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Economic and Scientific Policy**

**Monetary Dialogue – 19 December 2007**

**Background documents and Briefing notes**

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## **DG INTERNAL POLICIES OF THE UNION**

- Directorate A -

ECONOMIC AND SCIENTIFIC POLICY

POLICY DEPARTMENT

### **MONETARY DIALOGUE DECEMBER 2007**

#### **Summary of Monetary Experts' Panel Briefing Papers for the**

#### **Preparatory Meeting – 18 December, 10.00-11.30hrs, ASP 5G1**

The following summary presents the respective topics of the briefing papers followed by brief points on the main answers of the experts to the questions asked. Only selected main points are mentioned here. For a complete argumentation, please refer to the subsequent papers.

### **1. Developments in the real estate sector in relation with monetary policy**

Real estate prices in the EU have experienced substantial increases of varying intensities across countries in the last 10 years with few exceptions, the most notable one being Germany. There are some signs that this development is now slowing down. The situation in the US with decreasing real estate prices can equally have an impact on the aggregate situation in Europe.

The experts were asked to evaluate the developments of real estate prices in the euro area and the EU and to assess the appropriate role of monetary policy therein. Specifically, questions such as the real estate markets' appropriate weight in the HICP and the impact of the euro area heterogeneity on appropriate policy responses were raised.

There was overall consensus about the fact that monetary policy is concerned with the average and aggregate, and therefore has limited possibilities to react to idiosyncratic developments and heterogeneities. Also, if the ECB engaged in activist policies these heterogeneities across the euro area might only grow instead of shrink. As regards the role of real estate (or other assets) prices in the HICP, the answers however differed substantially. While some argued for adjustments in the HICP towards an inclusion of house ownership (de la Dehesa), others provided arguments for its abandonment in favour of e.g. the GDP deflator (Schwartz), and yet others argued for the usefulness of the present concept of “expected CPI” inflation (Patat, Walter). Finally, while there was fair consensus on the prospects of dampened GDP growth in the near future due to the US slowdown, the prospects for inflation are rather more controversial and unclear.

#### **Guillermo DE LA DEHESA – There is no housing bubble in the EU, but there is a case for a greater weight of real estate prices in the HICP, and more attention could be paid by the ECB**

Housing prices do not appear to be excessively overvalued in the average of the euro area (EA), residential investment is broadly in line with its long-term average and there is no great distortion between housing and consumer spending in the EA as a whole. While the heterogeneity in price developments in the EA is remarkable, the average of the EA-exposure to a slowdown to prices remains well under US-exposure levels, the UK being somewhat in between.

There seems to be a rather high exposure in Spain, and slightly lower ones in Ireland and France. However, in all these cases the fundamentals in the financial system seem healthy in enough to deal with decreasing price developments.

ECB policy can be said to have (unwantedly) stimulated excessive developments. Main driving factors behind this development have been low interest rates and financial innovation, but also real factors such as immigration and income growth. Real estate prices should have a more prominent weight in the HICP. A possible solution is that the ECB accept and include the concept of "owner-equivalent-rent" in the HICP calculations, which measures house ownership as an imputed rent.

**Gustav HORN - A better regulation of financial markets would increase the leeway for monetary policy, at the same time real economy investment has to be encouraged**

A central hypothesis states that different (i.e. higher) interest rate policies could have prevented the recent turmoils in financial markets. Moreover, the general assumption is that there was too much liquidity in the system. This hypothesis is challenged, as the same phenomenon can equally be interpreted as evidence for excessive saving. Real economy investment should have been higher to keep the upturn alive.

Monetary policy cannot be held responsible for the divergences in the real estate sector as it can only act on an aggregate level. Instead, wage developments should have been more in line with the ECB's inflation target. A more appropriate and stricter regulation of financial markets is necessary to prevent the use risky products which serve the sole purpose of exploiting informational asymmetries between buyers and sellers. Finally, a more pronounced income distribution policy would help diverting investment from financial products to the real sector.

**Jean-Pierre PATAT – As no systematic relationship exists between HICP and real estate price monitoring, monetary conditions need to be held stable**

Developments in the housing market are a concern for monetary policy as they can affect both price stability and financial stability. A more prominent weight for real estate prices in the HICP would however not provide the desired results. It could merely lead to wider and undesired variations in the index and make monetary policy therefore more difficult. However, this does not mean that monetary authorities do not need to gather a lot of pertinent data on the housing market and closely monitor its evolution and the financial institutions involved.

The ECB should refrain from large countercyclical actions when dealing with these questions as, given the heterogeneity of the euro area, too much activism will presumably only enlarge differences in the euro area. The medium term strategy of the ECB seems appropriate here. Even though there is no systematic correlation between the HICP and the housing market prices, the ECB has to remain alarmist as regards HICP inflation prospects at the same time remaining vigilant as regards the situation on the housing markets.

**Pedro SCHWARTZ - The connection between money and inflation remains pertinent, the long-run effects of high monetary growth on asset prices and HICP will become more pronounced**

Property price increases can be explained by loose monetary policy as the long term connection between M3 and inflation has been neglected. The persistent gap between desired and actual M3 growth was not a statistical aberration but an indication of excessive monetary expansion, whereas the effects on HICP goods and services realize only in the longer run.

Milton Friedman's "natural experiment" (2005) between money and asset price movements is strikingly simple and powerful in the long run. Empirical evidence supports that a similar phenomenon has happened in the euro zone in recent years.

The HICP is not the best measure for the value of money as financial assets and real estate are not included in it. As realistic remedies, the ECB should follow the FED and monitor the GDP deflator instead of the HICP, and/or consider re-enhancing the role of M3 in its monetary strategy more explicitly.

**Norbert WALTER - There is no case for central banks going beyond stabilising expected CPI inflation rates when setting interest rates**

The ECB should stick to expected CPI but communicate intensively about their valuation models if they see a danger of asset price bubbles.

The house price boom in Europe is on a decreasing edge roughly since 2006. Strong economic growth, favourable demographics and low interest rates can explain much of the price dynamics. However there is some evidence for excessive growth in the sector which has now started a downward correction on the supply side. This is only the beginning of the adjustment process. The slowdown in the US and the strong euro will lead to softer GDP growth and inflation, lower interest rates being the logical consequence.

Flexible mortgage systems have experienced stronger housing price growth, but recently equally stronger corrections in their housing markets as the interest rate elasticity is more pronounced in these systems.

## **2. The impact of globalisation on inflation**

Globalisation has become a very important theme in the public debate at both global and national levels. But for quite a long time globalisation has been referred to in discussions on topics other than inflation in the advanced economies. Primarily, globalisation has been invoked while focusing on e.g. the consequences of the liberalization of capital flows, the build-up of major global financial imbalances, the rise of strongly competitive emerging markets and its impacts on labour market developments, etc. Only recently has there been a more intense interest in exploring more systematically the possible links between globalisation and inflation.

In this debate, it was long the dominant view that globalisation contributed to lower inflation. Firstly, there was an institutional argument along the lines that "more globalised nations tend to pursue policies that achieve faster economic growth, lower inflation, higher incomes and greater economic freedom". Secondly, the global competition channel was at work through which increased global competition depressed (relative) price levels across the world, thus exerting a decreasing effect on inflation. On the other hand, global resource and supply problems in markets such as oil and energy (as well as most other raw materials) may now work in the opposite direction. This is especially the case as the dependence on these resource supplies in the EU is substantial. Furthermore, as a relative income argument, fast growing regions such as China and India also show higher income growth and an emergence of a larger middle class. The increase in prosperity of these classes also brings with itself higher costs and thereby higher prices in global trade networks.

The experts' papers clearly show the different points of view in the academic debate on the question on the influence that globalisation has on inflation. On the one hand, the influence of globalisation is at best believed to be indirect e.g. when labour in advanced economies is convinced (by credible threats) that its services could be easily substituted by workers in low-wage countries. On the other hand, if the above-described processes really do have a lowering effect on domestic inflation via import prices, downward pressure on wages, reduction in capacity bottlenecks and overall productivity increases, research is divided upon the fact whether such influence is transitory or permanent.

**Sylvester EIJJFINGER – Central banks should stick to price stability as the overriding policy goal because globalisation does not mean no inflation risk**

Globalisation does matter for domestic inflation and monetary policy, but theoretical models and empirical evidence do not provide enough insight in the globalization-inflation relationship.

Globalisation does not mean no inflation risk. Therefore, central banks should stick to price stability as the overriding policy goal but introduce some institutional adjustments to deal with more integrated financial markets (e.g. improvement of the early warning systems, the stress testing, and the crisis management tools, tougher financial supervision).

Globalisation could force structural reforms and institutional changes within the euro area economy. The EU should not wait, but rather anticipate the future consequences of globalisation.

**Jean-Paul FITOUSSI – If the effect of globalisation on inflation is transitory over a longer period, monetary policy could be more supportive of other general goals of economic policy**

Additionally to the channels mentioned in above, a contestability effect might be at work: Even when the share of imports is low, the simple threat coming from potential competitors will force domestic producers to keep prices low.

The obvious consequence of the established link between globalization and (dis)inflation is the necessity to frame the debate on inflation targeting and monetary policy effectiveness in new terms: if the generalized disinflationary trend observed has mainly external reasons, domestic policies, and notably inflation targeting, do not have the significant impact which is generally agreed upon. But then, if inflation partially escapes its control, monetary policy has room to manoeuvre that can be used to pursue other objectives, notably economic growth.

**Leon PODKAMINER – Globalisation may have helped to moderate the wage aspirations in advanced countries thus playing a prominent role in disinflation.**

There are serious problems with the identification of the impacts of globalization on inflation. The evidence suggests that these impacts are insignificant, at least for the euro area countries.

The fact that research does not support strong hypotheses on the role of globalization in reducing inflation suggests that other developments (changes in monetary, exchange rate, fiscal and social policies, etc.) may have been decisive.

Globalisation may have helped to moderate the wage aspirations of the workforce in the advanced countries – thus playing a prominent role in disinflation. This need not have been *direct*. All that is required for *real* consequences is that the labour in the advanced countries is convinced that its services could be easily substituted by workers in the low-wage countries.

**Anne SIBERT – Low and stable inflation over the past decade is mainly due to better monetary policy making.**

By changing the structure of the world economy, globalisation has changed the inflation transmission mechanism. Globalisation has changed policy makers' incentives, probably making it easier for them to commit to low inflation.

The growth of China has changed the structure of the world economy and posed serious challenges for monetary policy makers. However, the impact of the development in China on inflation has been – and should continue to be – small.

**Charles WYPLOSZ - The view that globalisation reduces inflation in developed countries is misguided.**

The principle that inflation is ultimately the result of monetary policy remains as valid as ever.

Globalization tends to reduce the prices of goods and services produced in the emerging market economies *relatively* to the prices of goods and services produced in the developed countries. Inflation, in contrast, corresponds to the increase in *absolute* prices. In addition, the emerging market countries are becoming increasingly large consumers. This tends to raise relative prices, which partly at least offsets the deflationary effect presumed to affect inflation.

Globalization can affect inflation in the developed countries by changing the incentives of central banks. If the effect of globalization is to raise unemployment central banks may shift their priority away from achieving price stability and towards preserving employment.

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## **IS THERE A HOUSING BUBBLE IN THE EURO AREA?**

### **Briefing Paper for the Monetary Dialogue of December 2007 by the Committee on Economic and Monetary Affairs of the European Parliament with the President of the European Central Bank**

**GUILLERMO DE LA DEHESA**

(Chairman of the CEPR, Centre for Economic Policy Research, London & Chairman of the OBCE, Observatorio del Banco Central Europeo, Madrid)

### **Is there a housing bubble in the Euro Area?**

The answer is no. Average Euro Area (EA) housing prices do not appear to be excessively overvalued, residential investment is broadly in line with its long-term average and the distortion from housing to consumer spending appears not to be large. Nevertheless, there are a few member countries, like Spain, Ireland and France, which have larger housing bubbles, in terms of real price increases, than that of the US and close to that of the UK, but fundamental factors account for a larger proportion of them than in the US. Housing bubbles are also highly concentrated in urban areas and cities. In the US, the standard deviation of home prices across metropolitan areas is 57 per cent. In the UK, Greater London explains a large percentage of its national bubble and in France a similar weight is represented by metropolitan Paris.

According to Goldman Sachs (2007), there are three different ways of measuring the present relative housing exposure of each of the different EA countries in relation to their historical averages in order to construct a valid index: The first one is its housing real overvaluation in the last ten years, (although it is also as important the extent to which its aggregate demand has been leveraged to the housing boom). The second one is the degree to which residential investment, in terms of GDP, exceeds its historical average, which captures better this second demand factor. The third one is its degree of deviation of its household savings ratio from its previous ten-year average.

First, being 100 real housing prices in 1997, since then they have gone up, in 2006, to 340 in the UK, to 290 in Ireland, to 220 in Spain and to 200 in France, while only to 170 in the US, to 140 in Italy and to 100 in Germany, according to Goldman Sachs. Thus, according to this measure the UK housing market is the one more really overvalued in the EU, being Ireland the one most overvalued within the EA, followed by that of Spain, and finally, the US equals the EA average.

Nevertheless, a better method of valuing housing is to compare, over the long term, its rental yield with its real long-term financing costs. A lower than average spread of rental yields over long-term real borrowing costs relative to its historical average is indicative of overvaluation. This valuation system is a housing version of the dividend discount model used in equity valuations, with the rental yield being analogous to the dividend yield. Just as the price of a share should equal the discounted present value of future dividends, the price of a house should reflect the discounted present value of the future benefits of ownership, either in terms of rental income or of rent saved by the owner occupier.

Such a method is even better than that of the house price to income ratio, which measures the relation of prices to disposable income, because its equilibrium value can be permanently changed by fundamental factors such as the changes in housing demand and supply and/or the permanent shifts in real borrowing costs (factors already subsumed in the comparison between rental yield and real long term borrowing costs) which have taken place in Italy, Spain and Ireland following the expectations of their entry in EMU.

Another advantage of comparing the rental yield spreads over borrowing costs in each country with their historical averages is that national housing factors can be accommodated. For instance, the spread between rental yield and borrowing costs is lower than their historical averages in Spain and the UK than in Germany because of their home ownership culture (84 per cent of Spanish households are home owners).

Second, such a spread is lower than historical average in the UK, with 1.1; in France, with 0.9; in Spain, with 0.8; in Ireland with 0.6 and in Sweden with 0.5, while in the Netherlands, with 0.1, Italy, with -0.1 and Germany, with -0.5, is higher, which provides strong evidence that the first five countries have much more overvalued housing prices than the second two. (Note that a positive deviation means a lower than average spread and vice-versa). Thus, in terms of this measure the UK housing prices are again the more overvalued, followed by France and Spain. The EA overvaluation average is 0.4 versus 0.9 in the US, which is more than double the EA.

Third, the measure of deviation of residential investment as a percentage of GDP from their historical average is the one where aggregate demand is more closely correlated with house price developments. Thus, countries that have experienced a sharp rise in residential investment during the housing boom can be more vulnerable to a housing slowdown. Under this measure, Ireland comes on top with a deviation of 2.9 per cent of GDP from its previous ten year average, followed by Spain, with 2.3 per cent, Sweden, with 1.3 per cent and the UK is only 1.0. The lower ratios are those of France and Italy with 0.5 per cent, while Germany with -0.7 per cent of GDP is the only major EA country below the historical average. The EA average deviation is only 0.3 per cent of GDP versus 1.3 per cent of GDP, a much higher deviation.

Fourth, another measure of housing exposure is the positive correlation between house prices and consumption through the "wealth effect", or alternatively, its negative correlation with savings. This effect is much more variable across time and across countries. There is not a clear correlation pattern in the EA. For instance, Ireland has a positive deviation in its saving ratio (with its ten year historical average) of 0.8 percentage points, in spite of its house price increase of 200 per cent, while Spain has a negative deviation of its savings ratio from previous average of -2.0, having only half the house price growth than Ireland in the same period.

According to this measure, the US comes out to be the more exposed country of the OECD, with a negative deviation from its average saving ratio of -3.0 percentage points versus only 60 per cent house price growth, followed by Spain, the Netherlands, Italy and the UK. Germany is again flat and France, Ireland and Sweden are the best performers with 0.1, 0.8 and 2.6 positive deviation saving ratios. The case of Ireland is especially striking, given that it has the largest house price growth. The explanation is that the Ireland consumers have been more cautious than those of other EU and EA member countries. The EA savings ratio deviation from historical average is only -0.5 percentage points, six times less than that of the US, with -3.0 percentage points.

A combination of all these three measures to reach a relevant index of “housing exposure” (based on deviations from historical averages) shows that the US tops the Goldman Sachs exposure index: Based on a linear scale from 0 to 10, US reaches 8.1, followed by Spain, with 8.0, the UK and Ireland with 6.6, France, with 5.5, the Netherlands, with 4.9, Italy, with 4.0, Sweden, with 3.9 and Germany with 1.6. The EA average is 3.0, an exposure two and a half times lower than that of the US.

The main difference about the EA and the US housing exposures is that even in the worst EA performers, consumer spending has not been significantly leveraged to the housing boom as it has been in the US. UK and US consumers have used their higher housing prices growth to increase their mortgage’s “loan to value” ratio, in order to consume more, through the so called “mortgage equity releases” and “mortgage equity withdrawals”. Both systems of exploiting instantly the higher price of its house by the owner do not exist in the EA, where their mortgage markets are less sophisticated than those of the US and the UK.

Moreover, it should be stressed that for an effective comparison with the US housing bubble, the relevant measure should be the EA average housing exposure (and not that of its different member countries) given that it is today an exchange rate area similar to that of the US and it is clear that the EA, as a whole, cannot be said to be suffering a housing bubble.

In sum, the average EA housing exposure to a slowdown in prices is rather limited in spite a high exposure in Spain and lower exposures in Ireland and maybe in France, but as a whole the bubble is much lower than that of the US or the UK.

### **Has the ECB monetary policy played a role in stimulating the bubble?**

The answer is yes. Monetary policy has played a role indeed, but mainly in the member countries where the housing bubble is larger but it has been mainly in an unwanted outcome of the design of the HICP. There are two financial factors that have plaid a role: low interest rates for almost a decade and financial innovation. But there are also two real factors even more important than the previous ones: population growth and income growth.

The special case of Spain (as well as that of Ireland) shows that monetary policy has played an important role. Spain has been growing at an average of 3.5 per cent over the course of the last 14 years and Ireland even faster. A significant part of such excellent growth performance of the Spanish economy is due to three different and consecutive external positive shocks: Two of monetary nature and one real nature.

The first positive shock has been the large drop in nominal interest rates from 1995 to 1999, resulting from first the high probability of entry in EMU and later the Spanish actual entry. In that period of 5 years, short terms rates fell from 13 per cent in 1994 to 4 percent in 1998. Only this positive credibility shock has been responsible for more than half of the Spanish GDP and employment growth over this period given that it encouraged national investment both in houses by households, in houses by foreigners (once the Spanish exchange rate risk disappeared) of equipment by companies and of construction and building in general.

The second positive shock, between 1999 and 2007, has been the “one size-fits-all” monetary policy of the ECB, which has tended to be too lax for Spain (and even more lax for Ireland) and still too tight for Germany and Italy.

Given that interest rates are set by the ECB according to the evolution of the EA harmonized consumer price index (HICP) weighted by GDP, Germany and Italy (the worst GDP growth performers with lower inflation) have a combined GDP weight of 47 per cent of the total HICP and adding France (slightly better GDP growth performer with also low inflation) their combined weight goes up to 67 per cent of its total. This positive shock made possible for Spanish average short term real interest rates to be (since the start of the ECB monetary policy) close to zero, given that Spanish average inflation rate has been 1 percentage point higher than that of the EA average over this period.

This second shock has further tended to encourage leveraging by households and companies to buy homes and office buildings as well as for real estate promoters and construction companies to invest more in buildings. As a result, over this period, Spanish GDP growth has contributed to 22 per cent of the EA overall growth and Spanish employment creation has been the fastest of the EA growing at 3.5 per cent over contributing to 40 per cent of the EA overall employment growth (which is another major factor encouraging housing demand) and Spanish construction has reached more than 13 per cent of GDP, on average, over the whole period

The third positive external shock (contemporary to the second) is the one derived from the recent huge migration inflows. Between 2000 and 2007, more than four million foreigners have entered Spain (or have emerged from the underground economy to the official economy) bringing the total ratio of foreign to national citizens from 2 per cent in 2000 to 10 per cent in 2007 and the ratio of foreigners to natives in the total labour force to 13 percent.

These immigrants have been able to rejuvenate the ageing native labour force, to increase the low and stagnant native labour mobility, to increase the number of households and thus the demand for housing and, finally, to produce a large net surplus in the social security annual accounts. Therefore, these three different positive shocks and fundamental factors have explained a large proportion of the present Spanish housing bubble, by allowing for a high leverage of native and foreign households to buy new primary and secondary homes.

Nevertheless, the present housing supply over demand surplus, due to the housing construction inertia (derived from the years needed to complete every house one it is started) is now slowly going down, due to a lower rate of housing starts, while housing investment is flat (in new primary homes) and negative (in secondary and tourist homes). As a result, real and nominal house prices will start to go down, but mainly gradually, during 2008, 2009 and 2010, given that now many of the recent immigrants are starting to form households and increasing their demand for housing, to be added to that the usual demand from retired Europeans and from natives, the latter are increasing their demand not only due to their normal household formation but also due to the fast increase in their divorce rates.

### **Should real estate prices have a greater weight in the HICP?**

Yes, there is indeed a case for including real estate prices in the HICP. How? Renters and owners should be treated equally and for that statisticians pretend that owner occupiers rent their homes from themselves. This is house it is done in the national accounts when computing GDP.

As explained by Stephen Cecchetti (2007), in national accounting, homeowners are supposed to receive additional income equal to the expected market rent of their homes and, at the same time, on the expenditure side of their balance sheet, they are given an equal amount of additional consumption. This flow of housing services to owner occupiers is known as “imputed rent” and its price is based on the rental prices for a sample of homes that roughly matches what is owned.

This is the reason why the construction of the US consumer price index (CPI) mirrors the national income accounts treatment of the owner-occupier housing. Owners are assumed to rent their homes from themselves, creating a category called “owner-equivalent-rent” (OER). As more than two thirds of US households own the house they live in, OER weight in the US CPI is substantial (23.8 per cent of headline CPI and 30.8 per cent of core CPI, which excludes food produce and energy).

The problem with OER is that when house prices go up fast, as it has happened in the US since 2000, then rents languish in comparison. In this period to 2006, the OER has gone up by 26 per cent while the index of the price of existing homes has increased by 80 per cent. Thus, there is alternative view that advises to include in the CPI the existing price of the houses according to the following argument: a home owner’s foregone income, or opportunity cost, is based on the current sale price of his house. This means that the implicit rent, which is essentially a measure of the opportunity cost of owning rather than renting, should be based not on the rental market but on the price of the house.

Cecchetti computes this change and finds that the difference is very high: since 2000, headline CPI would have risen by 4.0 per cent annually instead of 2.75 per cent and core CPI by 3.8 per cent instead of 2.0 per cent. Therefore, it distorts excessively the CPI and thus it seems better to stick to the rent based on the rental market or OER than to change to the rent based on the price of the house.

The issue is that the ECB does not include the OER measure in its HICP, which forms the basis for its definition of price stability. As a consequence, some EA member countries, as well as the UK, were forced to change their previous retail price indexes, which included OER, to the new ECB system, which excludes it, to be able to achieve a common harmonized HICP.

The main arguments for this change are dubious: the first is that housing is an investment, but being so, its dividend is only the housing service and its long-term capital gain is miniscule, given that, in the case of the US, it averages roughly 20 basis points per year for the last 100 years. The second argument is that owners are hedged against other price increases, what it is true, but as Cecchetti correctly points out, why single out housing as the one and only way to hedge and not using other financial assets to hedge consumption risks?

### **Are recent financial markets turbulences, in combination with falling real estate prices, going to be able to produce a recession in the Euro Area?**

Let us take again the case of Spain, the EA member country which has the largest housing bubble, as a proxy of the EA. It is obvious that recent credit and capital markets turbulences are producing an increase in the banking credit spreads, (but not yet a credit crunch) and are already affecting the Spanish housing and office demand and may end producing a faster GDP deceleration than that expected only a few months ago.

The markets are already discounting it: the latest private analyst consensus over Spanish GDP is that its growth rate will come down from 3.7 per cent in 2007 to 2.7 in 2008, one full percentage point. The same GDP growth drop is expected by the IMF.

