example of a self reinforcing price-income mechanism is Japan's experience in the 1990s – also referred to as the "lost decade".

A deflation triggered by a sharp fall in aggregate demand, possibly accompanied by unpredictable changes in economic sentiment (the Keynesian "animal spirits") which leads producers to cut prices on an ongoing basis, poses a serious cause of concern, in particular if it manifests itself in conjunction with a protracted economic slowdown and with risks of financial stability. This can result in a self-perpetuating downward spiral, in which conventional economic policy options are severely restricted. The system may find itself in a situation not very different from the Keynesian "liquidity trap", where private sector expectations of falling nominal and real values of financial and real assets lead agents to cling to any liquid and safe asset as much as possible.

Those self-perpetuating effects may arise through various channels, via onerous debt burden, personal and corporate bankruptcies, financial crises or other adverse conditions. According to the "debt-deflation-hypothesis", first mentioned by Irving Fisher in 1933, falling prices increase the real debt burden and adversely affect firms' balance sheets, which may result in a rising number of insolvencies and make banks more reluctant to grant loans, leading to a further slowdown in investment, creating additional deflationary pressures. Furthermore, if consumers expect a further decline in prices and face inefficiently high and positive real interest rates, this may lead to a general reluctance to purchase, causing a further decrease in aggregate demand and a further downward movement of the price level. In addition, in all cases on record, a sudden and sharp drop of asset prices which resulted in significant losses of wealth have been a crucial factor in amplifying and propagating the initial disturbance. All these factors, sometimes paired together with policy failures, may add to the severity and the length of the downturn.

## 3. What is not deflation?

Not all declines in the price level are deflation. First, individual prices can and do fall. In the euro area, for example, price of computers have fallen substantially and nobody has complained. Even the overall consumer price index, such as the euro area HICP, can fall from time to time on account of seasonal factors as well as in the wake of large changes in import or energy prices. The consumer price index might also fall if, following an exogenous shock, the equilibrium price level is lowered and the economy is flexible enough to achieve the adjustment quite rapidly. I would call this adjustment disinflation, which can entail a temporary negative inflation in order for the price level to achieve its new equilibrium level. Disinflation can also be associated with a negative growth of aggregate demand, at least temporarily. However, the quicker the adjustment in prices takes place, the lesser will be the output cost of the adjustment.

The difference between deflation and disinflation is neither the possibility of a negative price change, nor the association with a fall in output. The difference is that, in a deflation

[2] A mere decrease of prices of some categories of goods, in individual sectors or in certain regions should also not be termed deflation. In a market economy, such relative price adjustments are a response to changes in supply and demand – for example differences in sectoral productivity developments – and are essential for an efficient welfare-enhancing allocation of resources. Deflation per se only occurs when price declines are so widespread that broad-based indices of prices register ongoing declines. This is particular relevant for the euro area, as the consequences of deflation in the whole area would also be very different from a decline in prices in any individual euro area country (Issing, 2002).

scenario, expectations of price changes turn negative and induce agents to postpone consumption and investment decisions. It's the negative inflation expectations that pushes the (ex-ante) real interest rate up, even when the nominal interest rate is brought down to zero, above its equilibrium level.

It is not clear what could push agents to expect negative inflation, and thereby enter a deflation scenario, rather than a standard disinflation. One possibility is that agents are not fully rational and form adaptive expectations. As they observe the start of the disinflation, with a negative inflation rate necessary to achieve the new equilibrium, they may think that the negative price change is likely to persist for some time. Negative inflation expectations might thus become entrenched. Given the zero bound on interest rates, the negative inflation pushes real rates up, thereby adding recessionary forces to the economy, which might further fuel price declines.

Another hypothesis is that the disinflation process is not sufficiently quick to stabilise the economy at the new equilibrium. As in the case of asset markets that do not function properly, when the equilibrium price is not achieved rapidly enough and the adjustment process is slow, the price dynamics will take longer and might even overshoot, generating destabilising patterns. The same could occur for the real economy, as a lack of flexibility in markets delays the adjustment of the price level, which may take more time and generate negative expectations. This scenario might be aggravated if policies aim at stabilizing the economy at the "wrong" equilibrium, delaying the adjustment towards the new equilibrium. I would conjecture that the more the economy is kept away from its equilibrium, the more the adjustment, in terms of prices and output, might become non-linear. This could happen in particular if the classical transmission mechanisms of monetary and fiscal policies are impaired, for instance due to a loss of confidence in the financial system. More work needs to be done in this field, in particular in order to understand how price expectations are formed in the face of a negative demand shock.

