



BANK OF ENGLAND

Speech

Recent Developments in the UK Economy: the Economics of Walking About

Speech given by

Professor David Blanchflower, Bruce V. Rauner Professor, Dartmouth College, NBER and IZA and Member of the Monetary Policy Committee, Bank of England

Bernard Corry Memorial Lecture, At Queen Mary, University of London

30 May 2007

I am most grateful to Roger Kelly and Chris Shadforth for their invaluable assistance. I would also like to thank Kate Barker, John Gieve, Neal Hatch, Andrew Holder, Rachel Lomax, Peter Rodgers and Andrew Sentance for their helpful comments.

It is a great pleasure to be here today to deliver the second Bernard Corry Memorial lecture. Bernard was my mentor, friend and inspiration and I miss him greatly. I guess he was the first one to really have believed in me and I think he would have been amused that one of his boys now has an office on Threadneedle Street.

I believe I first met Bernard in 1984. He was the external examiner on my Masters thesis from the University of Wales. He eventually offered me a place at Queen Mary to do a PhD as well as the first CASS scholarship from the ESRC, which involved me spending a lot of time at the Department of Employment with Neil Millward and learning how to work with Workplace Industrial Relations Survey (WIRS) data. I spent a couple of years here and met David, now Lord, Currie and Maurice, now Lord, Peston who had intended to be here to chair this lecture, but he has been unwell and couldn't be here so I wish him a swift recovery. I also recall with some pleasure the three Festschrift volumes for Bernard and Maurice that John Grahl and Sami Daniel organised so well a few years ago, for which I contributed a chapter, as did many of his former students and colleagues. I was particularly upset to learn that Sami Daniel, also died earlier this year.

I remember, all those years ago, many hours spent discussing Bernard's passion for Economics. Perhaps the biggest thing Bernard ever taught me was to try and understand the low-side risk of any policy prescription, by which I mean always worry about the consequences if you are wrong. I remember him telling me on numerous occasions that I should be concerned about the welfare of the man on the Clapham omnibus. In part this was to ensure that economists did no harm, and also because Bernard never forgot his East End roots and understood that this bus passenger was paying his salary.

Bernard always encouraged me to look at the data carefully and to sniff the air. To adopt a more "investigative" approach, if you like: to put the data before the theory. I like to refer to this as the 'economics of walking about.' He pointed me to the writings of the early American labour economists Paul Douglas; John Dunlop; Clark Kerr; Richard Lester; Lloyd Reynolds; Sumner Slichter and Gregg Lewis. Clark Kerr encapsulated the spirit of these American labour economists when he said "Labour Economics will contribute more by helping to make a sense of reality than by building more castles in the air" (Kerr, 1988, p.33). While the analytical tradition in Labour Economics is really American, in fact it extends back to the Webbs in the UK, as David Metcalf pointed out to me recently. The tradition extends on at the Bank where we have twelve Agents and their staff around the country who stay in touch with businesses to ensure MPC members keep their feet on the ground. We also do frequent trips around the country with the Agents talking to business men and women and I find such trips an invaluable way to find out what is going on. That is particularly important given that most of the quantitative data we receive will get revised and so it is always hard to know where we are today.

I was also heavily influenced by a 1991 paper by Larry Summers, until recently Harvard president. The paper was entitled "The Scientific Illusion in Empirical Macroeconomics", and it seems particularly apposite to me today given my new MPC role. In it Larry wrote:

“formal empirical work which...‘tries to take models seriously econometrically’ has had almost no influence on serious thinking about substantive as opposed to methodological questions. Instead the *only* empirical research that has influenced thinking about substantive questions has been based on methodological principles directly opposed to those that have become fashionable in recent years. Successful empirical research has been characterized by attempts to gauge the strengths of associations rather than to estimate structural parameters, verbal characterizations of how causal relations might operate rather than explicit mathematical models, and the skilful use of carefully chosen natural experiments rather than sophisticated statistical techniques to achieve identification.” (Summers, (1991), p. 129).

And later

“Good empirical evidence tells its story regardless of the precise way in which it is analyzed. In large part it is its simplicity that makes it persuasive. Physicists do not compete to find more elaborate ways to observe falling apples. Instead they have made progress because theory has sought inspiration from a wide range of empirical phenomena.