Are these turbulences, in combination with the bursting housing bubble, going to produce a fast deceleration of real estate prices which may end bringing the Spanish economy into recession? I do not think so. I think that GDP growth deceleration will be pronounced in 2008, 2009 and 2010, but it will not end in a recession (defined as two quarters in a row with negative growth) for the following reasons:

First, Spanish households, as most of the EA ones, have not used the higher value of their homes to increase the value of their mortgages in order to consume more. Moreover, their present level of “financial effort”, that is, their annual ratio of total mortgage and consumer debt service to their after tax income, is close to 19 per cent and their ratio of their total financial liabilities as a percentage of their total real assets is only 20 per cent.

Thus, they have still some resilience even if interest rates go up a couple of percentage points. The main problem of course would be a large increase in their unemployment rate, but being now around 8 per cent, it would have to be very large to produce a major default on their mortgages.

Second, most of the Spanish large construction companies and some of the large real estate companies are diversified not only in other sectors, such as infrastructure management, utilities management and energy and environment, but also in other regions such as the OECD, Latin America and Eastern Europe so they are not as concentrated on the Spanish market as it may seem.

Third, it is the intention of the Spanish government (which has reduced its debt to 35 per cent of GDP by showing, for many years, equilibrium or surplus in its annual general government budget) to invest heavily on civil infrastructures and public housing for rent, in order to compensate the expected fall in private housing construction and to keep construction employment at a reasonable level.

Fourth, the Spanish banking system, which has financed such a bubble, is one of the most sound and efficient in the world. Its provisions against nonperforming loans (only 0.8 per cent of total loans) reach 250 per cent, versus 60 per cent in the EU. Its cost to income ratio is only 48 per cent, versus 60 per cent in the EU. Its return on equity is 20 per cent and on total assets is just over 1 per cent. The “loan to value level” in its stock of mortgages (that is, the value of the mortgage as a percentage of the value of the house or the office) is only 40 per cent, so it can face without major problems a large fall of the house and office prices.

Moreover, Spanish banks keep still being mostly very traditional retail banks, that is: do not have any “conduit or SIV”, very few CDO and CLO, low exposure to derivatives, hedge funds and private equity funds and, as a whole, are still today net lenders to the inter-bank market. Finally, their total loan securitization reaches only 25 per cent of GDP and most of it is through “covered bonds” (which stay in their balance sheets) and the larger ones are well diversified with branches in many other countries.

In sum, if Spain may be able to avoid a recession, being the member country most affected by the housing bubble in the whole of the EA, there is no reason to expect that the EA may end up in recession due to the recent wave of credit and capital market turbulences.

## **Could an US recession trigger eventually a recession in the EA?**

The answer is perhaps, (if there is no decoupling from the US at all) but it looks unlikely now for the following reasons:

First of all, it is not at all clear that the US economy deceleration could end in a recession. It should not be forgotten that the US has been growing at an average rate of 3.2 per cent since 1992, without any annual recession (except for two quarters of 2001, but the year average was positive in 0.8 per cent). Therefore, it is now time for the US to reduce its growth rate, and this is what is happening. The US GDP growth rate has come down from 3.1 per cent in 2005 to 2.9 per cent in 2006 and is expected to go down further to 2.1 per cent in 2007 (although annual growth in the third quarter has been 2.6 per cent) but still the consensus forecast for 2008 is around 1.9 per cent.

Nevertheless, it is clear by now that the US economic authorities are not going to remain idle and are already trying to avoid a recession. On the one side, the US Fed is ready to lower rates further to avoid a slowdown. On the other side, the US Treasury is finding ways to avoid the subprime mortgages defaulting further when teaser rates will go up and for the mortgage-backed securities to gain in value through the purchases of the so called "super conduit" and, finally, seems also ready to engineer a fiscal stimulus to compensate for the lower consumption of households, now that the budget deficit is improving at a good pace. The rest is being done by a cheaper dollar.

Moreover, US disequilibria are being reduced at a fast rate. The US budget deficit has come down sharply to 1.2 per cent of GDP, mark that is well below its historical levels. Its trade account is also improving thanks to the faster growth of exports (11 per cent today) and slower import growth produced by the fall in the dollar. In the last two years, the foreign sector has switched from subtracting half a percentage point of GDP growth to add half a percentage point in 2007 and for 2008 is expected that it will add a full percentage point. Thus, foreign demand is going eventually to compensate the expected weaker internal demand.

Second, the US contribution to world growth was huge between 1994 and 2000, reaching an average of around 50 per cent. Nevertheless, the situation has changed dramatically in the last few years. According to the IMF (2007) in 2006, the US economy contributed to world GDP growth, at market prices (not PPP) with 20 per cent of the total, versus 16 per cent by the EA and 14 per cent by China. For 2007, the expected US contribution is going to be of 14 per cent, that of the EA of 15 per cent and that of China of 17 per cent. The group of BRIC countries (Brazil, Russia, India and China) would contribute as much as the US and the EA together. Therefore, it seems as emerging countries are, for the time being, decoupling from the US growth deceleration.

Third, by contrast and for the time being, it does not seem to be a decoupling between the US and the EA. Both are suffering a deceleration in their rates of growth, in the case of the EA even faster than that of the US. It seems contradictory, since the EA has gone through a period of growth below potential, while the US growth has been at or higher than potential. The EA growth rate consensus from private analyst is that it will go down from 2.6 per cent in 2007 to 2.0 in 2008 a similar rate than that of the US but a faster deceleration, mainly produced by the strength of the euro and the difficulty of achieving a higher rate of consumption in Germany (maybe due to the large increase in VAT).

The key issue for the EA to decouple from the effects of the expected US growth deceleration is to compensate the lower contribution to growth by its foreign demand with a higher growth contribution from its internal demand and for that it should be necessary that the ECB does not react strongly to the recent temporary increase in the HICP, due to the increase energy and food sector prices that it is expected to be short lived. The ECB should aim at the medium term inflation expectations which, at the moment, show that the growth risks are larger than the inflation risks in the medium term and that world GDP will slow down in the next few years.

## **Bibliography**

Cecchetti, Stephen (2007) “Housing in Inflation Measurement” CEPR Blog [www.voxeu.org](http://www.voxeu.org)  
13<sup>th</sup> June

Goldman Sachs (2007) “The European Housing Market: No Threat in Aggregate but there are some Regional “Hot Spots””, European Weekly Analyst 07/37, October 25

IMF (2007) “World Economic Outlook”, October, page XI



# **DEVELOPMENTS IN THE REAL ESTATE SECTOR IN RELATION WITH MONETARY POLICY**

**Briefing Paper for the Monetary Dialogue of December 2007 by the Committee on Economic and Monetary Affairs of the European Parliament with the President of the European Central Bank**

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## **Summary**

A central hypothesis for the recent financial turmoil is that had interest rates in the US been higher earlier in the cycle, the fragile sub-prime sector for housing investments in the US would have never come into existence. In this case the excess liquidity that caused excessive lending would have never occurred. The conclusion is that central banks and in particular the Fed should have a closer look at financial markets in their future monetary policy strategy. The current paper challenges this hypothesis.

Instead of restricting monetary policy, a two tier policy approach is suggested. Firstly, a good regulation of financial markets increases the leeway for monetary policy. Secondly, industrial countries have to revise their income distribution policy in order to make real economy investment more attractive in relation to financial market investments. In the euro area such an approach should be complemented by wage policies based on productivity and the ECB's target inflation rate. This would ensure that that long term inflation differentials and the ensuing the emergence of regional bubbles would be avoided. With these measures economic development should become more stable.

## Introduction

The real estate sector has been in the focus of most recent economic analysis. Many economists consider it the root of present financial turbulences. Indeed the bursting of the US real estate bubble as well as similar developments in the UK and foreseeable ones in Spain seem to point into that direction. There is fear that the global economy may face a severe downturn as consequence of exaggerated housing investment. The result would be global shockwaves of financial distress. Initially home owners are hit. They lose their property and may nevertheless have to carry a heavy debt burden. Subsequently those banks that financed the investment are affected. They lose at least part of the money they had lent to the home owners who can neither serve nor pay back the debt and whose houses have lost significantly in value. Then the distress spills over to those financial institutions that bought part of the above mentioned debt – at least partly leveraged by borrowed money to be refinanced on short term notice. With the break down of these asset markets, the financial institutions face severe difficulties in refinancing the deals. Those that depend solely on these credits go bankrupt, those that have enough reserves or have insured the risks have at least to make significant write-offs. In the next round, all risk insurers that insured these risks will have to make their payments. Finally, each of the surviving financial market institutions, which were hit at the different stages of the shockwaves, will have to adjust its behaviour since the risk content of their portfolios has changed. Therefore they have to become more restrictive in their borrowing behaviour to avoid further risks. At this stage the real economy will be affected, since every investor, whether financial or not, will meet only very reluctant lenders. As a consequence many investments that would have been possible some months before are no longer feasible due to a lack of financial resources. In other words, financial turbulences originating in the real estate sector will be felt in the whole economy and probably trigger a severe downturn.

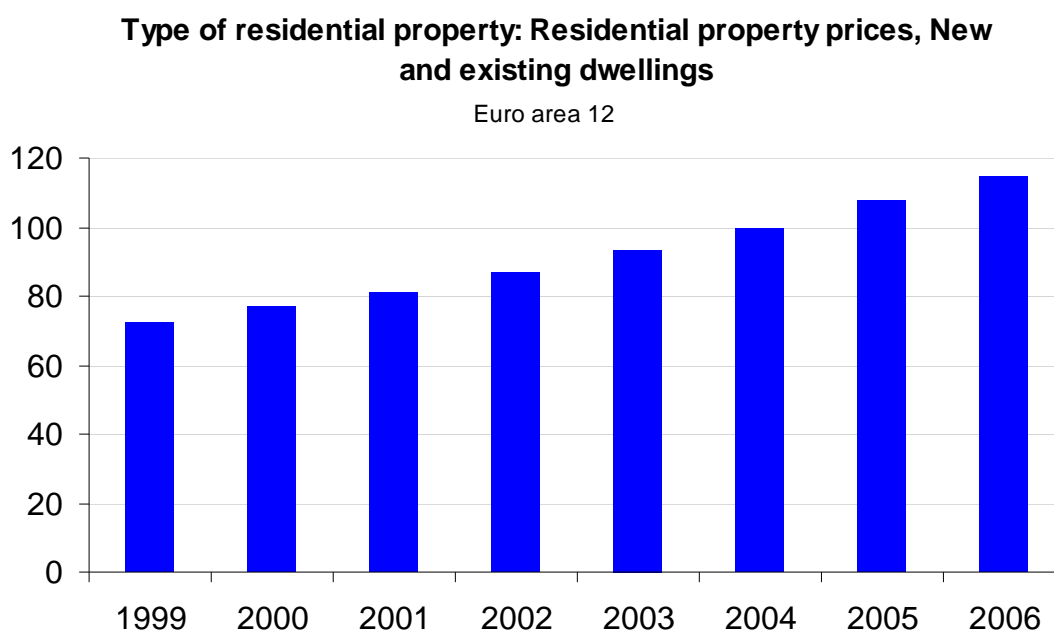
Many economists state that one of the main factors leading to the financial turbulences was an overly expansionary monetary policy. Especially the reluctance of the Fed to raise interest rates early in the upswing is said to have created excess liquidity. According to this hypothesis, it was predominantly the excess liquidity that spurred the crisis. Against the backdrop of the huge wave of liquidity, banks were in desperate need for seemingly profitable investments. That was the time when they discovered sub-prime mortgage market. In fact, during the first years profit expectations proved right inducing more and more investors to enter that business. However, as soon as the Fed started to raise interest rates, the whole system got into difficulties. The argument runs as follows: If interest rates had been higher earlier in the cycle the sub-prime sector would never come into existence since the excess the liquidity would have never occurred. The conclusion is that central banks should have a closer look at financial markets in their monetary policy strategy. Interest rates should be set not only in line with the inflation target and business cycle considerations, but also with respect to financial market developments.

In the following this hypothesis will be challenged. In the next section some developments in the real estate sector with respect to interest rates will be outlined. In the third section some reasons for these developments will be presented. In the final section recommendations for economic policy will be given.

## 1. What happened in the Housing Sector?

As a first step one should analyse how prices in the housing sector developed during the past years. The figures show that the picture of a bursting bubble does not really apply. The following table reveals how different relative housing prices behaved in different countries and regions:

**Figure 1**



Source: ECB.

In the euro area as a whole, the prices for residential property have risen by 58 % since 1999. This is much more than the average price level (measured by the HICP), which increased only by about 20 % since the introduction of the euro. Therefore it is fair to state that a significant change in relative prices has occurred in the euro area. However, this development has by no means been uniform across countries and regions:

### Housing Prices (Real Terms)

	2000-2006	2005 <sup>1</sup>	2006 <sup>1</sup>
<b>Germany</b>	-2,4	-1,8	-0,6
<b>France</b>	9,5	12,7	9
<b>Italy</b>	6	4,5	4,5
<b>Spain</b>	11,2	10,2	5,7
<b>Euroarea<sup>2</sup></b>	4,7	5,3	4,1
<b>UK</b>	8,8	0,1	6,2
<b>USA</b>	6,3	9,1	3,8

<sup>1)</sup> Percentige Change to previous year.

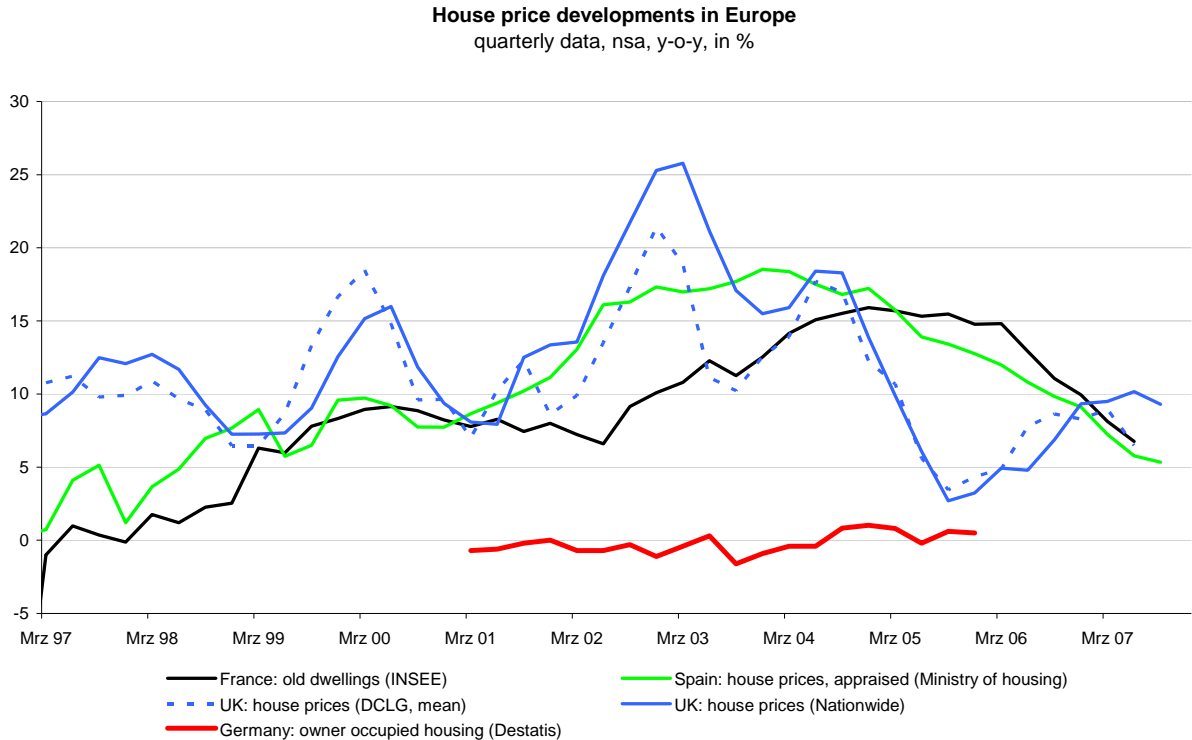
<sup>2)</sup> Germany, France, Italy, Spain, Ireland, Netherlands.

Source: OECD Economic Outlook No. 81, Table I.4.

The steepest increases within the euro area have occurred in France and Spain. Outside the euro area house prices soared in the US and the UK. The outlier is Germany, the only country where the relative price of housing declined. Therefore the development of German house prices remained far below the euro area average. This explains why the overall price increases in the euro area were fairly moderate. Interestingly, except for the UK, the price hikes already cooled down in 2006. Nevertheless the increase in France was still substantial. From these figures we learn that there was not a sudden burst of a bubble. That would have shown up in a sudden dramatic fall in house prices. Figure 1 reveals nothing but a continuous increase of relative prices in the housing sector that already started to slow down in 2006. On the aggregate euro area level it is all the more difficult to detect a bubble, because the development in Germany offset strong price increases elsewhere.

The following analysis of developments in Europe will show that monetary policy was at least not the only cause of the housing boom. In the US the situation may have been slightly different. The general view on housing activity in Europe outlined above is confirmed when looking at national quarterly data sources:

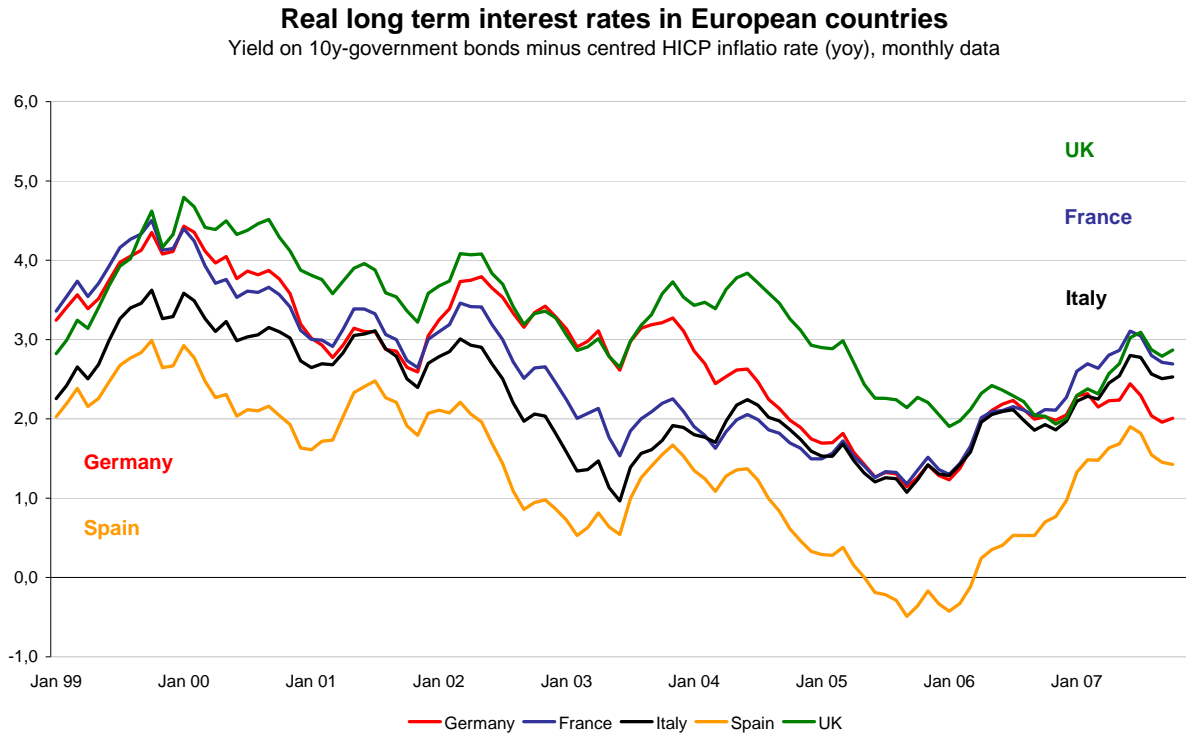
**Figure 2**



In contrast to the figures above, these are no changes of relative prices but of absolute ones. The higher frequency of the data allows us to see developments over time more accurately, although the availability of quarterly national data on housing is rather limited. Nevertheless, the picture is not that of a bursting bubble, but rather a soft landing. The most pronounced upward movement in Europe occurred in the UK. But the climax of price hikes was already in 2003, when house prices soared by 25 %. Since then the dynamics of price adjustments have slowed down in waves. This is not what one would expect when a bubble bursts. In Spain as in France the highest increases were seen in 2004. Again, Germany is the outlier with more or less stagnating real estate prices.

Real interest rates have a significant impact on the real estate market. If one compares the relevant real interest rates in some European countries one realises that they were lowest in Spain among the larger member states of the euro area.

**Figure 3**



Interest rates are part of the explanation why Spain showed such a strong housing boom and why the development in Germany was so weak. In Germany real interest rates were comparatively high at least until mid 2004 and housing activity was very subdued. In mid 2004 real interest rates started to decline and the housing sector showed signs of recovery soon after. For an extended period France and Italy showed real interest rates that were well below those in Germany. Consequently the real estate sector there was way more vivid than in Germany. The only exception is the UK. There real interest rates were even higher than in Germany for most of the recent past. Nevertheless the housing market was much more dynamic than in Germany. There, other reasons such as the positive income development seem to have played a major role.

In all these European countries interest rates peaked in 2000 and then declined until 2003. That was the climax of the real estate boom in most countries. The subsequent rise in real interest rates led to the cooling down of prices outlined above. After a brief slump in 2004/2005, rates started to rise again with accelerating economic activity in 2006. That prevented price increases from speeding up again.

An important point to consider is that the differences in real interest rates within the euro area did not occur because nominal interest rates differed. Instead they resulted from differences in national inflation rates. Thus, in the euro area monetary policy cannot be held responsible for the price hikes. Under a uniform monetary policy for all countries we simultaneously observed a slump in German housing activity and a boom in France and Spain. To understand the roots of the boom, in the euro area, one needs to understand the roots of the inflation differentials.

## 2. Two Explanations for the Housing Boom

There is no doubt that monetary policy has been very expansionary throughout most of the time since 2001. This applies in particular to the US, but also to the euro area and to some extent to the UK. An expansionary monetary policy leads to relatively low real interest rates. In that respect monetary policy contributed to a housing boom. This was at least partly intended, since the major reason for an expansionary monetary policy is to stimulate economic activity, also by stimulating the real estate sector. Whilst this is basically not seen as a problem, the intensity and duration of the expansionary monetary policy course especially in the US is. According to this hypothesis the turnaround to a phase with higher interest rates came too late and was insufficient.

Consequently there was too much liquidity striving for profitable investment. The excess liquidity induced financial market institutions to invent new risky products in order to offer investment opportunities for otherwise idle money. Among these new products were asset-backed securities that were based on sub-prime lending for housing. On the one hand they benefited from the relatively good income situation of households that usually were not in a position to afford a house of their own. But the economic upturn had improved their income position for some unknown time-span. On the other hand financial investors for these products were easily found – not least because low interest rates seemed to make leveraged investment very profitable. When interest rates are low, borrowing money is not very costly and profitable investments are therefore easy to find. A leveraged investment increases the volume of investment significantly, so the respective market grew very fast.

All these investments were based either on overly optimistic assumptions or on a significant lack of information about the nature of the respective products. With every basis point of higher interest rates this business became more and more endangered. The house owners had growing difficulties to serve their debt, since interest payments were increasing, too. Financial investors faced increasing difficulties to refinance their assets, as leveraged investments became more and more costly and potential lenders became more risk-averse. In the end markets collapsed with the potential consequences outlined above.

Could that have been avoided if the Fed had increased interest rates earlier? It is hardly possible to prove either this hypothesis or the contrary. The reason is that it is very difficult, if not impossible, to detect bubbles in financial markets, before they burst. Otherwise a central bank could certainly prevent bubbles from coming into existence. But then, investors would have the same information and the bubble would not have come into being in the first place. One should not forget that there is a price to pay for such a strategy. If the Fed had raised interest rates earlier, the real economy would not have shown such a dynamic upturn. Growth and employment would have been lower during that phase. One could argue that the prevention of a severe slowdown due to the bursting of the bubble would justify early intervention by the central bank. The initial weakness would be compensated by stronger growth later on. However, the success of such a policy crucially depends on correct detection of the bubble in time. Since this is highly uncertain, the suggested strategy is extremely risky. There is a severe danger that it may cause an unnecessary loss of growth and employment.

There is an alternative explanation for the financial turbulences and their roots and reasons. The hypothesis outlined above is based on the assumption that there was excess liquidity in the economic system. One can also interpret the very same facts as excessive saving.

In other words given all other circumstances real economy investment should have been higher in order to keep the upturn alive. There are several arguments in favour of this hypothesis. World wide countries faced two kinds of redistribution.

Firstly, profits grew much faster than labour incomes. Secondly, higher wages grew faster than lower wages. As a result incomes of the already wealthy soared during the upturn, whereas low income earners hardly benefited at all. As a consequence saving also increased in most economies with the notable exception of the US. On the other hand consumption remained below potential, since consumption intensive income groups benefited less than proportionally from the economic upswing. In the US people got indebted by keeping consumption high, a situation that is not sustainable and also leads to a downturn sooner or later.