## 4. Detecting deflation

Looking at history, although deflation experiences have occurred, they have been quite rare. Most of us immediately think of the deflation during the Great Depression and the recent experience of Japan. The sustained deflationary episodes of the Great Depression in the 1930s and in Japan in the second half of the 1990s bear some common underlying factors. Both episodes followed long periods of exceptionally optimistic views on potential output and major speculative stock price and asset price bubbles. In both cases, an exchange rate appreciation contributed to strengthening deflationary pressures. At the same time, there are also obvious differences between the two episodes. The role of monetary policy was clearly more damaging in the US. As Friedman and Schwartz (1963) show the initial downturn in August 1929 and the following Great Depression were mostly due to restrictive monetary policy, which added substantially to the rapid and strong decline in demand. From August 1929 to March 1933, US real GDP fell by almost 30%, or 7.6% on a yearly average. Similar drastic declines in average annual output occurred in other countries (for example, Canada -8.4%, Germany -2.7%, United Kingdom -1.0% and France -2.2%). The contraction was transmitted to the rest of the world via the fixed exchange rate linkages of the gold standard and by "golden fetters" which prevented the monetary authorities of gold standard adherents from following the expansionary policies needed to offset the collapsing demand and a rash of banking panics across the world (Bernanke and James, 1991), without triggering a speculative attack on the gold parity (Eichengreen, 1992).

Monetary conditions have played a role also in the case of Japan. With hindsight, it could be argued that monetary policy was overly accommodative during the run up of the bubble, and possibly too tight as the recession started, in 1991. In any case, it is now clear that deflationary risks were obviously not recognised at the time. Furthermore, weakness in the supervisory system and ingrained practices in the banking sector hampered the ability of the

economy to resolve the non-performing loans problems, with lasting implications on the recovery of output. Leading to a protracted slump, the price level decline in Japan was nevertheless considerably weaker than the fall in prices in most countries during the Great Depression. Falling below zero in 1995, the inflation rate remained negative, until 2005, averaging 0.1% p.a.. On the other hand, overall production did not suffer as much during this period. From its previous peak in 1990, of above 5%, GDP growth declined to a standstill in 1992-1993. Between 1995 and 2007 Japan's per capita GDP grew at an average yearly rate of only 1.2%, against 1.8% in the euro area and 1.9% in the US.

Looking at the current situation, inflation reached a peak only a few months ago. In July, inflation in the U.S. hit 5.6%, the highest rate since 1991. In the same month, inflation in the euro area surged to 4% and, in the UK, consumer price inflation hit 5.2% in September. This high inflation was mainly the result of the surge in commodity prices in the first half of the year. Since then, global economic growth slowed down sharply and the commodity boom turned to bust. The price of the barrel of crude oil dropped sharply, from a peak of 147 US-dollar/barrel in July to below 50 US dollars prt barrel in recent days. Against this background, the latest releases have shown a significant decline in inflation rates, though in most countries still remaining above the respective medium term-objective for price stability. The data clearly do not show any country in deflation right now.

Looking ahead, the inflation outlook is bound to change substantially. If raw materials prices remain at current levels, the year-on-year change in the energy related component of the consumer price indices will turn sharply negative in many countries in 2009. As a result global inflation can be expected to drop quickly over the next months, but should remain in positive territory. For the euro area, the latest inflation forecasts for 2009 range as follows (see Table 1): 1.4% for the OECD, 1.6% for the IMF, 1.8% for Consensus Economics. For 2010 many forecasts foresee a pick up in inflation in the euro area, except for the OECD (1.3%); Consensus Forecast projects 2.0%. To my knowledge, no individual private sector analyst or forecast is projecting deflation in the euro area either; this is true, in particular, for the ECB's Survey of Professional Forecasters. The longer term expectations, as measured by the 5-year break-even inflation rate 5 years ahead derived from inflation-linked bonds hover around 2%. Moreover, the available forecasts and expectations do not foresee any material risk of deflation in the United States either.