Macroeconomics could progress in the same way. But progress is unlikely as long as macroeconomists require the armor of a stochastic pseudo-world before doing battle with evidence from the real one.” (Summers, 1991, p. 146)

The use of empirical data is the theme I am going to talk about today and hence the subtitle, 'the economics of walking about'. I'm going to discuss some questions I have been examining in my research which are based on what is *really* going on in the UK economy. Not what *should be* going on, on a Ceteris Paribus basis! This is in direct contrast to much of economics that apparently believes the real world is a special case of a special case and uninteresting. In my view economics is not just about understanding mathematics or elegant theoretical models; as Arnold Harberger (1993) noted “economics is fundamentally an observational discipline”. The research behind this lecture uses many of the tools that Bernard taught me, to analyse the UK economy at the current conjuncture. It has frequently involved searching for patterns in the data. In making my decisions on interest rates month by month I watch the data closely.

I examine five questions:

- 1) Why have unemployment and inactivity increased recently?
- 2) Why has most of the job growth in recent years been in self-employment?
- 3) What has been happening to capacity within firms?
- 4) Why has wage growth been benign recently?
- 5) Why has inflation failed to respond to higher money growth?

1) Why have unemployment and inactivity increased recently?

There has been a significant improvement in the level of unemployment prevailing in the UK not just since 1997, but considerably earlier (**Chart 1**). The most notable feature of the immediate post-war era was of low rates of unemployment – which averaged 2.5% from 1945-1975. This situation reversed itself at the end of the 1970s when the unemployment rate rose from 5.3% in June 1979 to 11.9% in June 1984. The unemployment rate declined to 6.9% in June 1990, then increased to a new peak rate of 9.4% in September 1994, and subsequently declined again until September 2005 to 4.7%.

Table 1 sets out the major changes in the composition of the UK labour force for the period 1997-2007Q1. Most notable is the decline in unemployment, with 300,000 fewer jobless individuals in 2007Q1 than in 1997. Employment increased by more than 2.5 million over the same period. The unemployment rate thus fell from 7.2% to 5.5% between these years, while both the employment and activity rates rose.

A decline in the unemployment rate has by no means been restricted to the UK: in the past decade, unemployment rates around the OECD have been lower than in the previous decade (Blanchflower 2007). This would suggest that part of the explanation for the improvement in UK unemployment could have been the result of global factors. Despite claims to the contrary in the OECD Jobs Study and by Layard, Nickell and Jackman (1998) in their unemployment book and elsewhere, rates of unemployment over time by country show little or no statistical association with conventional measures of institutions and policies (Baker et al, 2005). There is also scant association with the deregulations of the 1990s and trends in unemployment. Despite conventional wisdom high unemployment does not seem to be primarily the result of job protection, labour taxes, trade union power or wage inflexibility (Blanchflower, 2001). By contrast, product market, capital market and housing market reforms all seem significant in explaining falling unemployment. However, the most important factors behind the decline in UK unemployment were probably welfare reforms involving reductions in the replacement rate along with tightening of benefit rules (Nickell, 2006).

Table 1 shows that unemployment has trended up since 2005Q1, and increased by 13,000 in the most recent quarter (2007Q1). Over the same two-year period, there have also been increases in the numbers of temporary workers saying they couldn't get permanent jobs (+42,000), and numbers of part-time workers saying they couldn't get full-time jobs (+89,000). Set against this is the rather surprising finding that employment has also increased, by +305,000, driven by an increase in the numbers of self-employed (+217,000).¹ However, there has also been a dramatic increase in the numbers of individuals who have exited the labour market, so are now classified as inactive or Out of the Labour Force (OLF) – their number has swelled by +135,000 over the last quarter. This is in contrast to the sharp rises in participation observed between 2004 and 2006, and now looks more consistent with the unemployment data (**Chart 1**). The majority of

¹ The number of employees in employment increase by +116,000, while the number of workers in government training schemes and unpaid family members fell by -28,000.

individuals leaving the labour market have been women, with the largest group women over retirement age. This looks to me like discouraged workers unable to find work in a *loosening* labour market. Of course, one quarter does not necessarily indicate a trend, but we should always be on the lookout for significant changes in the data, of which this may be a prelude. The increase in inactivity by age in 2007Q1 was as follows.