Given the strength of the cycle, relatively weak consumption leads to relatively weak investment compared to the development of profits. The result is excessive saving creating the potential for excessive financial market investments. The conclusion is that redistribution at the expense of lower incomes much rather than an overly expansionary monetary policy is at the root of the crisis.

In the euro area an additional phenomenon has to be considered: Inflation differentials. During most of the recent years the euro area experienced very heterogeneous price developments. Whereas inflation e.g. in Spain usually exceeded the ECB's target, German price increases remained well below it. This led to the relative low real interest rates in Spain that contributed to the housing sector boom. On the other hand real interest rates in Germany were high. One major cause of these differentials lies in national wage developments. Wages in Germany increased much more slowly than in all other countries of the euro area. The wage dynamics have contributed to the divergence of housing markets. Especially those countries with relatively high wage hikes and accordingly high inflation rates were more likely to experience excessive housing booms, whereas Germany suffered from an excessive weakness. Monetary policy cannot be held responsible for these divergences since it can only act on an aggregate level. Instead wage developments need to be more in line with the ECB's inflation target.

### **3. Consequences for Economic Policy**

What can be done to avoid financial turmoil under these circumstances? First a more appropriate regulation of financial markets is necessary to avoid the trade of risky products including those of the housing sector that simply exploit informational asymmetries between seller and buyer. One major element of the regulation should be that the *first broker* keeps a significant part of the underlying risks. In that case the original creditors would probably have shown a more responsible behaviour when investing in the sub-prime market. At least they would not have been able to sell risks so easily. Furthermore a stricter regulation for credits on housing as is the case in some European countries like Germany also seems advisable. If a minimum amount or a minimum share of capital is required to obtain a credit for housing investment, a legal sub-prime investment would not have happened in the first place.

All these measures help monetary policy to focus on aggregate developments of inflation and growth. With functioning financial markets there is no need the central bank can remain on an expansionary course for an extended period. Good regulation of financial markets thus increases the leeway for monetary policy. Higher growth and higher employment is the result.

In addition industrial countries have to revise their income distribution policy. To stabilise economic development it is necessary that households with a lower income participate in the economic upturn. If that happens investment into the real economy is strengthened, since consumption and domestic sales are strengthened making investment into these sectors more profitable. That would give incentives to divert investment from financial products to the real sector. Therefore an appropriate income policy also serves to avoid financial instability.

European countries should coordinate their wage policies, focusing on productivity increases as well as the ECB's inflation target. Then regional bubbles and slumps would be far less likely.

The bottom line of these considerations is that the root of the financial turmoil cannot be found in monetary policy. One has to concentrate on financial market regulations as well as on income distribution policy.

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### **Executive summary**

Developments in the real estate sector are a persistent subject of concern for monetary policy as they can affect both price stability and financial stability. Real-estate transactions can be a cause of inflationary pressures through many factors: money creation by long term credits, wealth effects in times of strong housing price increases, residential investments etc. In addition, real estate prices can undergo large fluctuations which have direct and indirect effects on financial stability, with potential high economic costs associated with the formation of bubbles and their subsequent bursting.

Correct monitoring of real estate developments does not need to give a larger weight to housing price indicators in HIPC. That could lead to wide variations of the index and make it difficult to assess the right degree of strengthening or loosening of monetary policy. However monetary authorities must gather a lot of other pertinent data on present and future evolutions of the housing market allowing to assess the demand and supply for housing, including: developments in loans to households and the prices of these loans, household disposable income, household indebtedness, residential investment growth and flows into housing stocks, building permit grants, land prices, housing completions etc. It is also crucial to closely monitor the degree of involvement of financial institutions in the real estate market.

There is no systematic correlation between price stability in goods and services and a smooth evolution of housing prices. Moderate goods and services price increases can be insufficient in avoiding excessive real estate prices variations. Inversely, inflationary pressures can rise and housing price variations remain relatively moderate.

For dealing with these situations it seems necessary to maintain a context of monetary conditions which does not create stimulus for excessive price variations, in other words, to maintain interest rates at reasonable levels and to avoid large variations in these rates. Failing this, very low interest rates encourage risk taking and booms in the real estate sector. At a time when it is necessary to come back to more normal monetary conditions even a rather reasonable level of interest rates is considered unbearable by economic agents who have by then become addicted to cheap money.

In the euro area, wide heterogeneities in local national markets, banking practices and indebtedness ratios of households make the job of the ECB more difficult. Nevertheless, the central bank seems to have succeeded in moderating real estate price increases after some years of booms. The main reason could be the fact that the lowest and highest ECB interest rates did never reach excessive levels in any sense. Consequently, banks lending rates have gently moved from 6.3% in 2000, to 3.5% at the end of 2005 and are presently at 4.35%. Lowest rates were favourable to high conjuncture in real estate without creating conditions for a bubble, and there moderate increases have contributed to a soft landing.

The medium term strategy of the ECB seems to be a good response for dealing with differences between countries as most of these differences are structural. Frequent, large or countercyclical actions could merely enlarge these differences.

There was no contradiction between the two missions of price stability and financial stability during the recent years. As prospects for goods and services price inflation seem presently relatively alarmist, the ECB will have to deal with its objective of price stability and the worry of not turning a soft landing evolution into a recession in the real estate sector.

## **Monetary policy has always been strongly concerned with real estate sector developments for at least two major reasons:**

1) Real estate transactions are generally linked to bank or specific credit institutions credits. Credits to households for house purchases play a major role in money supply as they are generally at long term (and even very long term), and, as in some circumstances, they can create money without any counterpart on the goods and services market when they finance second-hand transactions. Therefore, credit and money creation can be important channels through which real estate developments become inflationary factors.

2) Real estate prices are frequently undergoing large fluctuations. Sharp movements can be observed in price increases and decreases, as it was the case in the late 80's/early 90's. These fluctuations are sometime fostered by speculative behaviour and can have an influence on the overall inflation pressures in affecting household consumption, in particular through the wealth effect as well as residential investments. Specific financial and banking mechanisms can encourage, strengthen, or reduce these effects. In fact, there are no systematic links between real estate price increases and general inflation. In other words, excess surges in real estate prices cannot affect general inflation developments, and preserving price stability is not a guarantee to avoid large and worrying price increases in the real estate sector.

It is obvious that large shifts in real estate prices can have direct and strong effects on financial stability, that is to say the smooth functioning of the financial system and the credibility of this system towards non financial agents. Therefore it is essential for central banks to be very concerned about real estate prices fluctuations which reflect the high economic costs associated with the formation of “bubbles” and subsequent bursting of these bubbles. In this field, the job of central banks is quite tricky as they often have to deal with two separate issues, financial and monetary (or price) stabilities.

In this paper, we will try to look for the best way for central banks and financial authorities to take real estate developments in their risk assessments. We will also try to estimate what the optimum strategy can be in this area considering the interrelations between the financial situations of non-financial and financial agents and their evolution. As a result, we will assess if a single monetary policy can efficiently smooth real estate prices fluctuations in the euro zone, given the heterogeneity of local national markets.

### **1. The correct assessment of real estate price developments is difficult considering the great heterogeneity of this activity.**

There are numerous examples of specific factors which can influence both the level of real estate prices and their variations: transactions on new or second-hand houses and apartments, size of these goods, situation in great cities and elsewhere, “standing”, distance from centres and quality of transportation services for different districts or suburbs as well as transactions on specific assets. Furthermore, other factors may not be linked to the good itself but to the situation on other investment markets, especially the stock market.

Therefore real estate prices data result from various investigations and surveys, mostly from professionals of the sector (real estate agencies, mortgage banks, notary organisations, which, in some countries act as intermediaries in transactions as well as property developers...) Consequently, not only it is impossible to have a significant global real estate price index, but all the data which is collected and published cannot be considered as reflecting a scientific reality.

Such a technical weakness could be a sufficient reason to maintain unchanged the part of real estate prices variations in the HICP (estimated prices of new houses are presently included with a modest weight in the index). But there are other reasons:

Unlike prices variations of goods and services included in the HICP, price variations in real estate have complex and differentiated effects. They do not affect all economic agents and have (actual or potential) wealth or poverty effects depending on the involved actors. In addition, one can observe a great volatility of real estate prices and, above all, their possible disconnection with inflation of good and services prices. Regarding this, the example of the Japanese situation in the late eighties is particularly enlightening: the prices of real estate had increased so strongly in the great cities that it was assumed that the land value of the Imperial Palace district in Tokyo was higher than the total land value of Canada; however at the same time, the inflation index remained very quiet. Considering this the Bank of Japan did nothing to moderate real estate prices surges while monitoring the evolution of the HIPC. From this, some analysts concluded that this disconnection is a strong reason to include, with a more significant share, real estate prices variations in the HICP.

We will come back to the adequate monetary policy response to real estate prices variations in an other paragraph, but let us already say that giving a larger share to real estate prices in HICP could lead to wide variations (including decreases) of the index which would not reflect the reality of inflationary pressures and make difficult the assessment of the right degree of strengthening or loosening of the monetary policy.

## **2. Even exhaustive and pertinent information on real estate price evolutions would not be sufficient for monetary authorities to have an operational vision.**

The authorities must gather a lot of other accurate data allowing the assessment of the demand and supply for housing of which present and future evolutions and interactions are the determinant factors of prices levels and variations.

As regard housing demand, developments in loans to households for house purchases, and especially mortgage loans, are crucial data. It is also important to keep up with prices of loans. Banks consider these operations as very fruitful and less risky than other credits. So, when the market is buoyant, they can offer very advantageous conditions in order to attract new customers, and, consequently, in some circumstances, credit interest rates levels can be very close to the central bank rates and their variations can even be disconnected of those of the monetary authorities' index.

An other important indicator for a forward-looking demand is the household's "affordability" which can be assessed simply, as the ratio of households disposable income to residential property prices, or with a more complete approach, with the so called interest-adjusted affordability concept: this data is the ratio of household's nominal disposable income to the income that households would require in order to buy a house under the prevailing borrowing conditions.

Concerning housing supply, residential investment growth and flows into housing stock are essential data which must be associated with information about building permits grants. Other indicators, such as land prices and housing completions are also important. It is also necessary to have information about the financial situation of non-financial and financial agents. The level of indebtedness of households and its evolution is especially important since, as it will be developed further, this level can, if too high, reduce the room for manoeuvre of monetary policy.

Central banks must also closely monitor the degree of involvement of financial institutions in the real estate market: surges in mortgage loans, credit conditions and profit margins on these operations, quality of the credits, importance of housing investments in banks assets all are essential data for assessing risks on financial stability.

As it can be seen, the monitoring of real estate prices developments would be very insufficient if it was limited to just a more prominent weighting of those prices in the HIPC. A correct knowledge of the situation and of its implications for central bank decisions in the monetary and financial stability areas requires a much more sophisticated supervision (of which some elements are sometimes not totally accurate, as it is the case in a multinational area like the euro zone where data can be not homogeneous,-cf infra, or not available in time).

### **3. What could be an optimum policy concerning real estate price evolutions?**

The purpose of such a policy would not be to stabilize prices. Real estates is a cyclical sector and it is not unhealthy to have large increases, smaller increases or even decreasing stages.

What is important is to maintain housing price variations in reasonable limits in order to avoid excessive wealth effects, speculative behaviour and unreasonable housing price increases, as well as inversely, massive losses in assets, in the affordability of an important part of the population, deflationary risks and eventually a bank crisis.

Unlike some central bankers claim, the difficulty is that there is in my opinion no systematic correlation between good and services price stability and a smooth evolution of housing prices. Moderating goods and services price increases can be insufficient for avoiding excessive real estate price variations. Inversely, inflation pressures can rise and housing price variations can at the same time remain relatively moderate.

Some facts can provide lessons for dealing with situations of target conflicts. A first evidence is the difficulty of action in a context of strong rises in housing prices. Coming back to the Japanese example, it is easy to say ex post that the Bank of Japan was wrong in doing nothing when real estate prices were booming. But it is clear that, at this moment, only a very sharp and strong increase in interest rates could, perhaps, have been able to stop the movement. As in the same time, the stock market was also in a booming stage, the central bank action could have caused panic and the medicine may have been worse than the trouble. In fact it was too late for an action in the last years of the eighties. Inversely, and remaining with the Japanese example, dramatic drops in interest rates and very low, if not zero level rates, are no more efficient for rekindling economic activity in a deflationary situation following the bursting of the bubble.

It is by far better to maintain a structural context of monetary conditions which does not create a stimulus for excessive price variations. Of course, there is no miraculous formula for achieving this result in all circumstances. However, one can at least try to minimise the risks of escalation and collapse. A basic principle would be, in my opinion, to maintain interest rates at reasonable minimum and maximum levels and to avoid large variations of these rates.

It is important that borrowed money always has a cost, whatever the circumstances. It is legitimate to release monetary conditions when inflation is low and economic activity is weak. But very low nominal interest rates and negative real interest rates encourage excessive indebtedness, risk taking and booms in real estate, without adding more significant stimulus to the other economic activities, at least no more than weakly positive or even neutral real interest rates. Eventually, when it becomes necessary to come back to more normal monetary conditions from that situation, even a rather reasonable level of interest rates is considered as unbearable by economic agents who have become addicted to cheap money. Such a situation seems all the more unbearable when indebtedness ratios are high, and when the share of this indebtedness at money market indexed rates is important. Therefore, a limited strengthening of monetary policy in order to fight inflationary pressures can create collapses in financial situations of households and difficulties for banks, and the central bank can be obliged to inverse the orientation of its action for preventing deflationary and systemic crisis risks. In that context, not only will the central bank have failed in its mission of preserving financial stability, but also its monetary policy will be paralyzed.

#### **4. Examining real estate evolutions in the euro area and asking if the Eurosystem can efficiently monitor and manage these developments.**

Euro area residential property prices recorded six years of strong growth between the end of the last century and 2005. Prices rose from 3,8% between 1997 and 2000, until 7,9% in 2005. In real terms, the price increase has been around 5 to 6%. From a historical perspective, this growth can be considered, in first analysis, as not excessive compared with the rates observed in the past housing prices booms (the real prices increases in the late 1980s/early 1990s were around 8%). But if we exclude Germany (in which, in reaction with the post reunification booming, residential property prices have shown a slight decline during the observed period, price increases in the euro zone were, in fact equal if not higher, even if they were more gradual than during the late 1980s/early 1990s, a boom which then finished in a hard landing. A deceleration in price has been observed since the second half of 2005. After a pick at 8,3% during the first half, price increase waned at 7,5%, 6,9% and 6% during the following periods.

One can never be sure that the worst will not happen: the consequences of the sub-prime crisis on the European financial institutions seem for the moment relatively limited but we have to be cautious. Nevertheless, such a gentle evolution of prices suggests that a soft landing period could follow the sharp increase of the early 2000s, and the real estate cycle could end with a cruising regime of moderate price growth. If it is confirmed, such an evolution could be considered as a success for ECB monetary policy as the price deceleration process has coincided with the ECB monetary policy conditions strengthening stage.

For the ECB, the challenge was all the more difficult as there are wide heterogeneities in local national markets and situations of non-financial agents. First heterogeneity is reflected in the national price increases, with, taking the first half of 2005 as an example period, 18,7% in Belgium, 15,5% in France, 14,8% in Spain, but only 6,8% in Austria, 4,8% in Netherlands, not to cite Germany where the price increased at 0,3%. Very high growth rates in some countries could be reason enough to fear a difficult end of the cycle.

But the biggest subject of concern has been the heterogeneity in financial situations of non-financial agents and in banking practices for mortgage loans. Mortgage debt to GDP ratio, of which the average level for the whole area is about 36%, is almost at 50% in Spain, 56% in Ireland, 70% in Netherlands but only 22% in Austria.

Banking practices are also very different. National practices differ with respect to the length of time over which loans are repaid, which tend to be shorter in southern Europe (with loan terms around 15 years) than in other countries (in which 25 to 30 year loan terms can be the norm). In practice, there are also differences in a very important aspect which is the use of money market rate indexed mortgage loans conditions. Indexed conditions are massively used in Anglo-Saxon countries, but in the euro area they affect only 45% of credits. However, even though such practices do not exist in Germany, or are in a minority in France or in the Netherlands, they affect 95% of mortgage loans in Spain, 97% in Finland, 92% in Ireland and 98% in Portugal. Therefore, one could worry about the consequences of the process of monetary policy strengthening and of the reaction of the real estate market in some countries, especially those which accumulate high rates of credit growth, high prices increases, high ratios of mortgage debt and massive practices of indexed rate credits.

One can not have precise knowledge about the macroeconomic consequences of a less buoyant real estate activity in countries where this sector takes a major place in economic activity. But concerning the price regulation, the impact of the evolutions on inflationary pressures and expectations, and finally, risks for financial stability, it can be assumed that monetary policy succeeded in dealing with a situation in which the total complexity is reinforced by the heterogeneity of the zone.

The reason for this relatively good result is, in my opinion, the fact that the lowest and the highest ECB interest rates have been limited inside a rather narrow range without reaching excess levels in any direction. From 3,5% in 2000, at the beginning of the observed period, ECB rates were at a lowest level of 2% in the mid 2003, and began to rise at the end of 2005, reaching 4% now.

As a result, variations of bank lending rates for house purchase have been limited too, even if banks, being under strong competitive pressure, reduced their margins in order to offer more attractive conditions. According to ECB surveys, bank housing lending rates in the euro area were on average about 6,3% in 2000. They reached a lowest level of 3,5% at the end of 2005 and are presently at 4,35%. During the same period, the Fed interest rates have dropped from 5,5% to 1% and were at 5,25% this summer. American bank lending rates have of course followed these variations which were felt as particularly intolerable by borrowers during the rising stage.

Coming back to the euro area, one can make the following remarks:

- Lowest banks interest rates at 3,5% have been favourable to high conjunctures in the real estate sector, without creating conditions for a bubble.
- The strengthening of monetary conditions, starting at the end of 2005, was caused at least as much by the ECB concern for price developments in the real estate sector as by a worry about general inflation risk. Real estate prices variations have a very little weight in the HICP, barely 6% in the euro area index.

- Although this strengthening has been moderate, it seems to have played a decisive role in the slowing down of real estate price increases. Indeed, while crude household affordability ratios (ratio of disposable income evolution to real estate prices variations) was declining since 2003, price growth began to weaken only at the end of 2005, simultaneously with the decrease of the interest adjusted affordability house holds ratio.
- It is very difficult if not impossible to reduce the significant differences in real estate financing and practices in a multinational area.

Concerning for example mortgage debt ratios which can affect the efficiency of monetary policy decisions positively or negatively, a number of country specific structural features can explain large and durable differences: demography, sizes of households, degree of sharing residential property across different generations of a family, level of house prices, range of available mortgage products etc. Most of these features cannot be easily reduced or even weakened. Facing this true difficulty, it seems that the medium term strategy of the ECB is the best response, as dramatic, frequent, large, or countercyclical actions could enlarge differences between countries and provoke serious crises in some of them.

The monitoring of real estate price and stock market price variations is considered by many economists as more important than the monitoring of the inflation of goods and services. It is obviously more natural and actually more evident to assess real estate risks and fight them than to deal with the evolutions in the stock market: judgemental estimations about excess price levels and variations are by far easier and the effects of a corrective action are less uncertain. In addition, the moral hazard risk, which is considered by some academics and central bankers as a strong reason for being cautious before envisaging specific actions in order to moderate financial asset price variations, is less a problem in real estate price monitoring. Nevertheless, this mission can not be considered as a simple aspect of the mission of maintaining goods and services price stability.

Coming back to the policy of the ECB during the last years, it was evident that there was no contradiction between the two missions, especially since 2005. The situation presently could be different. As the variations of housing prices seem now on a decelerating rhythm, and as prospects for goods and services price inflation are relatively alarmist, the central bank will have to deal with its objective of price stability and the worry of not turning a soft landing evolution into a recession in the real estate sector.

## **DEVELOPMENTS IN THE REAL ESTATE SECTOR IN RELATION WITH MONETARY POLICY**

**Briefing Paper for the Monetary Dialogue of December 2007 by the Committee on  
Economic and Monetary Affairs of the European Parliament with the President of the  
European Central Bank**

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### **Summary**

We have been asked to ascertain whether monetary policy should not only consider the path of the Harmonised Consumer Price Index (HCPI) but also the evolution of asset prices. The answer to such a question has an important bearing on the way the European Central Bank (ECB) fulfils its role as a guardian of the value of the euro.

Real estate prices have increased sharply in the last years in the Euro area at a 6.5% average rate from 1999 to 2006. Such price increases may, in countries that were not considered safe before adoption of the Euro area, reflect a levelling up of real estate prices to the Euroland average. But it is our thesis that most of this increase is not the consequence of a once and for all equilibrating of real estate price levels but to sustained price expansion due to high rates of monetary growth. In the last decade, monetary aggregates have grown significantly in Europe and the world, leading to excess market liquidity. Market participants, when liquidity expands beyond their desired liquidity ratio, adjust their portfolios and remove excess money holdings by increasing their investments and their demand for final goods and services. Real estate is one of those investment options. Hence, mainly due to monetary largesse in Europe and in the rest of the world, real estate demand and prices have registered quite significant rises.

In our view, there is a clear link between monetary expansion and real estate prices: an excess of liquidity in financial markets (excess money supply) will be followed by excess demand for financial and property assets. At some point, the erosion of the profitability of such assets will put a stop to continued investment even if easy monetary conditions continue. By that time, the increase in liquidity will have given rise to inflationary expectations, as the wealth effects of asset inflation give rise to inflationary expectations in the markets for goods and services and start to become headline inflation. When monetary authorities are forced to operate an anti-inflationary policy, a recession will set in.

## Introduction

In this report we will try to determine (1) whether property price increases can in a large part be explained by a loose monetary policy in the Euro area; (2) whether asset price inflation has spilled over into inflationary expectations; and (3) if such is the case, how should the ECB take the potential effects of monetary expansion on asset markets into account in its long term monetary policy decisions.

## Two ways of calculating excess M3 growth

1. *Price Stability Rule*. One way to gauge whether M3 is growing too fast, even if consumer prices are behaving well, is the one the ECB applied when it used M3 as its main indicator. It could be labelled “Price stability desired monetary growth”. It consists in calculating a reference value for the desired growth of this broad monetary aggregate and then comparing it with the actual path of M3.

This is what the ECB used when, from 1999 to 2003, it took the M3 moving average as a reliable leading indicator of inflationary pressures in the long run<sup>1</sup>. In those years, the ECB even announced a per annum rate desired rate of M3 growth, to wit, 4.5 per cent. This concrete reference value of 4.5 per cent was arrived at by running the so-called Quantity Theory Equation,

$$M = Y + P - V \quad (1)$$

expressed in rates of growth<sup>2</sup>. M3 growth is compared with what actually happened it becomes clear that M3 has expanded too quickly - at an average rate of 7% per year since 1999 (and at an even higher average 8% rate from 2003 onwards).

Due to the persistent gap of the actual growth of M3 and the reference value so calculated, the ECB decided to stop publishing this yearly value (see Schwartz and Castañeda (2006) and ECB (2003 a)). Rather, the ECB now takes into account both money growth (which it calls the first pillar of its monetary policy) and the rest of financial and real indicators (the second pillar) to make an overall analysis of expected inflationary pressures in the Euro area (see ECB (2003 b)). In our opinion, however, that persistent gap between desired and actual M3 growth was not a statistical aberration but an indication of truly excessive monetary expansion, whose long delayed effects we are now beginning to experience (See Charts 1 and 2, Annex).

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<sup>1</sup> This is what the ECB calls the *first pillar* of its monetary policy decisions.

<sup>2</sup> M being broad money growth, V money velocity, P prices and Y real income. Logarithms were taken of this equation, which equivalent to expressing all these variables in rates of growth:

$$\log M = \log Y + \log P - \log V \quad (2)$$

The desired growth of M is calculated by plugging in the actual data of Y (real income) and the expected secular decline in V (velocity), after setting a target for P (the HCPI) at 2%. In effect, the prescribed money growth is the result of adding output growth to the ECB inflation target:

$$M_{\text{Stable Prices}} = \text{GDP} + \text{HCPI target} - V \quad (3)$$

<sup>3</sup> This *nominal income* rule in fact sets the joint evolution of the rate of growth of prices and output, money growth as a benchmark for M3 is the result of:

$$M_{\text{Nominal Income}} = \text{GDP} + \text{Deflator} - V \quad (4)$$

2. *Nominal Income Rule*. Another way of measuring excessive M3 growth is to use the so-called “nominal income rule”<sup>3</sup>. This is used to calculate the monetary growth rate consistent with the path followed by nominal income. Rather than the inflation target of 2%, actual inflation figures are used in running the Quantity Theory Equation.

Since nominal income ( $Y+P$ ,  $P$  here being GDP deflator) has grown at an average rate of 4.1% per year since 1999 in the Euro area and the estimated decline in money velocity lies between 0.5 and 1% per year, the money growth rate consistent with the evolution of nominal income in the Euro area should have been in the range of 4.5% - 5% per year (see Charts 1 and 2).