Overall, while a number of factors suggest that inflationary pressures will decline significantly, there are currently no signs of deflationary expectations. As long as inflation expectations remain firmly anchored, deflation will therefore remain a rather remote risk.

## 5. Deflation and monetary policy: strategy and implementation

In recent years, we have acquired considerable knowledge about the causes, nature and dynamics of deflation. The insights we have gained, including recognition of our imperfect knowledge, provide valuable input for policymakers. I will conclude by summarising the pertinent issues for monetary policy.

How can central banks prevent or at least minimise deflation risks and how can they effectively counter such risks if they materialise? By using an appropriate strategy to anchor expectations and to take robust decisions, by employing policy instruments in an effective and credible manner, and by ensuring that markets and the public at large are fully informed and understand the central bank's intentions and actions. Of course, the conduct of monetary policy should always be characterised by these elements. But these become indispensable in preventing and counteracting the risk of deflation. Let me examine them in turn.

The ability of the monetary authorities to anchor expectations to the price stability objective is crucial – and can be thought of as a first line of defence against deflation risks. The anchoring of inflation expectations can be greatly facilitated by a quantitative specification of the price stability objective. In choosing this quantitative objective, account should be taken,

among other things, of potential deflation risks. When the ECB evaluated its monetary policy strategy in 2003, it confirmed its quantitative definition of price stability; at the same time, it clarified that in the pursuit of price stability it will aim to maintain inflation rates close to but below 2% over the medium term. This clarification was partly meant to underline *"the ECB's commitment to provide a sufficient safety margin to guard against the risks of deflation"* and also to " *address the issue of the possible presence of a measurement bias in the HICP and the implications of inflation differentials within the euro area*". The quantitative definition of the monetary policy objective can help make expectations of future price developments "mean-reverting", thus ensuring that they do not depart from the central bank's stated objective. Needless to say, the ability of the central bank to anchor expectations ultimately depends on the effectiveness with which it achieves its goal.

This requires, especially in an environment of low inflation and low interest rates, that the central bank uses a strategy which provides a robust basis for decision-making and an effective framework for communicating policy decisions. A robust strategy is one that can be expected to work acceptably well under different assumptions concerning the channels and dynamics of the monetary transmission mechanism, including alternative hypotheses regarding the type and degree of nominal rigidities, the nature and formation of expectations.

The ECB's strategy combines economic and monetary analysis in assessing the outlook for price stability and the associated risks. It is suited for the conduct of monetary policy in an environment of low inflation. Monetary analysis does not only serve to "cross-check" from a longer-term perspective, the assessment based on the economic analysis, which focuses over a short to medium-term horizon. Monetary analysis can also provide useful information on the evolution of asset prices and help signal misalignments in asset markets that – if left unchecked – may unwind in disorderly way.[3] A robust approach to the assessment of the risks surrounding the economic outlook can insure against inaction or too hasty decisions, which can be both regretted with hindsight. In this respect, the historical evidence supports the conclusion that monetary aggregates can play an important role when inflation is low or negative and the nominal interest rate is constrained by the zero lower bound.[4]

With regard to policy implementation, the old saying "prevention is better than cure" is applicable also when deflation risks concretely emerge. The potentially complex deflation dynamics suggest that the central bank should act promptly and, possibly, in a pre-emptive fashion. Acting decisively and early, the central bank can reduce the probability that the zero-interest rate becomes a binding constraint and that conventional monetary policy becomes ineffective. A swift policy easing may further help to stabilise asset prices, counter a disproportionate widening in the market risk premium and thus prevent a sharp decline in the provision of credit.

However, such an approach, aimed at taking insurance against a possible deflation risk, also entails costs. First, it may contribute to, rather than obviate, a worsening of market sentiment, if it is interpreted as a signal that the central bank has a more pessimistic assessment of the economy than market participants. It has been observed at times that sharp reductions of policy rates have led to a deterioration of market sentiment. A policy of ensuring against a deflation risk, without clear evidence that the risk is materialising, might in fact coordinate agents' expectations of negative inflation, thus increasing its likelihood. Second, if the transmission of monetary policy does not function properly, the lowering of policy rates is not transmitted to the real economy and is thus not effective. We can see that in the current environment rates to end users have fallen much less than policy rates. This undermines the confidence on the effectiveness of monetary policy, which might aggravate the problem. It is thus preferable to devote efforts to improve the transmission mechanism, in particular by

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[3] See O. Issing (2002) and C. Borio and P. Lowe (2002).