2007Q1 (000s)	Men	Women
Ages 16-17	13	19
Ages 18-24	-3	23
Ages 25-34	-5	7
Ages 35-49	26	15
Ages 50-64(60)	-1	-8
Ages 65+(m)/60+(w)	11	40
All	40	95

In addition, worryingly, the proportion of total unemployment accounted for by those aged under 24 has ticked up over time. For example, in 1997 18-24 year olds constituted 23.9% of the unemployed compared with 30.4% in January-March 2007. Indeed, Quintini et al (2007) have noted that over the period 1995-2005 the UK had the largest increase in the ratio of youth to adult unemployment rates in the OECD ([Chart 2](#)); the UK moved from having a ratio below the OECD average in 1995 to being well above it in 2005.² There is no good explanation for the increase in youth unemployment, however (Blanchflower et al. 2007). It does not appear that young workers have been crowded out by immigrants, nor older workers returning to the workplace.

My Masters thesis, which Bernard examined twenty-odd years ago, was on the causes and consequences of youth unemployment, and it appears that the same issues remain pertinent today.

2) Why has most of the job growth in recent years been in self-employment?

Self-employment as a proportion of the UK workforce is high by international standards (Blanchflower, 2000, 2005). [Chart 3](#) shows that self-employment rose from around 7% in the late 1970s, peaking at 14.0% in 1991, before easing back slightly during the late 1990s to below 12.0%, and then recovering again. What explains these patterns?

It is apparent from [Chart 3](#) that the largest increase in the self-employment rate was during the 1980s. During this decade several factors appear to have combined to push the number of self-employed workers higher. First, there was a shift towards service sector industries, which one might assume have lower barriers to entry than manufacturing. Second, the decade was noteworthy for the extent of financial liberalisation that occurred. Loosening liquidity constraints tend to provide a boost to self employment (Blanchflower

² This is not just a case of adult unemployment falling. The unemployment rate of those aged 16-17 has risen from 19.1% in 2001 to 24.6% in 2006. Source: ONS.

and Oswald, (1998); Blanchflower, Levine and Zimmerman, (2002)). This enabled many latent entrepreneurs access to credit markets, which were previously closed to them.

The increased availability of credit also facilitated a house price boom, which subsequently allowed homeowners to extract equity with which to invest in their own businesses. Black et al (1996), for example, found that a 10% rise in the value of housing equity increased the number of new firm VAT registrations in the UK by some 5%. Taylor (2004) found that increases in house prices raised the probability of self-employment entry.

Third, government policy was introduced that actively encouraged workers to become self-employed. An example of these policies was the Enterprise Allowance Scheme (EAS), which ran from 1983 to 1991, paying self-employed workers a supplementary weekly income (of around £40 a week) for up to 12 months. In the twelve months following the scheme's introduction, self-employment rose by +266,000, the largest recorded annual increase of the past 40 years. Campbell and Daly (1992) estimate that one in eight of those that became self-employed during the late 1980s were supported into employment through this scheme.

The subsequent decline in the self-employment rate observed from 1995 resulted from a shift in a large number of workers from self-employment to employment within the construction industry. This reflected work by the Inland Revenue to stop employers treating employees as self-employed workers in order to avoid paying NIC's, nor provide benefits, training or observe employment protection laws. While the total number of workers employed in the construction industry remained steady at just over 18 million between 1995 and 2000, the proportion of workers declaring themselves to be self-employed fell from 46% to 33%. By 1997, 200,000 construction workers had reclassified themselves as employees, explaining most of the reduction in self-employment in construction between 1995 and 1997.

In the year September 2002 to September 2003 the number of self-employed increased by 280,000. The largest increase of 120,000 was found in banking, finance and insurance and was dominated by the 35-49 age group, although there were also large increases in the 50-64/59 and 65/60 and over age groups. During this period a number of tax changes were implemented, including: reform of capital gains tax; reducing the rate of corporation tax on smaller companies; the introduction of stakeholder pensions; and the abolition of Advance Corporation Tax.

Over the past couple of years there has been further substantial growth in the numbers of self-employed as well as in the self-employment rate. The numbers of self-employed over the period 2005Q1 to 2007Q1 increased by 217,000, accounting for a remarkable 71.1% of the total growth of employment of 305,000 over the period. Moreover, only 37.6% of the additional employee jobs were full-time compared with 61.8% of self-employed jobs. In addition, over the most recent quarter, January-March 2007, the number of employees *fell* by 100,000 while the number of self-employed *grew* by 45,000.

