Globalisation and Inflation[1]

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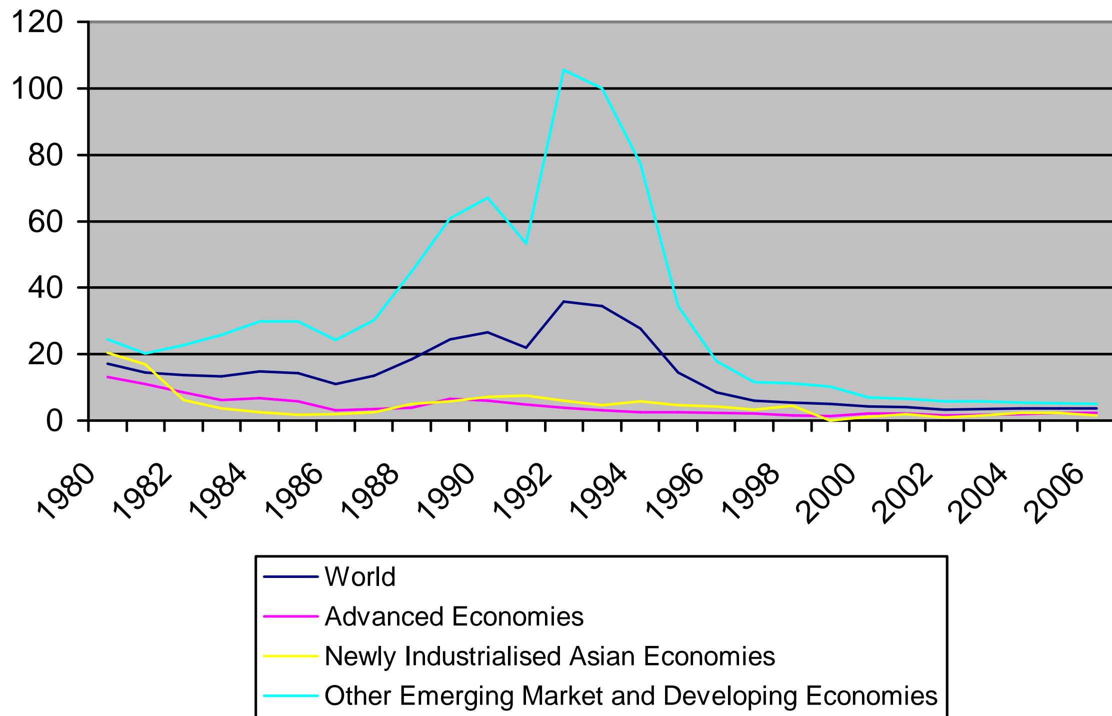
Executive Summary

- 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.

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.

[1] 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.

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*.[2] 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.[3] 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

[2] 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.

[3]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.

output gap becomes less important in predicting home inflation and the foreign output gap becomes more important. There appears to be a consensus that 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.

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.

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