However, money growth figures in the Euro area have been much higher than this, close to three percentage points more per year. Private loans have grown at an even greater speed.

In sum, M3 growth has been excessive by both benchmarks. This is a worrying development if one accepts that eventually M3 seeps into asset prices and then into the prices of goods and services.

## **Money conundrums**

True, the connection between M3 growth and the HCPI price index turns out to be rather remote. As can be seen in Chart 3, both series diverge over a long period, as consumer inflation has been rather more benign than expected. Whether this may be a delay due to low import prices or simply to a lag in perception by consumers and suppliers is a moot question. Imports have stayed rather cheap, thanks to the entry of China in world markets and to the appreciation of the Euro. But we argue that, whatever the cause of this short and medium term lack of connection between M3 and the HCPI, the monetary pigeon will come home to roost: first in asset prices and later in current goods and services.

Moreover, calculated M3 projections and actual M3 figures show quite different cyclical and trend patterns. The dispersion in Chart 1 is striking; and the trends shown in Chart 2 follow clearly separate paths. What the explanation is for such medium term divergence we do not know, though we suspect that free capital movements and monetary substitution contribute to the instability of the monetary multiplier.

We are confident, despite all this, that M3 will first push asset prices up in the medium term and then spill over into consumption prices in the longer term. In fact, the excess liquidity in the financial markets has caused significant price increases in financial and real assets (see Charts 4 and 5) but is now causing an inflation in goods and services markets (see HCPI growth from September 2007 onwards, Chart 3). We are confirmed in our belief by the conclusions of the Milton Friedman ‘natural experiment’ that he analysed in the last scientific paper he wrote in his life.

## **Milton Friedman’s ‘natural experiment’**

Friedman’s paper (2005) is a striking validation of the effect of monetary growth on asset prices. In a short study of three episodes of growth and decline of nominal income and stock prices, Friedman defended that his prediction that money creation would explain secular movements in nominal asset prices had survived a strong historical test. He studied the behaviour of M2, money GDP and Stock Market indices: in the US in the 1920ies and 30ies; in Japan in the 1980ies and 90ies; and in the US in the 1990ies and 2000s.

The correlation between money creation and those nominal prices seems to be quite clear and free of econometric juggling. Friedman went so far as to speak of a “natural experiment” akin to what takes place in a laboratory. This underpins our confidence in money growth as a consistent indicator of asset markets developments.

It is our strongly held belief that excess cash balances in the economy are followed by a higher demand for financial and real estate assets. This is what we think has happened in recent years, as can be seen in Charts 4 and 5. However, portfolio adjustments brought about by excess liquidity do not end here: unwanted cash balances will also be channelled to final goods and services markets. A plethora of historical studies shows that the connection between money creation and consumer prices holds in the long run.

## **Price indices and monetary policy indicators**

Financial assets and real estate are not included in the consumer price index of the Euro area because they are not final goods and services. We therefore believe that the HCPI is not the best measure of the value of money (the inverse of the price level) in the European economy. The HCPI captures the evolution of a standard basket of goods and services consumed by a “representative agent” in the Euro area. Though one of the components of this price index is “housing services” this only measures the changing cost of lettings, but not the price of new or second-used residential properties; and, of course, there is not even a remote proxy for the price of securities. It could be argued that the central bank should watch asset price changes intently, because such changes seem to be an early indicator of long run consumer price effects.

In order to capture asset price changes the policy maker could either (1) incorporate a specific financial and property price index in the monetary policy-making-process; or (2) follow the example of the Federal Reserve and use the GDP deflator instead of the HICP; or (3) rely on the rather remote connection between M3 and the general price level, even if there are different time lags between money creation, on the one hand, and asset prices and consumer prices, on the other.

There is a strong reason for disregarding the first option: the ECB would have to decide whether asset price hikes are unhealthy or due to changes in the real economy, something much more difficult to do than watching consumer price increases. This would imply that the central bank is able both to monitor the financial markets developments and, if required, use the interest rate to smooth or rein in asset price fluctuations. However, deciding whether financial markets are overheated or not is subject to a high degree of uncertainty and error (see Domingo Solans (2000)). A potential mistake in the identification process of the so-called financial markets bubbles may lead to a non-desirable intervention of the central bank in the financial markets with destabilising effects both in the financial markets and in the rest of the economy. Even if there is an unanimous opinion supporting the existence of a so-called financial bubble, the central bank neither has the information nor the knowledge needed to intervene in financial markets: financial markets indicators immediately respond to changes in monetary policy, so it is not easy to isolate the market information not affected by the own central bank monetary decisions. Finally, this suggested new stabilising role of the financial markets is clearly out of the scope of the central bank: as a monetary institution, the ECB must not be directly responsible for “fine tuning” financial markets.

Alternately, the ECB could try and test the reliability of an inclusive GDP deflator. This suggestion would need careful study, since the introduction of the Euro and the running of the single monetary policy are quite recent events, makes it that we do not have enough historical data to test the usefulness of this indicator in the Euro area reliably.

In parallel, the ECB could go back to assigning a more explicit role to M3 growth in assessing future price developments of all kinds. It is true that monetary substitution and free capital movements make the connection between domestic money supply and the general price level more uncertain, but there appears to be a mid- and long term connection between broad monetary aggregates such as M3 and nominal asset prices, first, and with consumer prices, later. The ECB should therefore reconsider enhancing the role of M3 as a leading indicator of the overall price developments in the middle and long term; and thus assigning again a more explicit role for M3 in the monetary strategy of the ECB.

## References

Domingo, E. (2000): “*Precio de los activos y política monetaria*”. Speech given at Confederación Española de Ejecutivos (CEDE). Madrid. Available at: <http://www.ecb.int/press/key/date/2000/html/sp000519.es.html#skipnavigation>

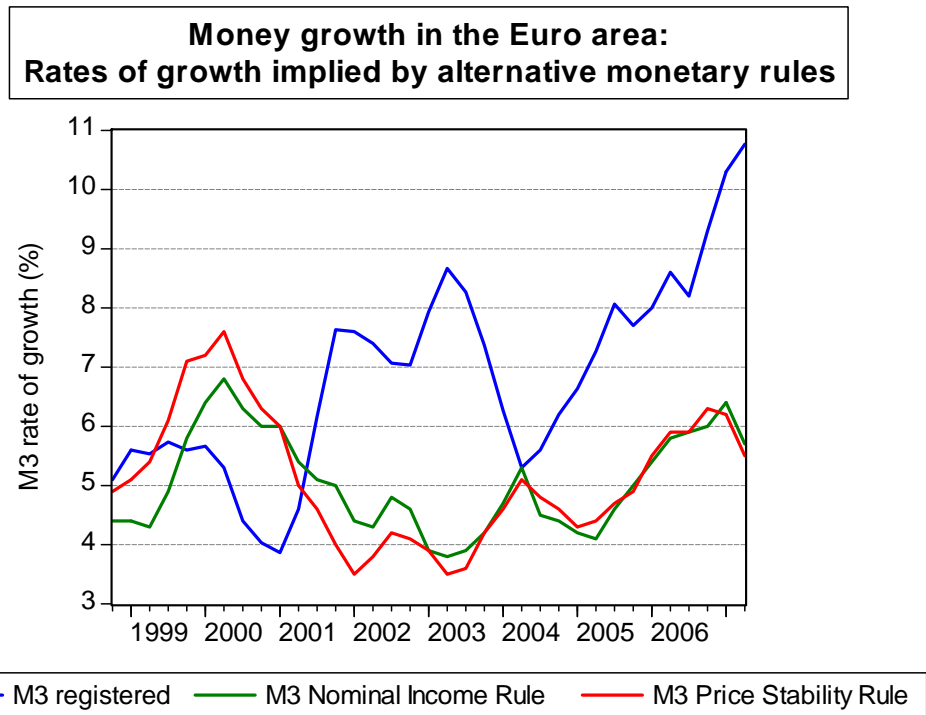
ECB (2003, a): “*On the ECB’s monetary policy strategy*”. Press release, 8th May.

ECB (2003, b): “The Outcome of the ECB’s evaluation of its own monetary policy strategy”. In *ECB Monthly Bulletin*, (June).

Friedman, M. (2005): “A Natural Experiment on Monetary Policy Covering Three Episodes of Growth and Decline in the Economy and the Stock Market”. In *Economic Perspectives*, Fall, vol. 19, no. 4, (145-150).

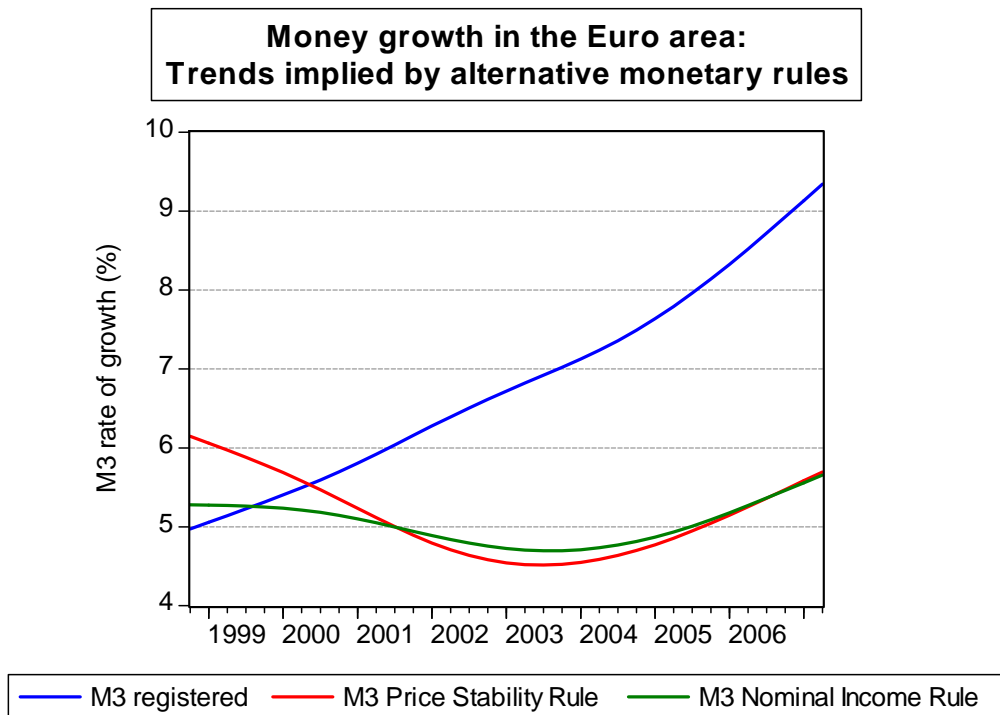
Schwartz, P. and Castañeda, J. (2006): “*High growth rates of monetary aggregates and low inflation*”. Report for the Monetary Dialogue with the ECB. European Parliament. (Dec.). Available at: [http://www.europarl.europa.eu/comparl/econ/emu/20061220/schwartz\\_en.pdf](http://www.europarl.europa.eu/comparl/econ/emu/20061220/schwartz_en.pdf)

**Annex**  
**Chart 1**



*Source: Data form the ECB and the Bank of Spain.*

**Chart 2**



*Source: Data form the ECB and the Bank of Spain.  
All trends are the result of using the Hodrick-Prescott filter.*

Chart 3

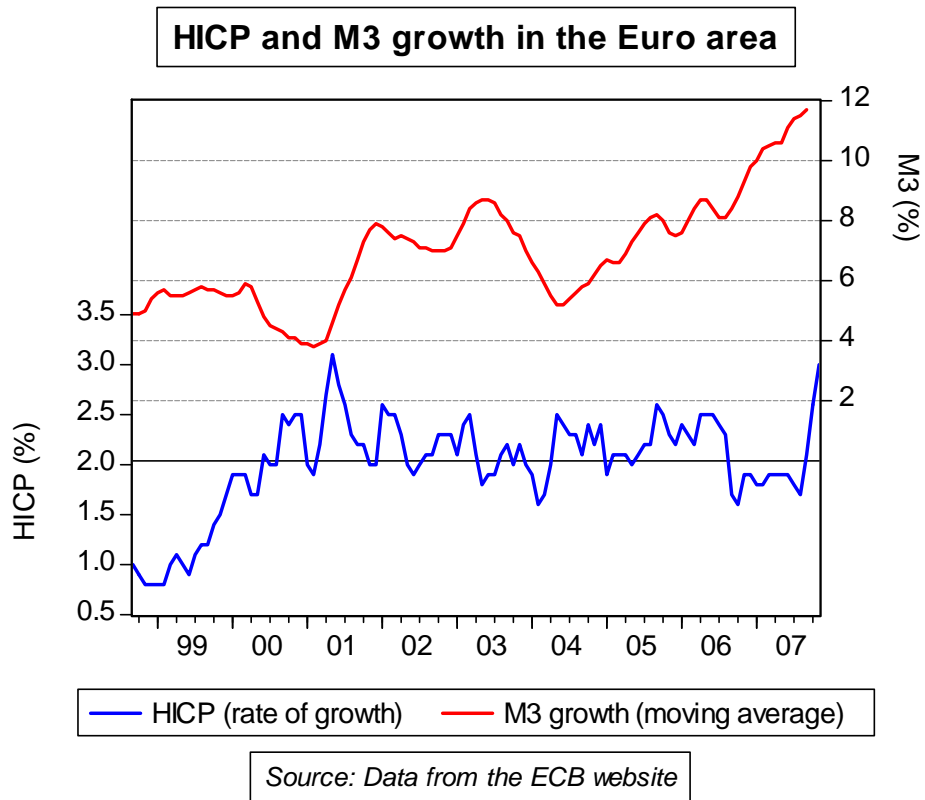


Chart 4

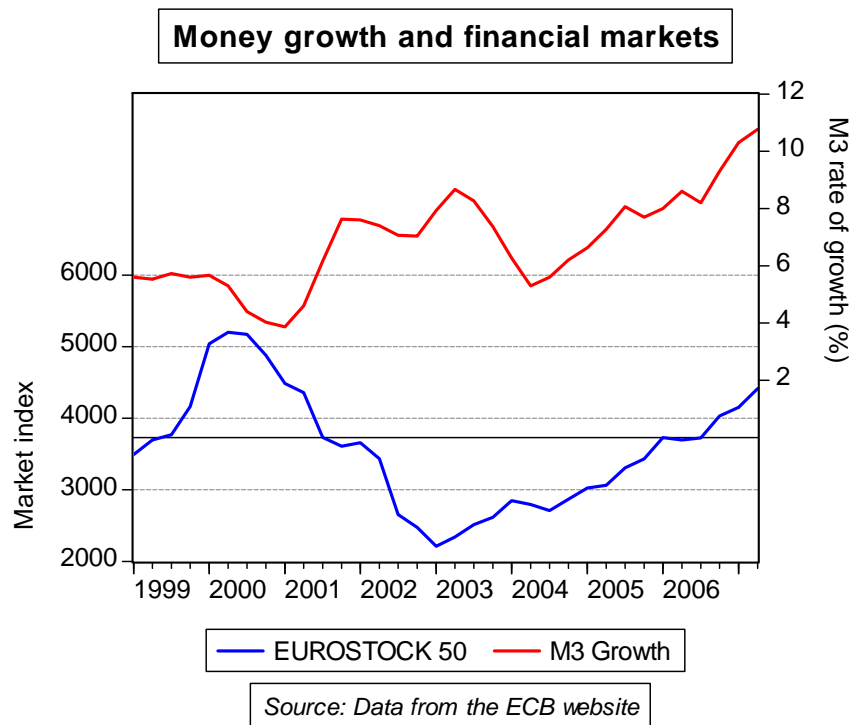
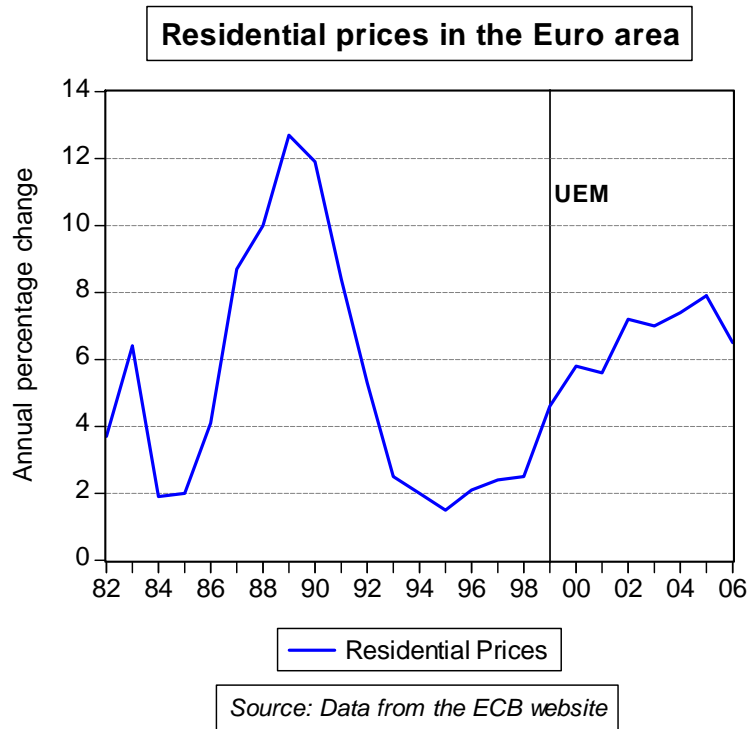


Chart 5





# DEVELOPMENTS IN THE REAL ESTATE SECTOR IN RELATION WITH MONETARY POLICY

## Briefing Paper for the Monetary Dialogue of December 2007 by the Committee on Economic and Monetary Affairs of the European Parliament with the President of the European Central Bank

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### Summary

**House price boom is ending.** Many European housing markets have seen rapidly rising prices in the last ten years. In many countries house prices have doubled; in the UK, Ireland and Spain, they have even tripled. However, in the course of 2006 house price growth started to slow in most European countries.

**Fundamentals able to explain only part of the dynamics.** Strong economic growth, favourable demographics and low interest rates explained much of the price dynamics in the past. However, for two years now most empirical models have been suggesting that price growth has been too strong. A correction has started on the supply side. In Spain and the UK building permits have started to fall, in Ireland house prices have begun to decline. And this is only the beginning of the adjustment process.

**Flexible mortgage systems more prone to correction.** We find empirical evidence that house price growth was stronger in European countries with predominantly flexible mortgage contracts than in countries with mainly fixed-rate systems. This bears the risk that flexible-mortgage countries will also see stronger corrections when interest rates do not fall anymore, because affordability then deteriorates faster.

**The recession in the US construction sector is dampening GDP growth** and will lead to higher savings rates and softer private consumption. The US Federal Reserve has already cut interest rates in anticipation of softer growth and decreasing inflationary pressure.

**In the euro area, the average rise in house prices has been less pronounced.** But the economic slowdown in the US and the strengthening euro will also lead to softer GDP growth and inflation in the euro area. Lower interest rates are the logical consequence.

**There is no case for central banks going beyond stabilising expected CPI inflation rates when setting interest rates.** However, they should communicate intensively about their valuation models if they see the danger of asset price bubbles. In the event of a bursting bubble, central banks should try to restrict the resulting problems to the bubble sectors.

## **Real estate prices in Europe**

European house prices have increased markedly over the last ten years. Within EMU house prices have risen by 5.5% p.a., i.e. they almost doubled in only ten years. Given an average inflation rate of roughly 2% during this period this translates into 3.5% annual growth of real house prices. Though this is significantly more than during the early 1990s, it does not look scary at first sight.

Second, there have been some hot spots in Europe. Ireland, Spain and the UK have seen house prices grow by double-digit rates for more than ten years. The main question therefore is not whether there are exaggerations in the European housing market as a whole, but rather how big the imbalances are in some countries.

### **Reasons for the strong housing markets**

The main drivers for demand growth in the housing market are income and population growth. There is a close relationship between income growth of a country and the overall house price trend. In this sense, housing is a normal good, demand increases when incomes rise. And provided that the supply side cannot react as quickly as the demand side, this rising demand must translate into rising prices. Of course Ireland, Spain and the United Kingdom additionally profited from strong population growth.

Beyond these two main drivers, interest rates, returns on alternative assets and institutional factors such as transaction costs or home ownership rates have an impact on housing demand and also house prices. All these factors help explain the strong performance of housing markets. However, according to most econometric estimates an explanation gap remains. This gap could be interpreted as irrational exuberance and is frequently estimated at up to 30% for some submarkets.

### **Role of lower interest rates**

For a Central Bank (CB), of course, the role of its key instrument, the interest rate, is crucial. And it is plausible that changes in interest rates have a direct impact on housing demand, as the affordability of homes improves when interest rates fall. For private households the monthly mortgage payment is decisive for their ability to finance a home, rather than an artificial relation of house prices and incomes.

With long-term interest rates falling significantly in the 1990s and the early years of the new millennium, affordability has improved markedly in most countries. This holds true particularly in comparison with the last house price peak in the early 1990s.<sup>3</sup> Compared with the peak of the early 1990s, houses still look affordable in most countries. However, compared with the late 1990s, houses in many countries look expensive.

What is more, house prices in most countries did not move in line with rental growth in the buy-to-let market: rents increased much more slowly than house prices. This might indicate either exuberance or strong rental growth in the future.

Moreover, there is empirical evidence that the housing boom was stronger in countries with predominantly flexible mortgage systems. There is a weak correlation between the share of flexible mortgage contracts and average house price growth in the last few years. This makes sense, as in an environment of falling interest rates, flexible mortgage contracts react quickly to lower interest rates.

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<sup>3</sup> Please note that DB Research's affordability index is calculated as the average mortgage payment over income. Therefore, a rising index signals a deterioration of affordability.

In a fixed-rate system, only new contracts benefit from the lower interest rates. However, this relationship is weak when we focus on individual countries. Looking at the averages of the two different mortgage systems in Europe, the relevance becomes more evident:

Our sample of 14 European countries can be divided into two sub-samples. In the first sub-sample we put together all countries with rather flexible mortgage systems (ES, FI, LU, GR, IE, UK and SE). In this sample the unweighted average growth rate of house prices was 10% p.a. This was more than 350 bp higher than the average growth rate in the second sub-sample with a fixed-rate mortgage system (IT, NL, DK, FR, DE, PT and BE). Even if we delete Germany from the second sample due to its peculiar outlier position, the difference in average growth is remarkable (230 bp per year).

This is important, as it can be expected that in an environment of rising or at least not falling interest rates, house prices in countries of the second sample (fixed-rate) will be much less affected than house prices in countries of the first sub-sample.

### **Future developments**

House price growth in most European countries has started to fall, and we consider it very likely that house prices will start to fall on a national scale in many European countries in 2008 and/or 2009. In fact, house prices in Ireland have started to decline. In Spain, one out of four regions shows negative house price growth, and also in the UK some market segments are already facing falling prices.

In a report published in October 2006 Deutsche Bank Research found that the Irish and Spanish housing markets are the European markets subject to the highest risk of contraction.<sup>4</sup> This is not only because house price growth was most pronounced there, but in particular because housing supply in Ireland and Spain grew significantly faster than demand. Of course it is justified that housing supply grows faster than the number of inhabitants, as backlog demand, smaller households and rising incomes enable faster growth.<sup>5</sup>

Still, we consider a downside potential of 10-15% in Ireland and Spain to be plausible over the next 24 months, as supply has been growing significantly faster than demand, and this is starting to create vacancies. In the UK very low levels of housing completions should safeguard against strong price cuts. However, a drop of 10% over the next 24 months is also plausible for the UK.

### **Has enough attention been paid?**

This question can only be answered appropriately if we know why a CB should track house prices. We will answer this question later on. First we want to answer a much easier question: Has the ECB paid attention to developments in the housing market? We have developed a simple house price attention index which counts the number of times the words “house price” and “house prices” appear in the ECB’s annual reports. Obviously there is a very close relationship between average house price growth in the EMU (as calculated by the ECB) and the frequency of our key words in their annual reports.

The normative part of the question, i.e. whether this degree of attention is appropriate, cannot be answered by this simple index, though. This would require a qualitative analysis of the relevant paragraphs in the annual report and, what is more, it requires answering the question as to how much attention a CB must pay to asset price movements.

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<sup>4</sup> Just, T., Ebner, S. (2006). US prices declining. Is Europe next? Deutsche Bank Research, Current Issues, October 11, 2006.

<sup>5</sup> We find no relation between the share of flexible mortgages in a country and its supply intensity.