[4] See M. Bordo and A. Filardo (2005).

strengthening the solvency situation of the banking system. Third, the exhaustion of all ammunitions earlier in the process, when there is no evidence of a deflationary shock, reduces the margin of manoeuvre in case other adverse shocks occur. For instance, if foreign exchange markets do not display a major appreciation of the exchange rate, which in the past has always been associated with deflation, monetary policy should maintain some room to counter such undesired development. Finally, if deflation risks eventually subside, too loose a monetary policy stance can fuel excessive risk taking, which would give rise to a new asset bubble that would lead down the road to even greater problems. Let me spend a few words on this objection.

The counter argument is that the real problem of lowering rates would emerge if rates were kept at low levels for too long, something central banks have been reproached in the first half of this decade. To avoid this scenario, the solution is not to avoid cutting rates to a low level but to raise them quickly enough, when the deflation fears evaporate. However, this strategy is not time consistent. In order to be credible, a policy of low interest rates aimed at ensuring against a deflation risk must affect the whole yield curve. This requires that the central bank commits to maintain low rates for a prolonged period of time.[5] Only in this way is the incentive created to invest in risky assets rather than holding money. However, the longer are interest rates held at a low level, below the equilibrium one, the greater is the need for a quick tightening, to reverse the course and bring back the policy in line. But such a tightening would induce a substantial re-pricing of risk and a potential downloading of these risky assets from investors' portfolios. The more agents have accumulated risky assets on the expectation that rates will remain low, the more the decision to finally increase policy rates will produce some disruption in asset markets. The experience of 1994 is quite interesting in that respect. There is thus a natural tendency to postpone the decision to tighten until the evidence that the recovery is solidly taking place is clear cut. Raising rates too early would be feared as jeopardising the recovery. On the other hand, the more the rate increase is delayed, the sharper it should be, to catch up with the lost ground.[6] But a similar problem to the one just explained would emerge. To avoid creating turbulence, the tightening tends to be conducted at a measured pace, which inevitably leads policy to be behind the curve.

To sum up, if interest rates are pushed very low on the fear of deflation, and deflation does not materialize, market participants will have sooner or later to shed the risky assets that they accumulated in their portfolios as a result of the low level of rates and to account for capital losses. Monetary policy might postpone the timing of such portfolio reallocation, keeping rates low and thus maintaining the incentive to avoid the capital loss, but the time of reckoning will come at a certain point. The incentive could be to postpone it as long as possible. The risk is that when the adjustment finally comes, on top of other adjustments in the economy, its effects are very disruptive. This story might sound familiar. It should call for prudence in conducting so-called "insurance" policies. They may sound costless in the short term, but the bill might come when least expected, and with a surcharge.

## 6. Conclusions

In my opinion the term "deflation" is often misused as a catch-all phrase describing all kinds of negative developments. This can obviously be dangerous as it could lead to the wrong policy advice, like a false diagnosis may lead to the prescription of overly aggressive medical treatment. The patient may think that this is harmless, and costless if he is insured. But as doctors know, there is no benign medicine and patients are always invited to carefully read the list of side effects and possible complications.

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[5] See Bernanke (2002).

[6] See L. Bini Smaghi (2006).

The best contribution that monetary policy can make to avoid the negative scenarios that I have described is to be implemented within a framework that ensures both a clear definition of price stability and a medium term strategy in which relevant economic and financial indicators are taken into account. This is the way the ECB has conducted monetary policy, also in turbulent times. This is not sufficient, however. It is essential that the transmission mechanism of monetary policy is improved, so that the monetary impulse is transmitted effectively to the real economy. This requires decisive action, in particular by national governments, to ensure the solidity of the financial system and restore confidence in financial markets.

**Table 1. Inflation forecasts in November 2008**

| | Euro area | | United States | |
|---|---|---|---|---|
| | 2009 | 2010 | 2009 | 2010 |
| OECD | 1.4 | 1.3 | 1.5 | 1.6 |
| IMF | 1.6 | - | 1.8 | - |
| Consensus Forecast | 1.8 | 2.0* | 1.4 | 2.2* |

** This refers to the first 2 quarters of 2010 as reported in the Survey in September 2008.*

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