At this time it is by no means obvious *why* self-employment has increased so sharply in recent months. In part it is because of increased immigration – since immigrants have a higher propensity to be self-employed – alongside moves to self-employment from some older workers who had previously been out of the labour force (Blanchflower and Shadforth, 2007). The rise in self-employment in part likely reflects the lack of employee jobs in a loose labour market.

The recent rise in self-employment could also be consistent with continuing increases in house prices, which have helped to further loosen capital constraints. Chris Shadforth and I have re-examined this relationship for the most recent data. **Table 2** records the results where we regress the log of the self employment rate, defined by UK region and year on the (log) house price and the log of the regional unemployment rate as well as a full set of year dummies.³ In each of the four columns the house price variable enters significantly positive with or without a lagged dependent variable or with region fixed effects. The unemployment rate is only significant in column 1 and is never significant in the presence of region fixed effects or a lagged dependent variable. The self-employment house price elasticity means that a doubling of house prices leads to an increase in the self-employment rate of 15.4%, so the effect isn't small. We take this as evidence of liquidity constraints being relieved as house prices rise – entirely consistent with the findings of Black et al (1996) for an earlier period.

It does not appear that the *most* recent increase in self-employment (i.e. over the past two years) has been the result of changes in regulation, tax changes or changes in the minimum wage. It seems unlikely that the current rate of growth in self-employment is sustainable in the long-run.

3) What has happened to capacity within firms?

My reading of the labour data is that the market has loosened over the past year or so. The other sort of capacity constraint faced by firms reflects how hard they have to work their incumbent factors of production to meet demand – i.e. capacity constraints *within* firms. The sum of capacity within firms and in the labour market is usually called the output gap.

Survey evidence suggests that capacity utilisation within firms is currently above 'normal' levels. **Chart 4** shows that the CBI measure of spare capacity within manufacturing firms has been in excess of its post-1996 average since March 2006. The BCC measures of spare capacity for both manufacturing and service sector firms are also above their post-1996 averages (**Chart 5**). But these series are volatile. One only has to look back over the past 12 months to see that all three measures have risen and then fallen sharply at times. Looking through these movements, however, it does appear to me that there is evidence that spare capacity within firms has fallen over the past 9 to 12 months. In any case, I have trouble understanding what capacity pressures in services actually

³ The year dummies are proxying inflation, hence the house price variable should be thought of in real terms; indeed, the results are even stronger (compared with the initial specification in column 1) when the year dummies are replaced with an (insignificant) aggregate price deflator.

means, over and above the skilled labour shortages that have been highlighted by the Bank's Agents in their recent surveys. New computers can be bought in an hour; equipment can be rented and work can be farmed out to consultants or sub-contractors. The availability of the internet and fast communications means that workers can work from home if necessary. So, what precisely are the constraints on firms that supposedly are binding in services? I'm not sure.

Nevertheless, signs of limited spare capacity may be a concern if they prelude price increases. There is tentative evidence from a number of surveys that some firms have become more confident about pushing through price increases. This may reflect buoyant expectations regarding future demand or simply a delayed pass-through of higher input prices. But the evidence is mixed. For example, the CBI measure of manufacturing firms' expected price increases over the next three months was above its 2006 average in 2007Q1, but the comparable BCC measure had declined. Furthermore, the surveys have little predictive power for actual output price increases one-year ahead; the correlation coefficient for CBI expected prices and output prices 12-months later is 0.56, while the coefficient using BCC expected prices is just 0.09.⁴ As such, it is difficult to interpret what the data are actually telling us about future inflationary pressures at present, although they do seem to point to an upside risk.

It is hard to reconcile the recent increases in unemployment and inactivity with what is happening within firms. The evidence would seem to support the observed steady increase in labour productivity since 2005, which suggests that firms have been working their workforce and plant more intensively. Strictly, we would expect such an increase in capacity utilisation to result in a tightening of the labour market, and increased pay pressures. Since that has not occurred, I must presume that the weakness in the labour market (however caused) has more than offset the increased constraints within firms.

4) Why has wage growth been benign recently?