## **Prospects for the US and the euro area economies**

The US residential real estate market has been and remains one of the most closely monitored property markets. The slowdown since late 2005 has been well-flagged even if the extent of the weakness – and the effects on financial markets – has been as difficult to assess as the extent of the earlier strength. In the third quarter of 2007, residential fixed investment (6.3% of US GDP at the peak in Q4 2005, 4.5% in Q3 2007) was down 16.5% yoy in real terms. In the full year 2007, the housing recession will directly subtract 0.8 of a percentage point from US GDP growth, pushing it to 2 ¼%. In the next stage, the end of wealth increases from higher house prices and the slowdown of home-equity withdrawals will lead to a higher savings rate and softer private consumption. This will reduce GDP growth to around 1 ¾% in 2008. Chart 8 shows that private consumption has grown quite steadily around a 2% rate over the past years – with support from residential construction as in 2004/05 and without it as in 2006/07 (chart 8). This is likely to change now, but the really important drivers of US economic success have been its strength in education, innovation and immigration.

In Europe, the average rise in residential construction activity and in prices was much less pronounced than in the US – and underlying trend growth is considerably softer. In addition, the link between construction and the real economy is probably not as strong because home-equity withdrawals are not prominent in the euro area. Furthermore, mortgages in most countries are fixed-rate, so the effect of changes in interest rates is spread out over many years. Euro-area GDP growth is expected to slow down to below 2% in 2008 because of weaker exports and knock-on effects on investment.

### **Role of the central banks in this slowdown**

Central banks on both sides of the Atlantic will adjust (or have already adjusted) monetary policy in accordance with the expected future developments of output gaps and CPI inflation. As the slowdown of the US economy to sub-potential growth rates will widen the output gap and thereby reduce inflation pressures, the Federal Reserve has already reduced the Fed Funds rate by 75 basis points (chart 10). A careful monitoring of asset prices, wealth effects and their effect on future inflation has to be an important element of a central bank's work on a continuing basis.

In Europe, a softer housing market coincides with a significant strengthening of the euro. This will reduce inflation pressures and has already led the ECB to not raise interest rates this autumn. As signs of softer GDP growth and lower inflation pressures accumulate over the winter, lower interest rates are likely in the euro area as well. Central banks are reacting to softer real estate markets in so far as they alter their outlook for inflation risks, but they do not directly support the market.

### **No case for going further**

There is no case for central banks to consider asset prices in their decision making beyond the links just sketched. First, asset prices should not be included in the consumer price index. The central bank's objective is to maintain price stability. This is understood as the stability of those prices regularly paid by consumers and therefore the HICP was chosen as the reference point. If higher asset prices lead to higher consumer prices – rents for example – then this will be reflected in the HICP and in the ECB's decision making. Statisticians have to ensure that rents are properly measured.<sup>6</sup> However, if financial markets decide to re-evaluate the price-earnings ratios of assets by raising prices without a large increase in earnings (rents), then this should not be of major concern to the central bank.

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<sup>6</sup> There are still open issues as to how to best include imputed rents in the HICP. Considerable work is going on in this area in particular at Eurostat.

Second, there is also no case – and no possibility – for the single monetary policy to address regional divergences within the euro area. This holds for economic growth, consumer price inflation as well as for asset prices. The ECB has only one tool and can only address one target: the average rate of consumer price inflation in the euro area. Advice may be given on how to address regional disparities with region-specific policies.

### **Asset prices determined by markets**

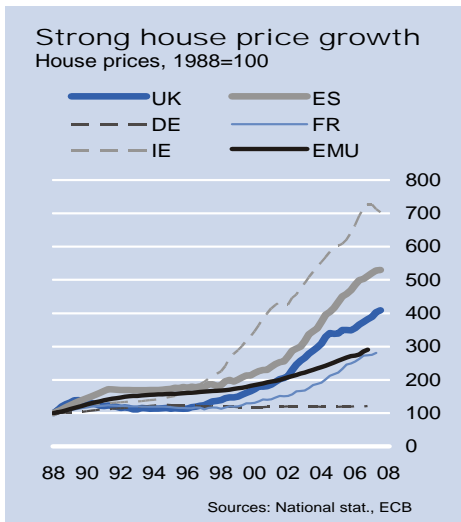
A further difficulty any central bank faces when wanting to avoid bubbles is how to identify them. It is not clear whether central banks have better valuation metrics than the many market participants. Central banks should monitor asset price developments and add their valuation models to the discussion. Tracking lending volumes (chart 11) has to be part of this monitoring process. Also, assessing the impact of financial innovation on asset prices is an important factor – but innovation must not be curtailed.

Getting involved in the public debate by presenting the central banks' models and analysis may help dampen herd behaviour and exuberance in asset markets. Central banks may also have a role in educating the public about the incentive structures of actors in financial markets. But as long as higher asset prices do not lead to higher HICP inflation, it is difficult to make a case for a central bank preventing these. They can and should lean against the wind if rising asset prices boost consumption and inflation. But this is fully consistent with central banks focusing on the primary objective of price stability.

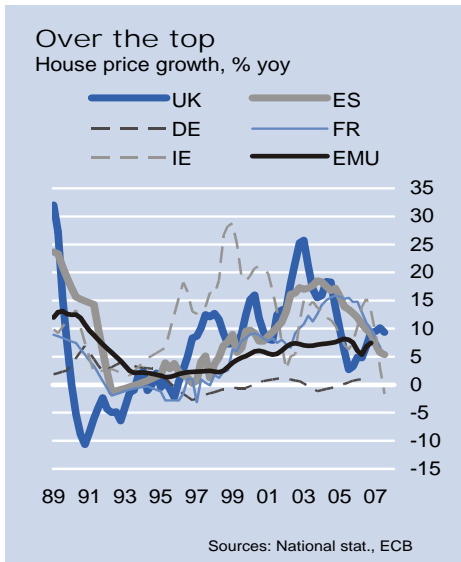
A further issue is that if a bubble were to emerge and then burst, then financial stability would be threatened. However, this requires that the CB correctly identifies a bubble that will burst. And, second, this would lead to multiple objectives despite the availability of only one tool. If HICP inflation remains low or is even falling, how should the central bank decide whether it should lower rates in reaction to lower inflation pressures or raise them in reaction to higher asset prices? The solution would be that the central bank focuses on HICP inflation and leaves the issue of financial stability to regulators and the financial sector. These have to ensure that speculators who pay excessively high prices also have to bear any ensuing losses. Central banks should contain the effect on the wider economy. However, this may entail benefits to the speculators and thereby introduce moral hazard. Therefore, central banks must also analyse the differential impact of their action on financial market actors and the economy at large.

# Annex

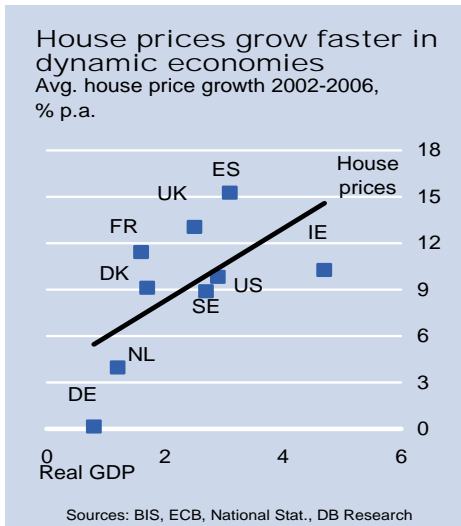
## Chart 1



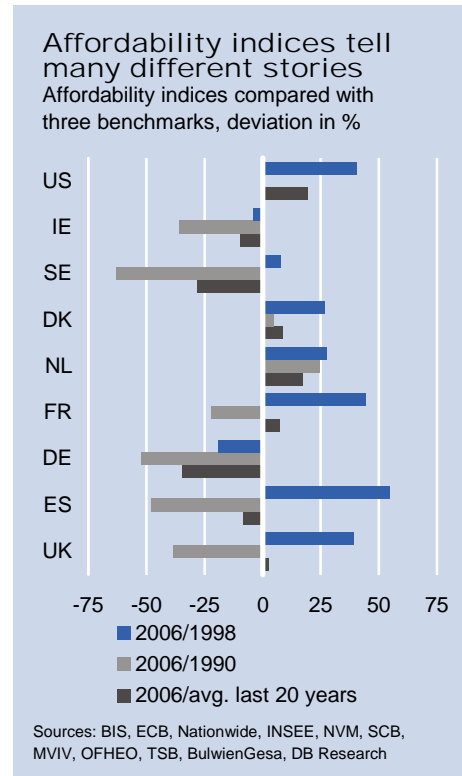
## Chart 2



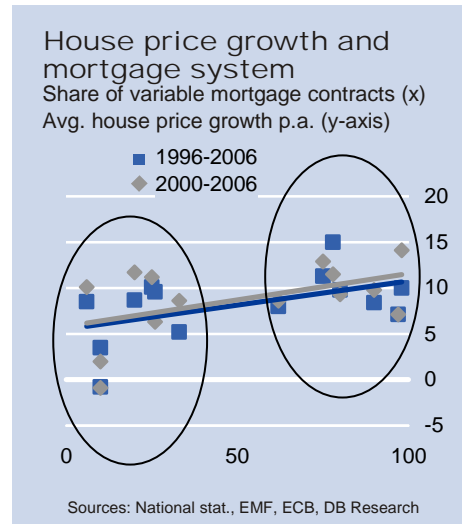
## Chart 3



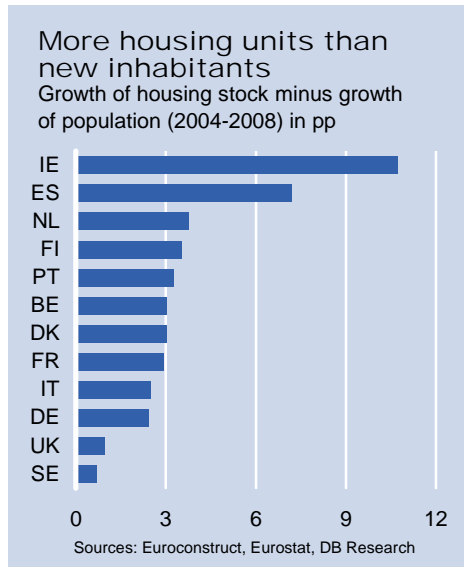
## Chart 4



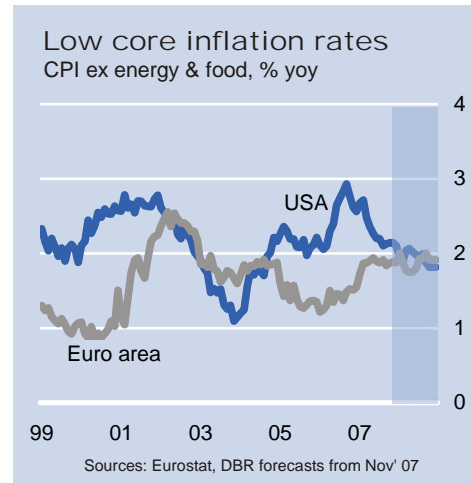
## Chart 5



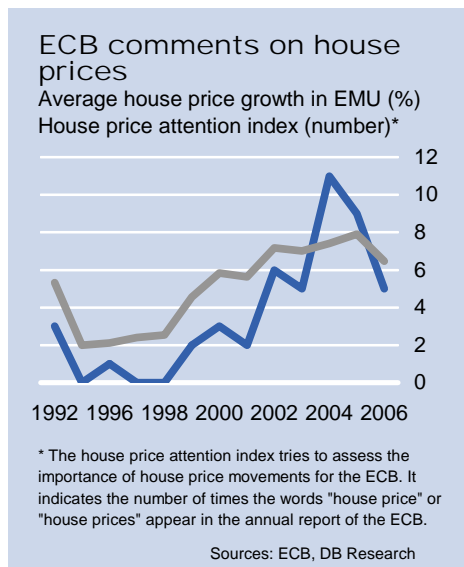
**Chart 6**



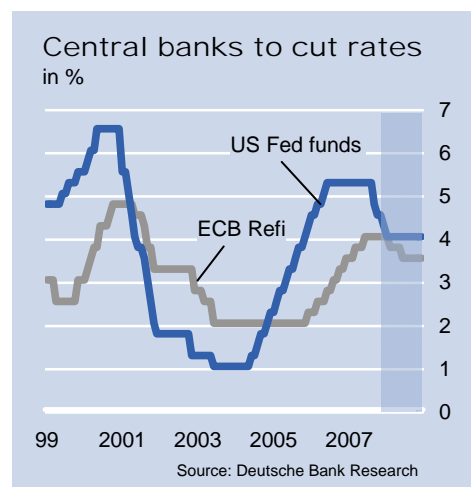
**Chart 9**



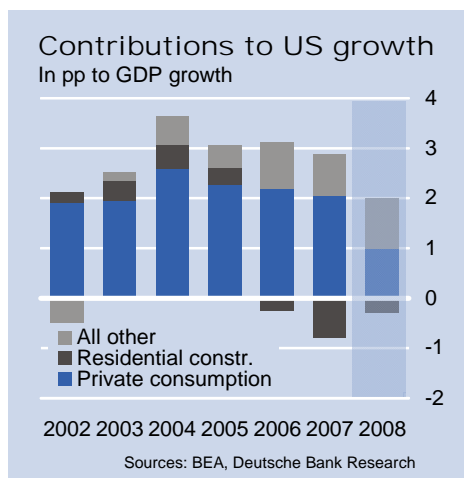
**Chart 7**



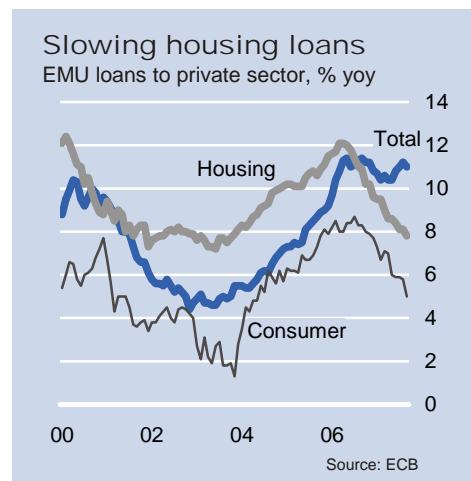
**Chart 10**



**Chart 8**



**Chart 11**





# **THE IMPACT OF GLOBALIZATION ON INFLATION**

**Briefing Paper for the Monetary Dialogue of December 2007 by the Committee on Economic and Monetary Affairs of the European Parliament with the President of the European Central Bank**

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(CentER Tilburg University, RSM Erasmus University and CEPR)

## **Executive Summary**

The purpose of this Briefing Paper is to discuss the impact of globalization on inflation. It was long the dominant view that globalization contributed to lower inflation. For one, this happened through an institutional argument along the lines that “more globalized nations tend to pursue policies that achieve faster economic growth, lower inflation, higher incomes and greater economic freedom”. In addition, and closely related, the global competition channel was at work through which increased global competition depressed (relative) price levels across the world, thus exerting a decreasing effect on inflation as suggested by Rogoff (2003). On the other hand, and possibly more recently, global resource and supply problems in markets such as oil and energy (as well as most other raw materials) may now work in the opposite direction. Various models have been presented and they all point towards a more global perspective of the domestic inflation showing the increasing importance of the global (common) factors in determining the inflation rate followed by a decreasing weight of the country-specific determinants. Although we know that the globalization does matter for domestic inflation and monetary policy, the theoretical models and empirical evidence do not provide enough insight in the globalization-inflation relationship as some authors suggest a negative link, whereas others find a more ambiguous relation. The first conclusion for central banks is that they should stick to price stability as the overriding policy goal, because globalization does not mean no inflation risk. Second, central banks should introduce some institutional adjustments to help them to deal with more integrated financial markets. These institutional adjustments may include improvement of the early warning systems, the stress testing, and the crisis management tools, so that the central banks can monitor the globalization on a day-to-day basis, and take account of the potential changes in monetary and financial stability. This implies also tougher financial supervision by the ECB and other financial supervisors. Third, globalization could force structural and far-reaching reforms and other institutional changes within the very hart of the euro area economy. The EU should not wait too long, but rather should anticipate on the future consequences of globalization.

## 1. Introduction<sup>7</sup>

The purpose of this Briefing Paper is to discuss the impact of globalization on inflation. It was long the dominant view that globalization contributed to lower inflation. For one, this happened through an institutional argument along the lines that “more globalized nations tend to pursue policies that achieve faster economic growth, lower inflation, higher incomes and greater economic freedom”. In addition, and closely related, the global competition channel was at work through which increased global competition depressed (relative) price levels across the world, thus exerting a decreasing effect on inflation as suggested by Rogoff (2003). On the other hand, and possibly more recently, global resource and supply problems in markets such as oil and energy (as well as most other raw materials) may now work in the opposite direction. This is especially the case as the dependence on these resource supplies in the EU is substantial. Furthermore, as a relative income argument, fast growing regions such as China and India also depict higher income growth and an emergence of a larger middle class. The welcome increase in prosperity of these classes also brings with itself higher costs and thereby higher prices in global trade networks. What is the real impact of the globalized economy on inflation? Can a net effect be reasonably identified in the first place at this stage? What trends have been recently observed in this regard, and what are the projections for the future? This Briefing Paper will be structured as follows. Section 2 will provide recent trends in globalization and inflation. Section 3 will discuss some models on globalization and monetary policy. After these models are presented and evaluated, Section 4 will mention some policy consequences of globalization for inflation and monetary policy. Section 5 concludes.

## 2. Recent trends in globalization and inflation

This section provides a few graphs reflecting the recent trends in globalization and inflation. Figure 1 shows the shares of individual regions in the global trade. There is a clear shift towards developing countries as well as the Asian economies accompanied by a slight decrease in the importance of developed countries, such as the US and EU15. The figure ranges just up to year 2002. In recent years we would expect even greater shifts in global trade from developed to developing and Asian countries. Figure 1. Shares of individual regions in global trade

% Total	1990	1995	2002
Developed countries	72	67	63
US	12	12	11
UE15	44	39	38
Developing countries	28	33	37
Asia	13	19	20

*Source: IMF Direction of Trade Statistics*

More integration among countries automatically leads to greater amount of funds crossing the national borders. Most of them come from more developed nations, trying to find new investment possibilities, to more developing countries.

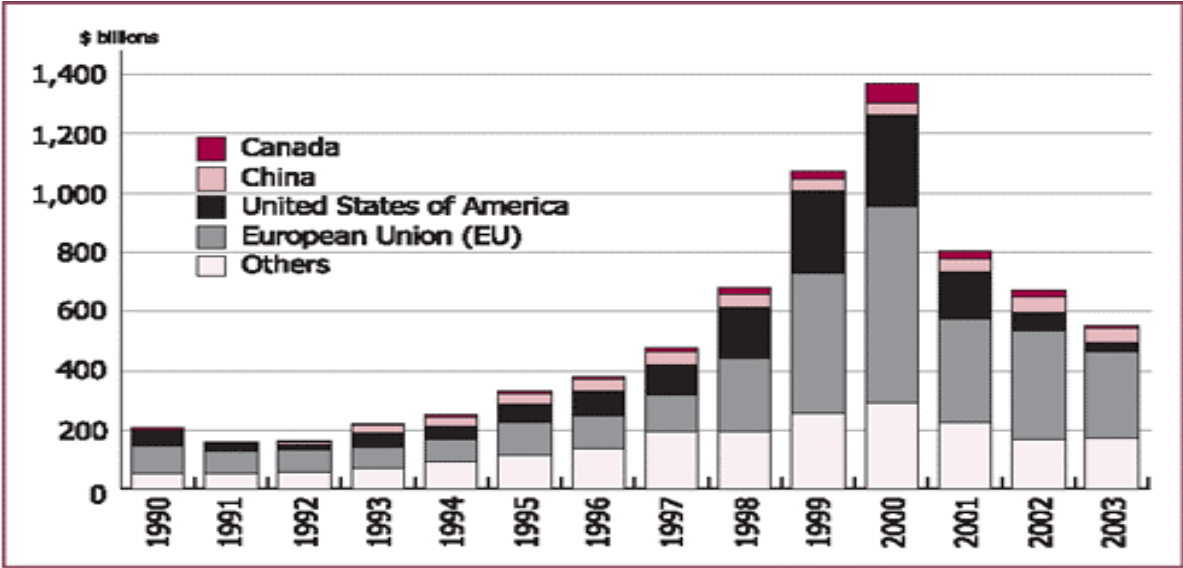
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<sup>7</sup> Briefing paper for the Committee on Economic and Monetary Affairs (ECON) of the European Parliament for the quarterly dialogue with the President of the European Central Bank.

The countries that just opened up to a more free market will be the obvious choice. That trend is obvious in Figure 2. This graph gives a decomposition of Foreign Direct Investment (FDI) inflows, showing the estimated weights of investments in certain areas in the world.

As one can observe, China’s FDI inflows just kept on growing steadily. The FDI inflows into Canada and the US seems to diminish after reaching a long time high in 1999 and 2000, while the EU seems to show a strongly decreasing pattern as of 2000 and stabilizing thereafter. Remarkable in Figure 2 is the absence of India as one of the most important emerging economies in Asia due to the heavy restrictions on FDI inflows into this country. Thus, globalization is a necessary but not a sufficient condition for more economic growth.

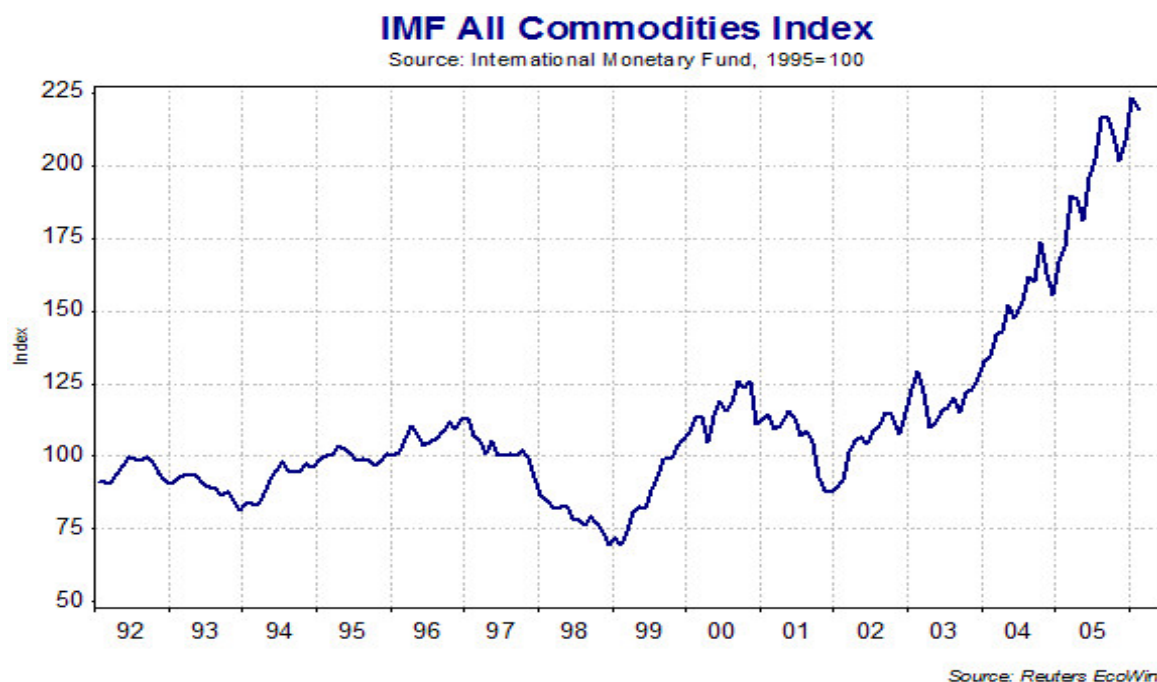
**Figure 2. World FDI inflows into selected countries and regions**



Source: United Nations Conference on Trade and Development (UNCTAD); World Investment Report 2004 ([www.unctad.org/wir](http://www.unctad.org/wir))

Globalization is at full speed, but we still do not know how it links with inflation. As Figure 3 suggests, globalization and inflation recently work in the opposite directions. The explanation of that phenomenon might be in the global resources markets, where the prices – in particular the oil price - are rising continuously. Prices for energy, metals and agricultural goods went up nearly 30% in a year and agricultural goods have all risen as demand for commodities has increased in a growing world economy. Increasingly, arable land in China is used for development (housing and commercial), Therefore, the supply of food will fall or in any case will not increase as much as before. At the same time, the Chinese are becoming richer and the middle class grows, meaning that the demand for food and food-related products will increase. This combination of changed use of land and increasing demand could very well result in structurally higher food prices because of globalization. At the same time, supply of commodities has remained relatively stagnant. Additionally, the economies of China and India are growing largely, and becoming richer with each year. That creates an even greater world demand for products and may result in increased prices. Using various models we will try to evaluate the overall effect that globalization has on domestic and world inflation.

**Figure 3. Commodity prices and world inflation (2006)**



### **3. Some models on globalization and monetary policy**

First of all, Wagner (2001) tries to evaluate the implications of globalization for monetary policy. He describes two channels of interdependency between the two, providing a model for each channel. Increased global competition is the first result of globalization, whereas increased uncertainty about monetary policy is considered to be the second result. The first channel is the most important one as it has direct consequences for inflation. Wagner provides a simple model showing that the difference between the optimal and discretionary inflation, providing evidence for the downward pressure that globalization exerts on inflation. As Wagner explains in lines with an argument, which is originally due to Romer (1993), the more open the economy, the smaller the real benefits of higher output from surprise monetary expansion, and thus the lower the equilibrium rate of inflation. A lower incentive to inflate is given to countries in a more integrated world, as a high inflation is perceived as a bad signal. Wagner also discusses a more complicated model, which treats inflation as a consequence of structural conditions and making it repairable just by structural reforms. Since globalization is believed to speed up those reforms, it is also said to put downward pressures on inflation.

Furthermore, Mojon and Ciccarelli (2007) provide evidence that the inflation is truly a global phenomenon, as the inflation rates in the OECD countries have moved together over the last 45 years. This co-movement, on average, accounts for 70 % of the variability of country inflation. They specify a multiple regression model trying to explain the determinants of global inflation. Many common determinants were tested and Mojon and Ciccarelli concluded that looking at the 1971-2004 sample only a few variables contain explanatory power with regards to global inflation. Cost variables, including commodity prices, wages and real GDP, as well as monetary policy developments have been all proven to have a positive (although the sign of these effects is not always significant) impact on global inflation. Then they investigate how much impact global inflation has on domestic inflation. Mojon and Ciccarelli calculated estimates of the average long term response of national inflation to global inflation. They conclude that this response to global inflation is lower in countries with a tight commitment to price stability.

Moreover, Mumtaz and Surico (2007) present a time-varying dynamic factor model applied to a large panel of inflation indicators in order to separate the country specific factors determining inflation from the more global (common) factors. Their results show that an international common factor explains the historical decline in the level and persistence of inflation for most G7 countries, Australia, New Zealand and Spain. The national conditions, on the other hand, are responsible for the high volatility of the late 1970's and early 1980's. In addition, national factors are proven to be responsible for variations in inflation when the output growth is relatively low, whereas the international factors explain inflation variability when the output growth is relatively high.

Then, Borio and Filardo (2007) evaluate the scope of models explaining national inflation rates, distinguishing two types of models. Some are older, more country-centric models, reflecting the past view that inflation is purely national phenomenon. However, the new models are the more globe-centric models treating inflation as a more global phenomenon. Their hypothesis is that the models up to now have been too country-centric and that these models should move towards more global ones, in order to fully incorporate the changes by globalization.

In order to incorporate the impact of global factors, they explain the difference between the present inflation rate and the underlying inflation rate trend (used largely as a proxy for slowly changing inflation expectations) by the conventionally-defined domestic output gap and a set of proxies for other factors (e.g., oil, import and other commodity prices and unit labour costs) and the global output slack. Borio and Filardo's main results clearly show that inflation is not purely a domestic phenomenon, as the global output slack variable significantly explains more of the domestic inflation as the domestic output slack. The diminishing significance of domestic output slack in explaining the domestic inflation may point to the conclusion that, although strictly domestic factors still do matter in determining the level of inflation, more and more emphasis should be put on the global factors, giving evidence of more globe-centric view of the domestic inflation.

Finally, Allard (2007) investigates to what extent the inflation in Poland is determined by global factors and globalization. She analyzes empirically the relationship between inflation and globalization at the aggregate, macroeconomic level for Central and Eastern European (CEE) countries with CPI inflation explained by trade openness defined as the ratio of imports of GDP and output gaps derived with Hodrick Prescott filters for GDP. The results provide evidence that the sensitivity of prices to domestic economic conditions in the eight CEE countries has been falling in the wake of higher trade integration. Allard evaluates the effects of globalization in Poland only, and she discovers that globalization would have lowered domestic prices by between  $\frac{1}{2}$  and 1 percentage point per year since the middle of the 1990s, mainly through lower mark-ups on prices. Allard's model, therefore, provides clear empirical evidence of a negative relationship between globalization and inflation.

All models above recognize the importance of global determinants of inflation next to the country-specific ones. What is lacking in most of these models is an explanation of how exactly globalization affects the domestic inflation rates. Only the paper by Allard (2006) provides evidence of a decrease in CEE inflation rates by globalization. Other authors, on the other hand, state that globalization should lower inflation rates (via increased competition), but acknowledge that recent developments (like higher oil and other energy prices) might cause that relationship to alternate. Without convincing empirical evidence on the inflation-globalization relationship for developed and developing countries, we will discuss the possible consequences for monetary policy in general and the euro area.

#### **4. Consequences of globalization for monetary policy**

Leszek Balcerowicz, the former President of the National Bank of Poland (NBP) and the keynote speaker of the CEPR/ESI 2006 Annual Conference on 'Globalisation and Monetary Policy' at the NBP in Warsaw, stated in his address that the lesson for the future times is that the monetary policy should be focused on keeping the inflation low and ought to "avoid adding to asset prices" by first lowering and then hiking up the interest rates and thus bursting their bubble, whereas, "the bubble could be prevented in the first place" (see: Mujagic. 2007). Balcerowicz calls for not using the financial markets as an early warning system for crises as they tend to overshoot, which has even worsened by globalization. Balcerowicz does not provide a straight answer to whether globalization has also led to more boom-bust cycles. If it would be the case, he suggests the use of longer term inflation targets, so that they may incorporate the full globalization effects.

Onno de Beaufort Wijnholds (2007), the permanent representative of the ECB at the IMF, stated in his policy lecture at the same conference that in the more integrated world, the central banks would not necessarily have to adjust their policy frameworks. They should rather focus primarily on the price stability, as this is the overriding goal of the monetary policy. The central banks are to some extent helped by globalization, but we should keep in mind that inflation is not dead. The only adjustment for central banks he suggested is the incorporation of more global factors and spillovers in their assessment of near and medium term inflation prognoses, as country specific factors would not explain the whole story. De Beaufort Wijnholds discussed the global imbalances pointing out that they emerge due to more globalization, but that is also the integration process that helps to keep those imbalances sustainable over a longer period of time. He concludes that those imbalances will have to be reduced at some point in the future. Keeping in mind that external imbalances reflect the internal ones, the key to their resolution lies in addressing domestic shortcomings. This view was shared by Yi Gang, Deputy-Governor of the People's Bank of China, who also called for the decrease in global imbalances. More flexible exchange rate in China will do part of the trick. Additionally, there is great need for China to encourage its domestic demand, so that we can move away from the situation where US mostly buys and China mostly produces (See: Mujagic, 2007).

Krzysztof Rybinski (2007), Deputy-President of the NBP, also focused on the global imbalances in the world and their consequences. According to Rybinski, the uncertainty in the oil prices also contributes to a large extent to the ever rising US current account deficit vis-à-vis the rest of the world. As the US economy grows, it consumes more and more oil, increasing the oil prices further and choking off US economic growth. The possible solutions include: reducing the US deficit, re-weighting the Chinese model from the export oriented to the domestic consumption driven one, and introducing more structural reforms mostly in Europe and Asia to raise potential output in those parts of the world. As for what the central banks ought to do in the future, Rybinski gives a two-step solution. First of all, they should fully commit their policy to maintain price stability (with both higher and lower inflation rates considered undesirable). Second, some proper and prudential measures as well as supervision policy have to be introduced, in order to control the rising asset prices and to make sure they do not diminish the product quality. The supervision policy is also the best solution to deal with bubbles, because the bursting of the bubbles may cause more trouble for central banks and financial supervisors.

## **5. Concluding remarks**

The aim of the Briefing Paper is to investigate the theoretical and empirical relationship between globalization and inflation. Various models have been presented and they all point towards a more global perspective of the domestic inflation showing the increasing importance of the global (common) factors in determining the inflation rate followed by a decreasing weight of the country-specific determinants. Although we know that the globalization does matter for domestic inflation and monetary policy, the theoretical models and empirical evidence do not provide enough insight in the globalization-inflation relationship as some authors suggest a negative link, whereas others find a more ambiguous relation. The first conclusion for central banks is that they should stick to price stability as the overriding policy goal, because globalization does not mean no inflation risk. Second, central banks should introduce some institutional adjustments to help them to deal with more integrated financial markets. These institutional adjustments may include improvement of the early warning systems, the stress testing, and the crisis management tools, so that the central banks can monitor the globalization on a day-to-day basis, and take account of the potential changes in monetary and financial stability. This implies also tougher financial supervision by the ECB and other financial supervisors. Third, globalization could force structural and far-reaching reforms and other institutional changes within the very heart of the euro area economy. The EU should not wait too long, but rather should anticipate on the future consequences of globalization.

## References

- Allard, Céline (2007), Inflation in Poland: How Much Can Globalisation Explain?, In: Adam B. Czyzewski, Sylvester Eijffinger and Kees Koedijk (Eds.), *Globalisation and Monetary Policy*, Centre for Economic Policy Research, London, May 2007.
- Borio, Claudio and Andrew Filardo (2007), Globalisation and Inflation: New Cross-Country Evidence on the Global Determinants of Domestic Inflation, In: Adam B. Czyzewski, Sylvester Eijffinger and Kees Koedijk (Eds.), *Globalisation and Monetary Policy*, Centre for Economic Policy Research, London, May 2007.
- Ciccarelli, Matteo and Benoit Mojon (2007), Global Inflation, In: Adam B. Czyzewski, Sylvester Eijffinger and Kees Koedijk (Eds.), *Globalisation and Monetary Policy*, Centre for Economic Policy Research, London, May 2007.
- De Beaufort Wijnholds, Onno (2007), How Should Central Banks React to Globalisation?, In: Adam B. Czyzewski, Sylvester Eijffinger and Kees Koedijk (Eds.), *Globalisation and Monetary Policy*, Centre for Economic Policy Research, London, May 2007.
- Mujagic, Edin (2007), Introduction, In: Adam B. Czyzewski, Sylvester Eijffinger and Kees Koedijk (Eds.), *Globalisation and Monetary Policy*, Centre for Economic Policy Research, London, May 2007.
- Mumtaz, Haroon and Paolo Surico (2007), Evolving International Inflation Dynamics: World and Country-Specific Factors, In: Adam B. Czyzewski, Sylvester Eijffinger and Kees Koedijk (Eds.), *Globalisation and Monetary Policy*, Centre for Economic Policy Research, London, May 2007.
- Razin, Assaf and Prakah Loungani (2007), Globalisation and Inflation, In: Adam B. Czyzewski, Sylvester Eijffinger and Kees Koedijk (Eds.), *Globalisation and Monetary Policy*, Centre for Economic Policy Research, London, May 2007.
- Rogoff, Kenneth (2003), Globalization and the Global Disinflation, Paper presented for the Federal Reserve Bank of Kansas City Annual Conference at Jackson Hole, Wyoming.
- Romer, David (1993), Openness and Inflation: Theory and Evidence, *Quarterly Journal of Economics*, Vol. 108 (4), 869-903.
- Rybinski, Krzysztof (2007), Global Imbalances: 'Hard' or 'Soft' Landing? Implications for Monetary Policy, In: Adam B. Czyzewski, Sylvester Eijffinger and Kees Koedijk (Eds.), *Globalisation and Monetary Policy*, Centre for Economic Policy Research, London, May 2007.
- Wagner, Helmut (2001), Implications of Globalization for Monetary Policy, *IMF Working Paper*, No. 01/184, International Monetary Fund, Washington, D.C., November 2001 (Also published as: *SUERF Studies*, No. 17, SUERF, Vienna, 2002).

## **GLOBALIZATION AND INFLATION**

### **Briefing Paper for the Monetary Dialogue of December 2007 by the Committee on Economic and Monetary Affairs of the European Parliament with the President of the European Central Bank**

**JEAN-PAUL FITOUSSI**

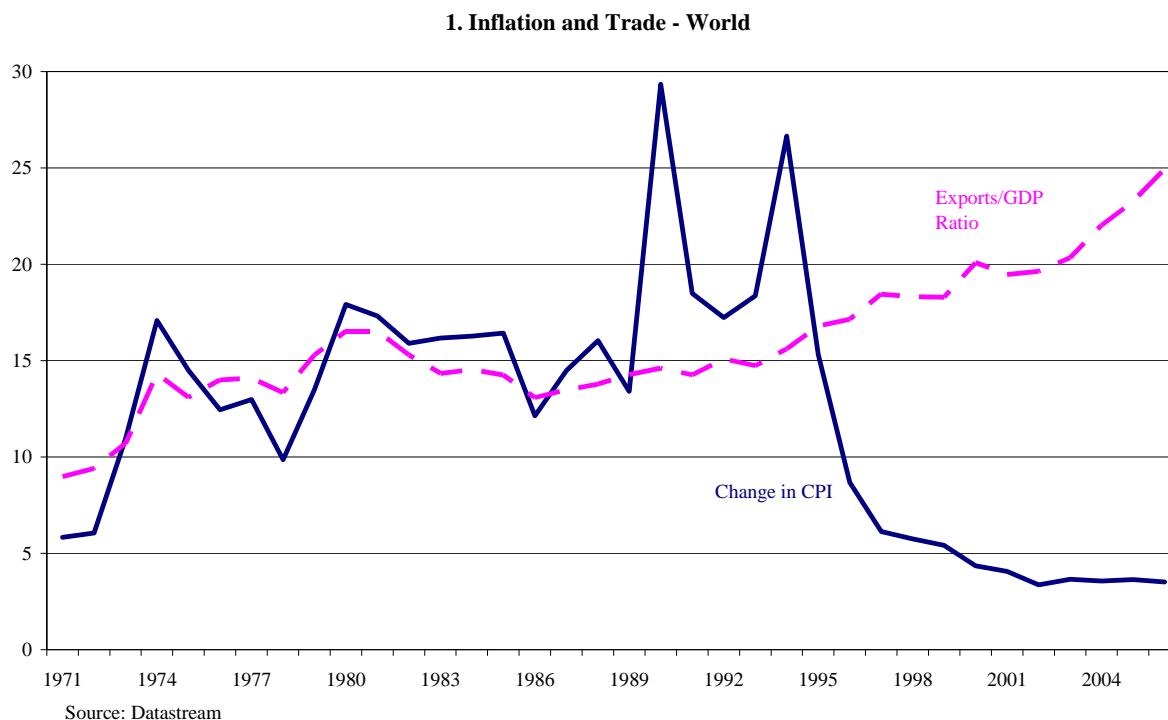
#### **Summary**

The issue of whether globalization has yielded structural changes in the process of inflation is crucial for the definition of the role of monetary policy, and for an assessment of the strategies followed by central banks around the world.

This briefing paper will first frame the argument by showing a series of stylized facts on inflation. In the last 15 years or so, disinflation and the increase of world trade seem to have gone hand in hand. This phenomenon does not seem to have been fuelled by lower mark up but by a decrease in the wage/productivity ratio. The briefing paper then tries to identify the channels through which increased openness to trade affects inflation: cheap imports, increased competition in the labour market, the disappearance of bottlenecks, the selection process of firms etc. The effect of globalization on (dis)inflation seems to be robust, but the question of its duration remains: is it transitory or permanent? If the transition period is rather long, which is likely, then monetary policy could more than ever participate to the others general goals of economic policy, at least in industrialized countries.

## 1. Inflation and Trade

The first fact we can observe is that the past three decades were characterized both by an upward trend in world trade (measured as exports over GDP) and a downward trend in inflation (measured as yearly change in CPI), if we disregard the first half of the nineties. The following figure shows these trends quite well.



The figure also shows that both trends accelerated since 1995.

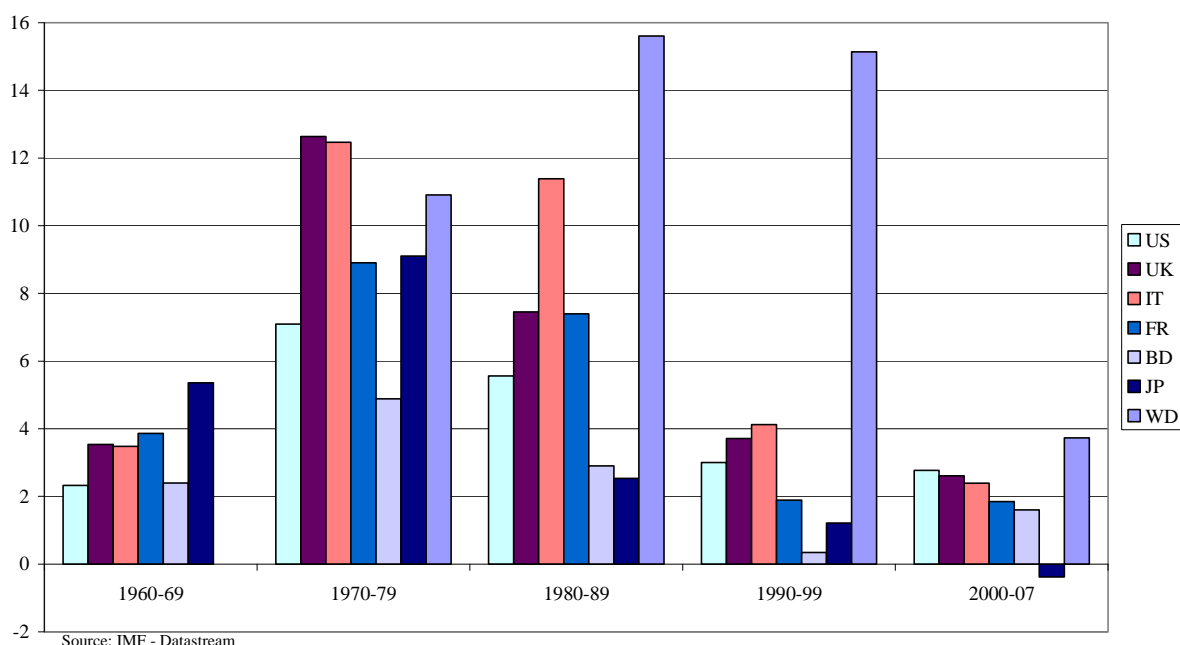
If we look at a number of selected developed countries (figure 2), we can observe that the sharp decrease in inflation began even earlier, while the rest of the world experienced very high inflation rates until the mid 1990s (the average inflation rate of developing countries computed from the IMF's International Financial Statistics, is on average 36% between 1980 and 2000).

The increase of world trade is of course not necessarily the only factor explaining the dramatic decrease in inflation. In a speech in 2004<sup>8</sup>, former Fed Chairman Alan Greenspan argued that innovation and productivity increases were among the factors explaining the trend in inflation. Nevertheless, he argued in the same speech that “Because of a lowering of trade barriers, deregulation, and increased innovation, cross-border trade in recent decades has been expanding at a far faster pace than GDP. As a result, domestic economies are increasingly exposed to the rigors of international competition and comparative advantage. In the process, lower prices for some goods and services produced by our trading partners have competitively suppressed domestic price pressures.”

<sup>8</sup> “Globalization and innovation”, Remarks by Chairman Alan Greenspan at the Conference on Bank Structure and Competition, sponsored by the Federal Reserve Bank of Chicago, Chicago, Illinois, May 6, 2004

Similarly, a recent study from the IMF<sup>9</sup> attributed to trade a significant portion of the observed reduction in prices, while at the same time warning about the possibility that this effect could only be transitory.

## 2. Inflation - Decade Averages



## 2. How can globalization affect trade?

A number of channels through which globalization and trade affect inflation have been highlighted in the recent debate:

1. The more straightforward is the direct effect of cheap imports, which reduces the overall price level in industrialized countries. This effect is larger for countries that have a higher share of imports in domestic consumption<sup>10</sup>.
2. Related to the former, there is the substitution effect of cheaper imports for domestic goods. According to the ECB monthly bulletin, of August 2006, China and new member states have seen their exports to old member countries of the EU double from 1995 to 2004.
3. Trade openness has also an effect on domestic prices, through the downward pressure that it exerts on wages of sectors more exposed to foreign competition. The threat of delocalization and of outsourcing has been used to moderate wage growth and to keep labour costs low.
4. A global economy also tends to reduce bottlenecks and capacity constraints, thus reducing the sensitivity of inflation to domestic supply problems. Supply and demand are increasingly determined on a global scale.
5. Finally, increased competition implies a process of selection in the domestic market, with less efficient firms driven out of business. This implies an increase in overall productivity and a decrease of prices.

<sup>9</sup> IMF "How Has Globalization Affected Inflation?", Chapter III of *World Economic Outlook*, April 2006

<sup>10</sup> The ECB monthly bulletin of August 2006 provides an estimate of this direct effect of the European Union

To these factors, often mentioned in the literature, I believe it is worth adding what I call the *contestability effect*:

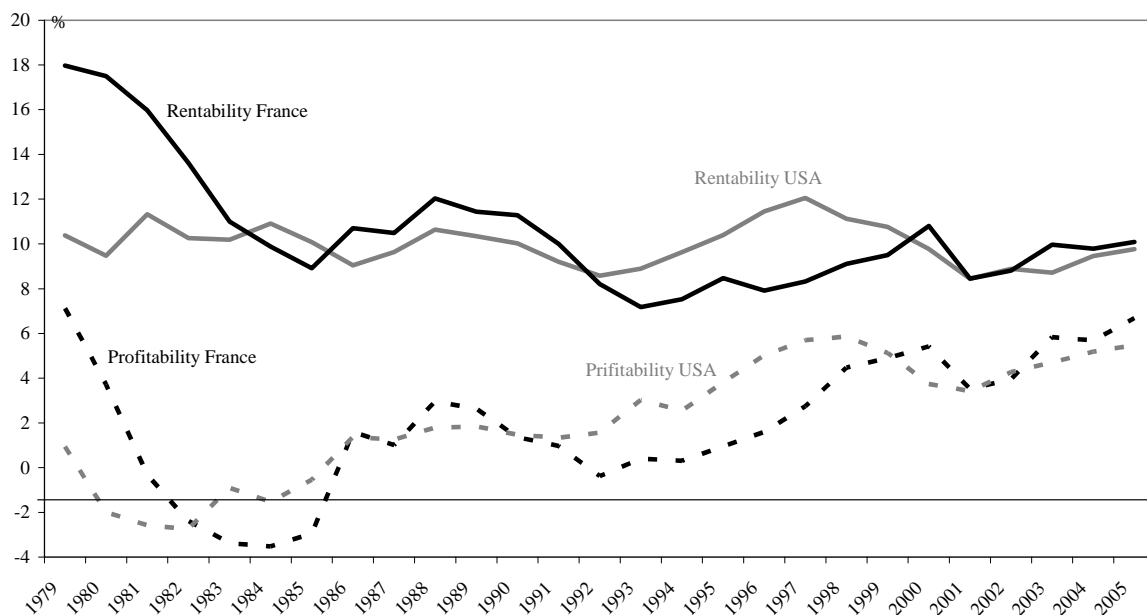
6. Even when the share of imports is low, and hence the direct effect plays a limited role in affecting inflation, the simple threat coming from potential competitors will force domestic producers to keep prices low. The notion of market contestability, introduced by Will Baumol in oligopoly theory, fully applies to international trade, and explains why the reduction of inflation also appeared in relatively closed economies (like the US for example).

### 3. The Burden of International Competition

Nevertheless, if we attribute to trade globalization the positive effect on inflation, we are immediately faced to a contradiction. Contestability and increased international competition should have an impact on mark-ups as well as on prices, and we should have observed a tendency to compression of profit margins. Now, as figure 3 shows for the case of France and the USA (the only countries for which reliable data on the capital stock were available), this is not the case. For both countries profit rates (computed as the ratio of value added net of wages, revenue taxes and consumption of fixed capital over the stock of capital) have shown fluctuations that are related with the business cycle, but no clear trend. If anything, we observe a tendency to increase since the early 1990s. Even profitability, obtained by adding capital revaluation to profits, shows no trend.

The explanation to this contradiction lies in the financial globalization that has accompanied the trade globalization described above. Capital -- the most mobile production factor -- has moved or threatened to move where it was more profitable. The worldwide surge of FDI and outsourcing responds, among other things, to this objective. This has weakened the bargaining power of the less mobile factor, labour. In fact, since the early 1980s, the increase in productivity has not been passed to the wages. Figure 4, where I plot an index of productivity (GDP/employment) divided by the real hourly wages in the manufacturing sector (broadly speaking, the inverse of the wage share), shows that the trend has been upwards in the past three decades.

3. Capital Rentability and Profitability



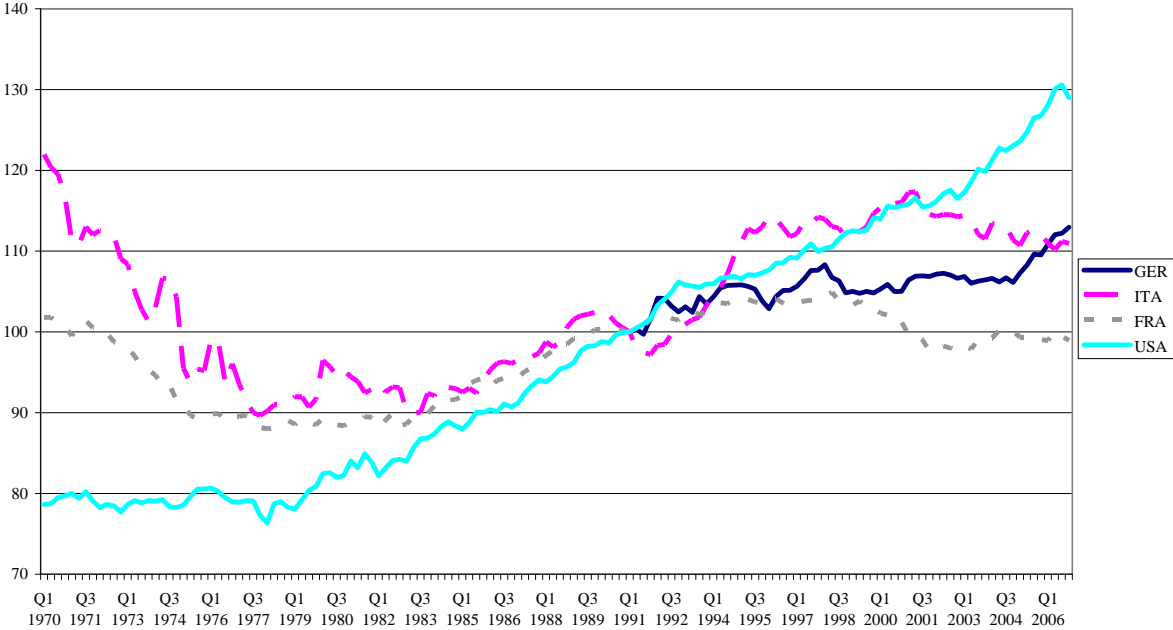
Source INSEE and BEA. Author's calculations. Rentability includes capital revaluation

Most of the pressure coming from competition by the globalized economy has been put on labour, thus allowing prices to decrease without significant reductions in profit rates that on the contrary show no downward trend.

**4. Inflation, Globalization and Monetary Policy**

In a world where inflation seems to be less and less a domestic phenomenon, researchers have been asking whether this changes the framework for monetary policy. The first obvious consequence of the established link between globalization and (dis)inflation is the necessity to frame the debate on inflation targeting and monetary policy effectiveness in new terms: if the generalized disinflationary trend that we observed in the past quarter of a century has mainly external reasons, domestic policies, and notably inflation targeting, do not have the significant impact which is generally agreed upon. An indirect proof of this argument comes from the United States, where the Fed had actively pursued a double objective of growth and inflation; in spite of this strategy, the long run inflation level in the US decreased as much as other comparable countries where central banks followed strict inflation targets. It is also worth noticing that, at the same time, the growth performance was much more satisfactory than in other areas as for example the EMU.

4. Productivity/Real Wages



Source: IMF - OECD - Datastream. Calculations of the author (1991 = 100)

Nevertheless, the debate is not settled yet, and it is probably too soon to be able to say a final word on the issue. The research agenda boils down to answering the following question: Are the effect of globalization on inflation formation permanent or not? Answering this question in one sense or in another will entail important consequences on the design of monetary policy.

Two recent articles may be taken as representative of the different positions in the field. The first is an article by Lawrence Ball<sup>11</sup> arguing that most of the effects of globalization on inflation are temporary, in the sense that they are linked to the current transition towards a more integrated world. Once the transition accomplished, concludes Ball, inflation will

<sup>11</sup> Ball, L. M. (2006). "Has Globalization Changed Inflation?" *NBER Working Paper*, 12687.

become a domestic monetary phenomenon again, and central banks will have to go back to business as usual and keep targeting inflation.

Opposed to this view is another, exemplified by an essay of Kenneth Rogoff<sup>12</sup>, who argues that Globalization has modified so deeply the economic environment that inflationary pressures are today permanently lower than in the past (notably through the increased competition that makes prices and wages more flexible).

While it is too soon for fully fledged empirical analyses to shed some light on the question, a number of recent papers begin giving some partial answers. A first result, that goes in Ball's sense is that the direct effect of trade openness (through imports, see item 1 above) is significant, sizeable, but temporary<sup>13</sup>. On the other hand, nevertheless, a number of papers<sup>14</sup> show through sector level analyses that the effect of increased competition on productivity, prices and wages produces a permanent downward pressure on prices.

Developed, emerging and developing economies are undergoing through a process of deep structural change that is evident even to the casual observer. The balance of domestic and international factors in determining inflation seems to be irrevocably shifting towards the latter, thus challenging Ball's thesis. But then, in this new environment in which inflation partially escapes its control, monetary policy acquires room of manoeuvre that can be used to pursue other objectives, notably economic growth.

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<sup>12</sup> Rogoff, K (2004), "Globalization and Global Disinflation", *Economic Review*, Federal Reserve Bank of Kansas City.

<sup>13</sup> See for example Ihrig, Kamin, Linder and Marquez (2007), "Some Simple Tests of Globalization and Inflation Hypothesis", *Board of Governors of the Federal Reserve System*

<sup>14</sup> An example is Chen, Imbs and Scott, (2004), "Competition, Globalization and the Decline of Inflation" *CEPR Discussion paper* no 4695.

## GLOBALIZATION AND INFLATION: IMPACTS UNLIKELY TO BE LARGE AND PERMANENT

Briefing Paper for the Monetary Dialogue of December 2007 by the Committee on Economic and Monetary Affairs of the European Parliament with the President of the European Central Bank

LEON PODKAMINER

### Summary

There are serious problems – both conceptual and practical – with the identification of the impacts of globalization on inflation. The evidence that is nonetheless referred to suggests that these impacts are insignificant, at least for the euro area countries. The impacts of freer trade seem more pronounced when one considers developments in prices, wages and unit labour costs in specific branches of manufacturing, particularly in branches most exposed to competition from low-wage countries. But even that evidence must be interpreted with care. The fact that research does not support strong hypotheses on the role of globalization in reducing inflation over the recent 15-20 years suggests that other secular developments (changes in monetary, exchange rate, fiscal and social policies, etc.) may have been decisive. Besides, the progressing disinflation seems to have been coupled with a falling share of labour in national income (i.e. falling real unit labour costs). Globalization may have helped to moderate the wage aspirations of the workforce in the advanced countries – thus playing a prominent role in disinflation. The impact in question need not have been *direct*. All that is required for that impact to have *real* consequences is that the labour in the advanced countries is convinced – which largely seems to be the case – that its services could be easily substituted by the services performed by workers in the low-wage countries.

## 1. Some common-sense views on (dis)inflationary impacts of globalization

Globalization has become a very important (or perhaps *the* most important) theme in the public debate on the course of evolution of real economies – at both global and national levels. But for quite a long time globalization has been referred to in discussions on topics other than inflation in the advanced economies. Primarily, globalization has been invoked while focusing on e.g. the consequences of the liberalization of capital flows, the build-up of major global financial imbalances, the rise of strongly competitive ‘emerging markets’ and its impacts on labour market developments in the advanced countries, etc. Only recently, one observes a more intense interest in exploring, somewhat more systematically, the possible links between ‘globalization’ and inflation.<sup>15</sup>

The common-sense motivations for linking globalization to inflation (primarily in advanced industrial countries) seem quite straightforward. They all start from the notion of progressing opening and liberalization of national markets for goods, capital (and – albeit to a lesser degree – labour), declining costs (e.g. of transportation) and – eventually – tightening international integration. As domestic prices (and also wages) are increasingly left free to interact with those abroad, one should expect – so the story runs – the domestic inflation to be also somehow linked to what is going on globally.

One often distinguishes several (though fairly related) likely mechanisms (‘channels’) through which ‘globalization might affect domestic inflation’:

1. The expansion of *freer trade* may impact domestic inflation through prices of imported final – and also intermediate – goods. Cheaper imports of consumer goods lower the overall price index directly (if included in the underlying basket of goods). Apart from this, one speaks of possible indirect effects when imported intermediate goods get cheaper. Such imports could lower costs (and hence possibly also prices) of domestically produced goods and services (whose production requires the application of imported intermediate imports).
2. In addition, downward pressures on prices of domestic substitutes to low-price imports may erode the market position of their (domestic) producers (forcing lower mark-ups on costs) – and thus possibly imply attenuation of inflation. Or, alternatively, the downward pressure on prices of domestic substitutes is transmitted into lower wages of domestic employees<sup>16</sup>, without necessarily lowering the mark-ups.
3. Ample and growing supplies of low-price imports of some unsophisticated consumer goods (i.e. ‘*wage goods*’, so to say) may help preserve the purchasing power of nominally stable domestic wages. The domestic labour force can be kept reasonably happy without pronounced hikes in their nominal wages. This should be conducive to lower domestic inflation as well.
4. Competitive imports may also stimulate productivity growth, resulting in slower growth in production costs – ergo in weakening inflation pressures.

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<sup>15</sup> Arguably, that interest may have been aroused by the decisive change in trends in the world-market prices of energy carriers and other basic raw materials and commodities which started in 2003-04. Sustained massive rises in these prices may have brought back the memories of the oil-price shocks of the 1970s and what had followed – the extended periods of very high inflation (combined with stagnant growth and high unemployment). But, let us observe that that gloomy ‘stagflation’ was unrelated to any globalization, as now understood. Protectionism was then openly preached and practised, and there were no competitive ‘emerging markets’.

<sup>16</sup> For instance by eroding the market position of employees/Trade Unions in sectors most exposed to competitive imports from low-cost ‘emerging markets’.

## 2. An aside: can globalization *induce* higher inflation?

It may be observed that the above-described channels should work best (or at all) only when the domestic (advanced) economy is increasingly exposed to competitive (i.e. lower-cost) imports of substitutes to domestic products. Thus all these channels must be assumed to act as *brakes* on the domestic inflation. They are only active when foreign goods are competitively cheap vs. the domestic ones.<sup>17</sup> Thus, globalization would imply a *deflationary bias* – at least as far as the advanced industrial countries are concerned.

However, sometimes it is suggested that globalization can be also a serious *indirect* source of an inflationary tendency. One refers here to the fast growth of large emerging markets such as China or India which is combined with strong expansion of their demand for oil and other raw materials (or, more recently, for some farm and food products). This is believed to have driven up the world market prices of commodities in question. In so far as these commodities cannot be substituted by own (competitively priced) supplies, these higher world-market prices exert a direct upward pressure on domestic prices of the commodities in question in the advanced countries – and indirectly on costs of production of domestic goods and services.

Clearly, this situation should support higher inflation (just as falling prices of imports are believed to be conducive to a declining domestic inflation). However, I have doubts whether the China's, India's etc. growing demand for oil – even if actually responsible for the observed rise in oil prices – should be linked to the globalization process. In my opinion, globalization (equated with liberalization, removal of barriers to trade, freer capital movements, declining trade costs etc.) is *not* necessary for the emergence of fast-growing economies than bid up world market prices of oil and other commodities.<sup>18</sup> Concluding, I do not think we should make globalization as such responsible for acceleration of inflation in the advanced countries – now, or in the future.<sup>19</sup>

## 3. Some reservations about the views on the role of import prices

Falling (or rising, as the case might be) prices charged by foreign suppliers for some goods imported by an economy are anyway a poor predictor of the change in the *overall* price level – hence of *inflation*. In general it is inappropriate to expect e.g. falling import prices (whether linked to globalization or any other development) of some goods to be necessarily followed – other things being equal – by lower inflation. A fall in some prices may cause a change in the consumption pattern – and also provoke a *rise* in prices of some other goods. The end effect of all these changes may imply a *rise* in the price level – a positive inflation.

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<sup>17</sup> Foreign goods offered at prices that are higher than those of the domestic substitutes would be uncompetitive. There would be no good reason for their being imported. Here the country's imports should get negative – the domestic economy would be expected to become an *exporter* of competitively priced goods – thereby possibly contributing to slower inflation in its trading partners.

<sup>18</sup> In the past, other countries (such as Japan, South Korea) successfully caught up with the most advanced ones under highly illiberal international (and internal) conditions. They too had to compete for oil and other raw materials, possibly driving upwards the world market prices of these commodities. A possibly inflationary impact of the emergence of new strong 'players' does NOT need globalization to materialize. Had the global institutional arrangements been more or less the same as in the 1960s, China could now be growing very fast all the same (surely relying on expansion of domestic investment and consumption rather than on gigantic trade surpluses). But its demand for oil etc. could have been equally strong.

<sup>19</sup> One may wonder whether more affluent middle classes arising in the 'emerging economies' cannot induce higher inflation in the advanced countries (via increased demand for more sophisticated consumer goods produced and exported by the latter). I do not believe this is a likely development. Inflation has been particularly *low* in the leading exporters of such goods: Japan and Germany (among others). The huge export surpluses that these countries record coexist with very low inflation (or even deflation) at home.

(For instance, lower spending on cheaper imported shoes may induce a stronger rise in prices of some domestic services.) The ‘*other things being equal*’ clause cannot be legitimately invoked here: a change in some prices/quantities requires definite adjustments in all other prices/quantities. This, by the way, is the most rudimentary lesson from the general equilibrium analysis.<sup>20</sup>

There are also some practical (and less ‘pedantic’) reasons for doubting the arguments advanced to justify the significance of the impacts of changes in import prices on the measured domestic inflation in the advanced countries:

1. Non-tradables (primarily services such as housing, health care, education etc., plus some goods that for various reasons are not traded internationally) increasingly dominate the consumption (and overall GDP) structures in the advanced countries. Services alone account for more than 50% of the GDP in these countries. Moreover, the share of non-tradables in consumption and GDP keeps rising (in line with overall affluence). This is combined with (i) rising *relative* prices of non-tradables; (ii) rising *absolute* volumes of non-tradables; (iii) stagnant *absolute* volumes of tradables. In effect the impacts which the changes in prices of *all* tradables (domestically produced *plus* imported) have on the overall inflation index keep diminishing. For practical purposes the *direct* accounting impacts (even disregarding possible ‘perverse’ effects referred to above) of changes in prices of imported tradables are losing significance.
2. There is some evidence (also generated by research conducted at the ECB) that the pass-through from shocks in import prices (and also in exchange rates) to the domestic price indices is rather weak. Moreover, the pass-through coefficients seem to be actually *declining* over time, meaning that eventual inflationary/deflationary impacts of changing import prices may have been weakening. (This is not inconsistent with the belief that globalization has been deepening. On the contrary, this might suggest that globalization may have already reduced the *incentives* for a further narrowing of gaps between prices charged domestically and internationally.)
3. Globalization notwithstanding, the gaps between producer costs/prices of tradables and prices eventually charged on final foreign buyer are truly gigantic. These gaps tend to dwarf the producer prices themselves.<sup>21</sup> Of course, to some extent these gaps may reflect unavoidable costs (transportation, insurance, normal trade margins, taxes etc.) of getting the goods from the producer to the final buyer. But my guess is that the combined profit mark-ups in all activities involved dominate the price gaps in question. The presence of such mark-ups would indicate that there are some invisible (and invincible?) limits to actual globalization.

The visible trade liberalization (dismantling of *official* barriers to international trade) is not followed by a dismantling of the imperfectly competitive structures of the private trade industry. With such structures, possibly firmly entrenched, one may expect a rather weak, and at best delayed, pass-through from foreign to domestic prices. Variations in foreign prices may effectively be smoothed out by the intermediating firms, which can also ‘protect’ the domestic markets from excessively low prices.

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<sup>20</sup> In the present author’s experience, some fairly standard (and reasonably realistic) computable general exchange equilibrium models of international trade suggest that free trade (‘globalization’) is capable of inducing *higher* price levels in some (mostly more affluent) countries.

<sup>21</sup> This is documented and thoroughly analysed by J. Anderson and E. van Wincoop; see e.g. ‘Trade Costs’, NBER Working Paper No. 10480 (2004).

To conclude, there are some good reasons to doubt the significance of low and falling import prices on the *overall* inflation in the advanced countries.

#### **4. Empirical identification of globalization impacts on inflation is rather problematic**

It is rather difficult to arrive at quantitative estimates of the disinflationary impacts of globalization. Generally, it is certainly true that the gradual disinflation over the recent two decades or so has coincided with – broadly understood – progressing liberalization, economic integration, rise of ‘emerging economies’, etc. In short – with globalization. Has there been a causal link running from deepening globalization to gradual deceleration of inflation during the past about 20 years? There is no convincing proof of that. First, running regressions ‘explaining’ gains in inflation by changes in globalization is hardly possible. Globalization itself has proceeded along many dimensions. We do not have any single well-defined index (or even a set of such indices) to measure the progress of globalization. Second, even if one agreed to some definition of a ‘composite’ index of globalization, there would be a problem with allowing for other processes that may have been by far more influential in the disinflation in the advanced countries. These processes include:

- (1) the tremendous transformation in the doctrines and practices of central banking (monetarism being put to rest, the rise of inflation targeting, tendency for central bank independence);
- (2) the proliferation of floating exchange rate regimes, the emergence of large global financial imbalances;
- (3) profound changes in the fiscal (rediscovery of the virtues of ‘sound’ public finances) and social (contraction of the welfare state) policies;
- (4) acceleration of technological change (computerization, information technologies etc.), possibly enhancing productivity gains;
- (5) the accelerated pace at which new products (and new varieties of old products) have been entering the market<sup>22</sup>;
- (6) last, but not least, the great disinflation has involved a decisive change in the distribution of national income, with a consistent decline in the share of income going to the labour force. It is this latter development – labour’s great moderation – which may have made disinflation possible.<sup>23</sup>

#### **5. Estimates available: fragmentary and fairly low**

Given the simultaneity of globalization, the five processes enumerated above, and disinflation in the advanced economies, the possibility of arriving at a reliable empirical identification and quantification of the role played by globalization alone is rather problematic. Estimates of the

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<sup>22</sup> New products/varieties, even if appearing at a slow pace, pose well-known problems for the calculation of inflation indices which – out of necessity – *directly* allow only for changes in prices of ‘old’ products/varieties. Let us notice that problems become more complicated when new products/varieties keep entering the market on a massive scale. The prices of the old varieties tend to be depressed under such conditions (e.g. when a new version of Windows is released, the older one is offered at a discount) even before the basket of goods used for calculation of inflation is properly modified. Thus the recorded inflation is downward biased: it allows for lower prices of the old varieties, but not necessarily for the prices (possibly quite high) of the new ones. Observe, that when the product innovation is fast and sustained over time, the downward bias in the recorded inflation will be permanent.

<sup>23</sup> That moderation may have been forced upon the labour force by the policies consistent with the doctrine that stipulates the social desirability of having a sufficiently large (‘natural’) rate of unemployment.

impacts of specific aspects of globalization on specific aspects of inflation need to be treated with due care. Literature on the subject is – anyway – rather limited. Moreover, the conclusions derived in that literature are generally quite modest.

This is well exemplified by the recent study ‘How has globalization affected inflation’ included in the IMF World Economic Outlook 2006 (April). The main specific finding of that study is that a 1% decrease in real import prices decreases inflation in the advanced economies by about 0.08 percentage points (p.p.) in the first year, to be followed by even smaller gains in inflation in the second and third years.<sup>24</sup> Thus, the overall role of import prices has been quite negligible in reducing inflation, according to that study. More concretely, the average contribution of non-oil import prices to inflation in the advanced countries was found to be about one fourth of one per cent (over the years 1997-2004). For the euro area countries that contribution was then not significantly different from zero. Another interesting finding of the IMF study is that price and wage growth in the sectors that have been more exposed to international competition (including e.g. textiles and electronics) has been restrained. In such sectors producer prices and unit labour costs have declined relative to the overall price and unit labour cost levels – i.e. their relative prices and costs have fallen. This is also reflected in falling relative prices of goods and imports (vs. the CPI). Of course, these findings seem unsurprising – the more so as the estimates of the impacts of the greater trade openness on manufacturing’s relative producer prices are quite minute.<sup>25</sup>

### **Concluding remarks: real (indirect) impacts, after all?**

As I have argued, there are serious problems – both conceptual and practical – with the identification of the impacts of globalization on inflation. The evidence that is nonetheless referred to suggests that these impacts must be insignificant quantitatively. The impacts of freer trade are perhaps more pronounced when one considers developments in prices, wages and unit labour costs in specific branches of manufacturing, especially in low value added branches of manufacturing that are most exposed to competition from low-wage countries. But even that evidence must be interpreted with care. The fact that research does not support strong hypotheses on the role of globalization in reducing inflation over the recent 15-20 years suggests that other developments (changes in monetary, exchange rate, fiscal and social policies, etc.) may have been decisive. Besides, one may need to allow for the fact that the progressing disinflation seems to be coupled with a falling share of national income accruing to labour (and thus in generally falling real unit labour costs). In so far as globalization (and in particular growing liberalization of trade and investment vs. the low-wage countries) has helped to moderate the wage (and living standards) aspirations of employees in the advanced countries, it could have played a prominent role in achieving low inflation. The impact in question need not have been *direct*. All that is needed for that impact to have *real* consequences is that the labour in the advanced countries is convinced – which largely seems to be the case – that its services could be easily substituted by the services performed by workers in low-wage countries.

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<sup>24</sup> Impacts for Germany, France and Italy are even lower, impacts for the UK and the USA higher (0.19 p.p. and 0.15 p.p. respectively).

## GLOBALISATION AND INFLATION

### **Briefing Paper for the Monetary Dialogue of December 2007 by the Committee on Economic and Monetary Affairs of the European Parliament with the President of the European Central Bank**

**ANNE SIBERT**

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#### **Executive Summary**

- World-wide inflation has been low and stable over the past decade; this is mainly due to better monetary policy making.
- By changing the structure of the world economy, globalisation has changed the inflation transmission mechanism.
- Globalisation has changed policy makers' incentives, probably making it easier for them to commit to low inflation.
- The growth of China has changed the structure of the world economy and posed serious challenges for monetary policy makers. But, the impact on inflation has been – and should continue to be – small.

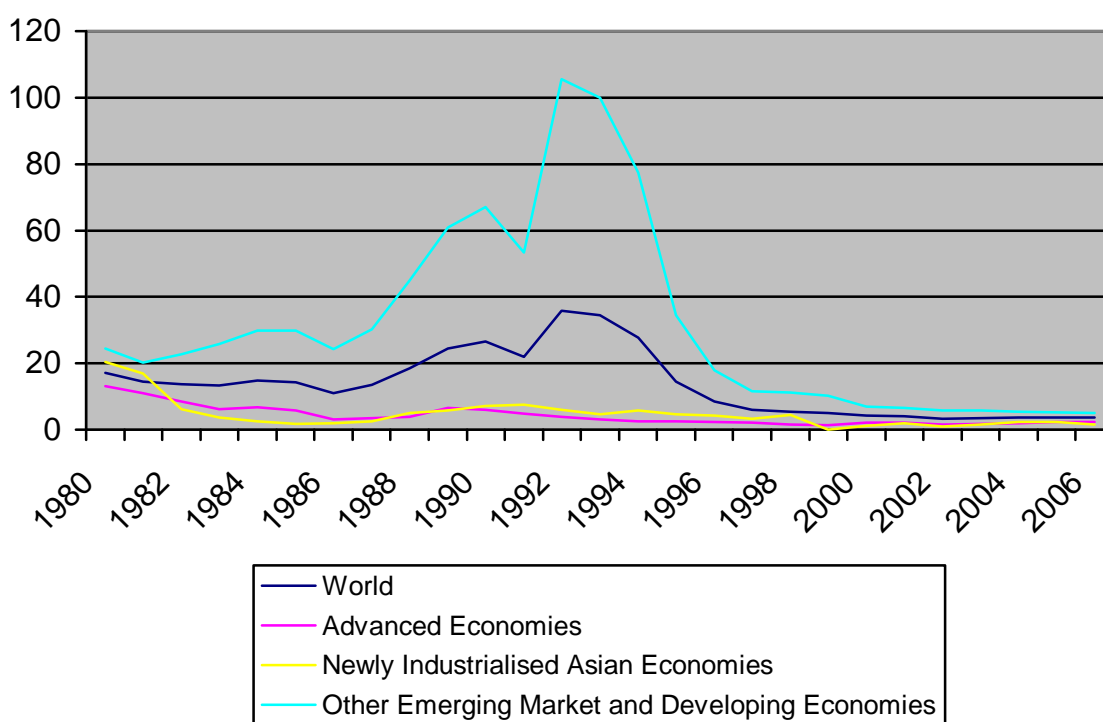
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<sup>25</sup> For the sake of completeness I need to mention a study that suggests that 'global economic conditions' might have an impact on inflation in advanced countries (C. Borio and A. Filardo, 'Globalization and Inflation', BIS Working Paper, May 2007). Specifically, this study suggests that the concept of the national output gap (believed to be useful for explaining the cyclical behaviour of inflation) should perhaps be supplanted by the concept of a GLOBAL output gap. This story seems dubious to me on both theoretical and purely empirical grounds. I do not believe it if only because it works with econometric models whose Adjusted R-squared indicators are miserably low. A more complete appraisal (negative) of the concept of the global output gap can be found in L. Ball, 'Has globalization changed inflation?', NBER Working Paper 12687 (Nov.2006).

## Introduction

Inflation in the advanced and newly industrialised Asian economies, shown in Figure 1 below, fell in the early 1980s and has been low and stable since. Inflation in other emerging market and developing economies took longer to decline, but it too has been low and stable since the mid-1990s. The drop in inflation is probably due mainly to better monetary policy, but other factors may have played a role. As it occurred in a period of increasing globalisation it is reasonable to ask how globalisation has affected the pattern of world inflation and whether or not it will continue to affect it in the same way in the future.

**Figure 1. Inflation, Average Consumer Prices (annual percent change)**



Source: World Economic Outlook Database, Oct 2007, IMF. Excludes Zimbabwe.

In thinking about the role of globalisation I define globalisation to be the opening and widening of trade in goods and services, factors of production and financial assets. I consider the rapid growth in emerging market economies – in particular, China – to be part of the globalisation phenomenon. In considering the role of globalisation I look at three sets of questions:

- How has globalisation changed the nature of the inflation process? Has it made home inflation more sensitive to foreign events and less sensitive to home events?
- How has globalisation changed the incentives of monetary policy makers? Has it made them more willing and able to pursue low-inflation policies?
- Has the integration of low-cost countries such as China into the global economy, reduced world inflation? Or has their growing demand for commodities increased inflation? How will these countries affect inflation in the future?

## Has Globalisation Changed the Nature of the Inflation Process?

There is a small but fast growing body of empirical literature testing whether globalisation has changed the nature of the inflation process. The idea is that because of increased openness to trade, globalisation is associated with imports becoming more important in consumption baskets and home and foreign firms competing more closely with each other. This has two implications for domestic inflation.

First, as the consumer price indices used to measure inflation include imported goods, a sustained decrease in the domestic-currency price of imports (due, say, to a sustained increase in foreign output) tends to cause home inflation to fall *if monetary policy makers do not respond*.<sup>26</sup> In addition to this effect, if foreign goods compete with home goods, then a sustained fall in the home-currency price of foreign goods may cause the home-currency price of home goods to fall over time, thus indirectly lowering home inflation. Thus, the story goes, globalisation amplifies the effect of foreign prices on the home price level.<sup>27</sup> Ihrig et al (2007), however, find only weak evidence that import prices affect home inflation, or that this effect is rising over time or that it is due to globalisation.

Second, as home and foreign firms become more competitive domestic firms become less able to raise their prices if foreign firms do not. Thus, the home output gap becomes less important in predicting home inflation and the foreign output gap becomes more important. There appears to be a consensus that the responsiveness of inflation to the domestic output gap has declined; see Ihrig et al (2007) for a survey. The reasons for this are unclear however. The IMF (2006) suggests that globalisation, in the form of increased openness to trade, is responsible, but other authors find conflicting evidence. Evidence on the importance of the foreign output gap is mixed. Many studies find little or no evidence of a relationship between measures of foreign capacity utilisation and domestic inflation (See Tootell (1998), Pain et al (2006), Ball (2006) and Hooper, Slok and Dobridge (2006)). Borio and Filardo (2006) find the strongest evidence of significant and increasing relationship, but Ihrig et al (2007) argues that their model may be poorly specified and that it is not robust to alternative specifications.

Thus, while theory suggests that globalisation has affected the way that foreign shocks affect domestic inflation, the empirical evidence is not strongly supportive of particular systematic changes. It must also be emphasised that, if globalisation affects transmission mechanisms, then this implies that a central bank that targets inflation may set a different interest rate in response to particular fundamentals than it would have prior to globalisation. But, if the central bank reacts appropriately, it does not imply that there will be any more or less inflation.

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<sup>26</sup> Of course, if the central bank targets inflation the result is a decline in the relative price foreign goods in terms of home goods and an increase in the home currency price of home goods, rather than lower inflation.

<sup>27</sup> Some cautions are in order. It should be kept in mind that adjustments in the exchange rate may mean that a rise in the foreign-currency price of the foreign good need not translate into a rise in the home-currency price of the foreign good. Imports may be bundled with home services, lessening the impact of a change in the foreign-currency price on the home-currency price. A one-time permanent fall in the home-currency price of foreign goods tends to permanently lower the home price *level*, but the associated fall in inflation is transient.

## **Has Globalisation Changed the Incentives of Monetary Policy Makers?**

Most of the recent good inflation performance is probably due to improved monetary policy making. However, it is possible that globalisation has played a role in changing the way monetary policy is made.

Rogoff (1985) argues that an unexpected monetary expansion causes the real exchange rate to depreciate and this reduces a policy maker's incentives to create opportunistic inflation. Rogoff (2007) argues that globalisation reduces the power of domestic labour unions and monopolies, making wages and prices more flexible. This decline in nominal rigidities reduces the incentives of policy makers to create opportunistic inflation by steepening the slope of the Phillips curve. A number of authors have suggested that the increased international mobility of capital has also increased the cost of following bad macroeconomic policies.

Empirical work lends some support to the above theories. Romer (1993) and IMF (2006) find a strong relationship between openness to trade and low inflation. Tytell and Wei (2004) find some evidence that increased capital mobility led countries to pursue monetary policies resulting in lower inflation. Thus, increased globalisation may have made it easier for monetary policy makers to commit themselves to low and stable inflation.

## **The Effect of China's Growth on Global Inflation**

The growth of emerging market economies has had and continues to have major consequences for the global real economy; the entry of 1.3 billion Chinese into the world economy as workers, consumers, savers and portfolio holders has had a significant influence on relative prices and the inflation transmission mechanism. With proper monetary policy, the effect on inflation has been, and should continue to be, small and transitory. However, recognising the effects and interpreting their significance for inflation has been, and continues to be, a major challenge for monetary policy makers. In this section I detail some of the effects of Chinese growth and the difficulties they pose for policy makers.

First, the opening of China to global markets increased the global labour-to-capital ratio and it especially increased the global ratio of unskilled and semi-skilled labour to capital. This has depressed labour's share of GDP just about everywhere. For short-run inflation dynamics, this means that the growth rate of unit labour costs will be lower than before in relation to the rate of inflation of producer and consumer prices. However, with the equilibrium 'mark-up' of prices on unit labour costs rising, even a historically low rate of inflation of unit labour costs could still result in price inflation that is above the ECB's target if the ECB does not calculate the relative size of these effects correctly.

Second, in a limited number of European industries (especially textiles, footwear and light manufactures), China's entry as a producer has been strongly competitive with European and North American producers. While beneficial to consumers, there are real costs associated with contracting production and employment in these highly exposed sectors. There need not be lower inflation, however, if the central bank realises the change in the structure of the world economy and relaxes monetary policy below what it otherwise would have been.

Third, China has entered the world economy as a producer of 'core goods', mainly tradable manufactured goods, and as a demander of 'non-core' goods, mainly commodities, including oil and gas. This has resulted in a major increase in the relative price of commodities to core goods, reversing an almost 80-year trend decline.

Core goods tend to be 'Keynesian' in their pricing: they are subject to nominal rigidities. Non-core goods tend to have flexible prices; indeed, many commodities trade like financial assets. This means that when there is an increase in the equilibrium demand for non-core goods relative to core goods, there is a short-run tendency for the initial relative price increase to overshoot what is required in the longer run, when the nominal rigidities characteristic of core goods prices vanish. This means that, when the relative price of non-core goods to core goods is rising, as it has been for the past seven years or so, overall or 'headline inflation', which is a weighted average of core and non-core inflation, will be higher, other things being equal (including domestic and foreign central bank policy interest rates) than when this relative price is constant or falling. This has made life difficult for monetary policy makers at the Federal Reserve, who, based on past experience, have treated core inflation as a good predictor of future headline inflation. Instead, for the past six years or so, core inflation has been systematically below headline inflation. The ECB and the Bank of England have not made this mistake, however.

Fourth, for a variety of global and domestic reasons, the Yuan prices of Chinese exports are rising much less fast, although they are no longer falling as they were at the beginning of the decade. As long as the Yuan – dollar exchange rate is stable, the effect on US inflation is relatively clear. This is not true for inflation in the Euro Area, the UK or Japan, where authorities must infer the influence of imported inflation.

## References

- Ball, L. (2006), "Has Globalization Changed Inflation," NBER Working Paper.
- Borio, C. and A. Filardo (2006), "Globalization and Inflation: New Cross-Country Evidence on the Global Determinants of Domestic Inflation," BIS Working Paper.
- Hooper, P., T. Slok and C. Dobridge, (2006), "Understanding U.S. Inflation," Global Markets Research, Deutsche Bank.
- Ihrig, J., S.B. Kamin, D. Lindner and J. Marques, (2007), "Some Simple Tests of the Globalisation and Inflation Hypothesis," International Finance Discussion Paper 891, Board of Governors of the Federal Reserve System.
- International Monetary Fund (2006), "How has Globalization Affected Inflation?" World Economic Outlook.
- Rogoff, K. (1985), "The Optimal Degree of Commitment to an Intermediate Monetary Target," Quarterly Journal of Economics 100, 1169-89.
- Rogoff, K. (2007), "Impact of Globalization on Monetary Policy" in Federal Reserve Bank of Kansas City, The New Economic Geography: Effects and Policy Implications, 2007.
- Romer, D. (1993), "Openness and Inflation: Theory and Evidence," Quarterly Journal of Economics, 108, 869-903.
- Tootell, G. (1998) "Globalization and US Inflation," New England Economic Review Federal Reserve Bank of Boston.
- Tytell, I. and Wei, S. (2004), "Does Financial Globalization Induce Better Macroeconomic Policies," IMF Working Paper 04/84.
- Wynne, M. A. and E. K. Kersting, (2007), "Openness and Inflation," Staff Papers, Federal Reserve Bank of Dallas.

# THE IMPACT OF GLOBALIZATION ON INFLATION

## Briefing Paper for the Monetary Dialogue of December 2007 by the Committee on Economic and Monetary Affairs of the European Parliament with the President of the European Central Bank

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### Executive Summary

The view that globalization reduces inflation in the developed countries is largely misguided. The principle that inflation is ultimately the result of monetary policy remains as valid as ever.

In order to understand why this view is misguided, we must carefully distinguish between relative and absolute prices. Globalization tends to reduce the prices of goods and services produced in the emerging market economies *relatively* to the prices of goods and services produced in the developed countries. Inflation, in contrast, corresponds to the increase in *absolute* prices, the average of all prices. The decrease in some relative prices can occur with low inflation, then the prices of some goods decline in absolute terms, or with high inflation, then all prices rise but some increase less than others.

In addition, the emerging market countries are becoming increasingly large consumers of some goods and services produced in the rest of the world. This tends to raise the relative price of these goods and services, which partly at least offset the deflationary effect presumed to affect inflation. A prime example is the increase in the relative price of oil and primary commodities.

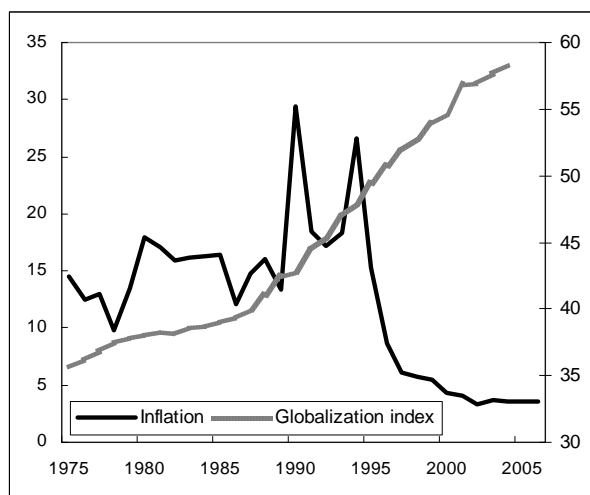
Globalization can affect inflation in the developed countries by changing the incentives of central banks. Explicitly or not, all central banks care about both inflation and unemployment. If the effect of globalization is to raise unemployment – because the reallocation of resources across industries, required to meet new trade and production patterns, takes time – central banks may shift their priority away from achieving price stability and towards preserving employment.

There is no indication that central banks have indeed shifted their priorities, as indicated by the extraordinary record of price stability over the last decade. The current situation is more delicate because of the “oil shock”, the increase in oil and primary commodity relative prices. Here again, there is no indication that central banks have forgotten the lessons from previous oil shocks, which call for uprooting inflation first.

## 1. Why globalization does not *directly* affect inflation

It is often mistakenly asserted that globalization is *the* reason why inflation has been low worldwide over the recent years. This widespread belief rests on the impression that the two events occurred at the same time. As is well-known, simultaneity is not causality but, anyway, globalization started to deepen long before inflation was brought down, as Figure 1 shows. It picked up speed in the late 1980s while worldwide inflation did come down and stabilize at a low level until about a decade later.

**Figure 1. Globalization and inflation**



Source: IMF and KOF

Note: The inflation rate is the world's average. The globalization index is based various criteria.<sup>28</sup>

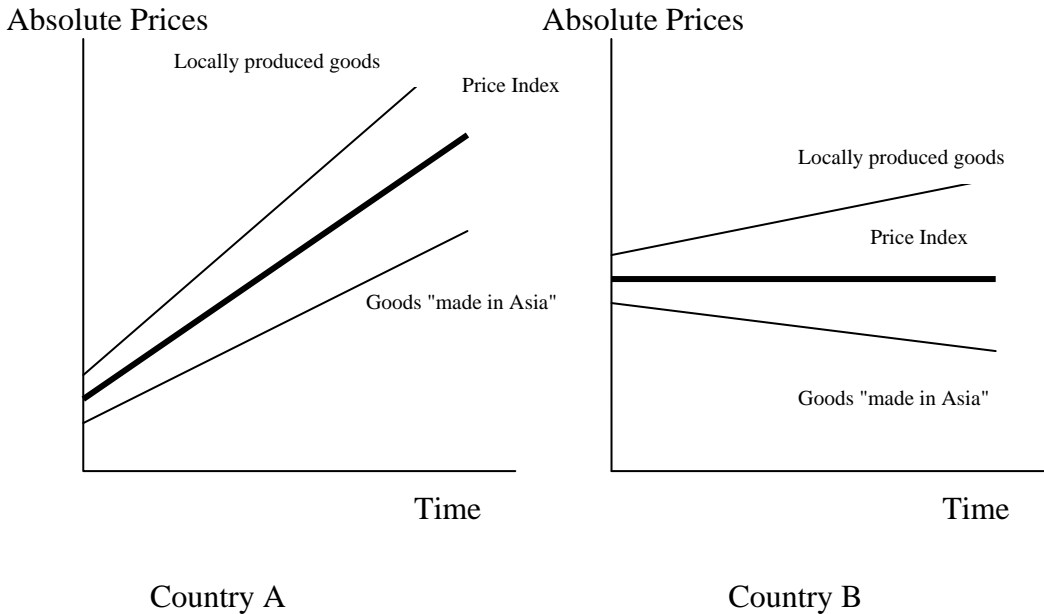
The view that globalization brought down inflation is often based on erroneous reasoning. Competition from emerging market economies with low labour costs puts pressure on producers and workers in firms operating in developed countries. Cheaper intermediate goods further reduce production costs, which also weighs on prices in the developed countries. The argument is apparently convincing, but it confuses relative and absolute prices.

Relative prices compare goods pairwise, or a good to a price index, or wages to prices. Competition is strictly about relative prices: goods imported from emerging market economies are cheaper than identical goods produced in developing countries; wages in China are lower than in Europe, etc. Globalization implies that the relative prices of goods subject to competition from low-cost countries will decline relative to the prices of goods shielded from competition, some of which may actually rise because globalization also means higher demand for European goods. In developed countries, it also means that wages of low-skilled workers decline vis a vis wages of workers with skills to produce goods demanded by emerging market countries. There is no doubt that a huge number of relative prices are being transformed as the result of globalization. This affects the distribution of income within countries, but inflation is a different question.

<sup>28</sup> The globalization index is produced by KOF at the Polytechnic School of Zurich. The economic dimension of the KOF index of globalization measures long distance flows of goods, capital and services as well as information and perceptions that accompany market exchanges. In addition to actual flows of trade and foreign investment, it captures the degree to which a specific country restricts capital and trade flows. The social dimension measures the spread of ideas, information, images and people, while the political dimension captures diffusion of government policies.

Inflation measures how, on average, absolute prices are increasing. Can globalization affect the average price level? Not really, for several reasons. To start with, while the prices of computers and textiles “made in Asia” decline, prices of oil and foodstuff are rising. Overall, therefore, the price index may be pushed either way. More importantly, the average price level is driven by local monetary policies. This is illustrated in Figure 2, which considers two hypothetical cases. In the left-hand side, Country A’s monetary policy is lax, which result in a rising price level – the inflation rate is positive. Prices of goods “made in Asia” and by their local competitors rise less fast than the price index, while the prices of other goods locally produced rise faster. The relative prices of goods subject to global competition keep declining relatively to the prices of other domestically-produced goods over time as globalization deepens – either new countries join the globalization bandwagon or the same countries keep expanding their exports. In Country B, monetary policy is tight and the inflation rate is zero: the price index remains constant. Yet, as country B also faces the implications of globalization, relative prices evolve in the same way as in Country A. In this case, however, this relative price effect comes about with declining prices of goods “made in Asia” accompanied by slowly increasing prices of locally produced goods.

**Figure 2. Absolute and relative prices**



One might wonder how the price of the same television set “made in Asia” rises in Country A and declines in Country B. The answer is: the exchange rate does it. In high-inflation Country A the exchange rate depreciates, which makes imported goods more expensive when set in the domestic currency. In low-inflation Country B, the exchange rate stay constant (or even appreciates), which makes foreign good cheaper.

The conclusion is simple: globalization or not, inflation is ultimately determined by monetary policy.

**2. How globalization indirectly affect inflation**

Does this mean that globalization has no effect on inflation? There might be some indirect effects but, according to the previous reasoning, they must be working through monetary policy. There is no compelling evidence, at least not yet, that these effects have been significant over the last decade, but this cannot be ruled out.

Goods imported from emerging market countries put pressure on the relative prices of competing goods and on low-skilled workers. This means that, at a given exchange rate, a segment of price and labour costs are subject to external pressure. Imagine that “Asia” pegs its exchange rate to the euro. Then, no matter what it does, the central bank will always face a segment of prices that are spontaneously declining. This is the “discipline hypothesis” which claims that low and possibly declining imported good prices exert a moderating effect on price and wage claims in increasingly large segments of the economy. As a consequence, the task of the central bank, to maintain price stability, is made easier and it has no reason not to take advantage of this fortuitous development to achieve an inflation rate lower than otherwise – at least as long as inflation remains positive.

The argument is plausible, but not guaranteed. First, note that if the demand of the emerging market countries for some domestically produced goods – cereals, high-speed trains, technology, financial services, etc. – grows, this will tend to make prices and wages in the corresponding industries increase faster than otherwise. In that case, the latter effect offsets, at least partly, the discipline effect and the central bank is in no better position than before globalization.

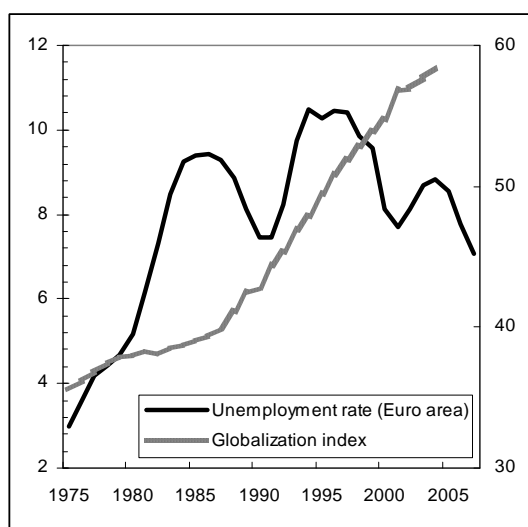
More importantly, the previous reasoning assumes that the “Asian” exchange rate is pegged to the euro. If that is not the case, then the evolution of the euro price of imported goods will depend on the evolution of the exchange rate between Europe and “Asia”. If the euro appreciates, these prices will decline even faster; if the euro depreciates, they will decrease less and may even rise. The evolution of the exchange rate is ultimately determined by the ECB’s monetary policy stance, which is precisely the point made in Figure 2. Once again, the key determinant of the evolution of all prices is monetary policy.

There remains one more possibility for globalization to affect inflation. The structure of trade and production in the developed countries must change in response to globalization. Reallocating resources across industries takes time and is not easy, with two main implications. First, some countries may be poorly positioned initially to produce and sell the kind of goods and services that emerging market countries wish to import. This means that, for a while, only few of their own goods are in the category whose relative prices rise; their impact is therefore weak as far as compensating the effect of declining imported good prices is concerned. Still, this does not mean that the overall price level will decline – or that it will increase more slowly – since, again, its path is first and foremost determined by monetary policy, including through its impact on the exchange rate. Second, the resource reallocation process may generate unemployment if old industries decline quickly and new ones only grow progressively. The overall increase in the unemployment rate generates downward pressure on wages which makes it easier for the central bank to achieve price stability.

Thus temporarily rising unemployment can become a source of lower inflation if central banks choose to focus more on price stability than on employment. Before even considering the central bank reaction, however, we need to ascertain whether globalization has been accompanied by higher unemployment rates. Some information is provided in Figure 3, which displays the Euro area unemployment rate along the globalization index already shown in Figure 1. It may well be that globalization has increased unemployment *ceteris paribus* but, except maybe for the early 1990s, other forces pushing unemployment rates down – labour market reforms – have been more powerful and overwhelmed that effect.

There is no evidence that globalization has led to more unemployment and, therefore, to lower inflation via changing central bank incentives.

**Figure 3. Globalization and unemployment**



Source: OECD and KOF.

Note: The unemployment rate concerns the twelve first members of the Euro area.

Note that these relative price changes may have profound effects on the distribution of income within the developed countries. This impact is unrelated to inflation and monetary policy is not the way to try and compensate those who face these unfavourable consequences because it only affects overall prices.

### **3. The current oil and primary commodities shock**

It is generally agreed that the fast increase in oil, gas and primary commodity prices observed over the last months is related to increasing demand from emerging market economies, chiefly but not only China. This is only natural and corresponds to the reasoning presented above. The relative prices of goods imported by the emerging market economies must rise; this corresponds to the “locally produced goods” in Figure 2, except that “locally” now corresponds to oil and primary commodity exporters.

The problem with increases of oil and primary commodity relative prices is that they raise production costs. This phenomenon, usually referred to as an oil shock, presents central banks with a well-known and difficult challenge. It is inflationary in the sense that, all other prices and costs – including wages – growing at their pre-shock rates, the oil shock adds to the overall inflation trend. If the central banks want to keep inflation unchanged, they must act to reduce the increase in all other prices and costs, i.e. they must adopt a tighter stance. But the oil shock is also contractionary because it transfers purchasing power from oil and primary commodity importers to exporters. If exporters do not spend their increased income, world consumption declines, which is contractionary. If the central banks want to avoid the contractionary impact, they must relax their policy stance.

Thus central banks face a dilemma that is familiar since the first oil shocks of the 1970s. The lesson to be drawn from previous episodes is not really controversial anymore: in order to avoid second round effects on domestic prices and wages, central banks must opt for the tight policy stance. Otherwise, we risk a remake of the late 1970s and early 1980s, a rise in inflation that eventually had to be fought with even more contractionary and more long-lasting policies in the late 1980s.

Yet, we observe that the ECB has cancelled its inclination towards further interest rate hikes and the Fed has even started to reduce its interest rate. Does this mean that the lessons from past oil shocks have been forgotten? It does not seem so. The reason is the simultaneous existence of the credit market crisis. This crisis has already tightened monetary policy by raising interest rates and restricting access to bank credit. Put differently, the required monetary policy tightening has already happened, even though central banks did not do anything. The Fed's view is that the tightening is too strong and, more importantly, that the credit market crisis could spread to other segments of the financial markets. It also has to deal with the contraction of the housing market, which is an additional contractionary force.

The situation in the Euro area is different. Prior to the financial crisis the European economy was in the expansionary phase of its business cycle, which explains why the ECB was raising its interest rate and intended to go further. In addition, since housing prices generally increased much less than in the US, the risk of a housing market decline is much lower. On the other hand, credit conditions have worsened in Europe as well. This is why the ECB seems to have cancelled its inclination toward further interest rate increases. The question that it now faces is whether it should reduce its interest rate. This will depend on the impact of the financial crisis on credit cost and availability, and on the evolution of the financial crisis, which may not be over.