Consistent with the finding of a loose labour market and increased self-employment, wage growth has been flat or slowing on most measures since late 2004, as indicated in [Chart 6](#). The Average Earnings Index and Average Weekly Earnings series excluding bonuses have shown little or no tendency to increase; if anything they have declined slightly over the past twelve months or so. Earnings excluding bonuses, averaged over three months, rose by 3.7% in the year to March 2007, compared with 3.9% in March 2006 and 4.1% in March 2005.

In contrast, average earnings including bonuses increased at an annual rate of 4.5% in March 2007, compared with 4.0% in 2006 and 4.5% in 2005. However, the pick-up in this headline series is confined to the financial services sector. Contrary to the claims of some that bonuses are volatile and should be smoothed through there are much stronger arguments for actually ignoring them entirely as long as they are based on performance and especially so if they are derived from some market risk (see Weitzman (1984) and Blanchflower and Oswald (1987, 1998)); for example, an increase in basic pay of £1,000

⁴ The CBI data are available from 1975, the BCC data from 1997Q2. The weaker result obtained using the BCC data may reflect the shorter period over which data are available.

this year would add to household income in all future years, and has quite different implications from a one-off bonus of £1,000.

In any case, the estimates derived both with and without bonuses are likely to be *upward biased* estimates of wages. The data files used, by definition, exclude the earnings of the self-employed, which, as discussed above, account for 13% of total employment. The files also exclude data from workers in the smallest workplaces, which account for a further 13% or so of the workforce. The wages of these workers are more flexible than other workers in the economy when labour markets loosen (or tighten), that is to say they have a higher wage-unemployment elasticity.

The evidence of benign wage inflation in the official data is confirmed by the Bank's Agents who found that pay awards slowed in April (Agents' Summary of Business Conditions, Bank of England, May 2007).⁵ It is also consistent with recent evidence provided by IRS in their Pay and Benefits Bulletin, Issue: 663 (18/5/2007). Their provisional analysis of pay settlements collected for the three months to 30 April 2007 revealed a sharp decrease in the IRS measure of pay awards - the midpoint in the range of basic pay deals - to 3%.⁶ This is half a percentage point lower than the 3.5% level at which pay awards have held for the previous three rolling quarters. It is, however, inconsistent with the findings in KPMG's Report on Jobs, 9th May 2007 which found that 'permanent salary inflation was the strongest in nearly seven years in April. This survey tends not to correlate well with official earnings measures or settlements presumably because it is drawn from a biased sample, only covering workers placed in permanent jobs by some recruitment consultancies.

Some of these publications also highlight the issue of skilled worker shortages, but this is a fact of life in a dynamic economy. There is a remarkable amount of churning going on in an economy as firms are born and others die (Davis and Haltiwanger, 1998). The question is whether this has become greater than was the case in the past and I see no evidence of this whatsoever, outside Financial Services. Every insurance company would always like five more salesmen who could sell thousands of policies, but that doesn't mean that wages are going to rise. In any case, the occupations that are in short supply and whose wages have risen are included in the wage data.

So, in my opinion, at this point in time, it appears that wages are the dog that hasn't barked. My view is that wages are not going to increase much any time soon when insider and outsider pressures are low. By that I mean, firms don't have the ability to pay as their profits have been squeezed (insider power is low) and, as I have said previously, there is a good deal of slack in the labour market resulting from increased unemployment and immigration to the UK (low outsider pressures) (Blanchflower, Oswald and Garrett, 1990 & Blanchflower et al. 2007).

⁵ <http://www.bankofengland.co.uk/publications/agentssummary/agsum07may.pdf>

⁶ Wage settlements themselves have limited representativeness given that only 16.6% of private sector employees are union members (Grainger and Crowther, 2007) <http://www.dti.gov.uk/files/file39006.pdf>

I have some sense from my regional visits that the fear of unemployment among workers is elevated, although, there is limited data on the issue (see Blanchflower, 1991 and Campbell et al, 2007). Workers these days seem increasingly aware that they can be replaced by immigrants and/or that their employer can move his or her production facility abroad. This limits workers' bargaining power. These pressures manifest themselves in the recent low settlements figures.

Lower wage inflation and higher unemployment are usually thought of as describing the Phillips curve. However, the time series results do not provide universal support for the theory. The results of estimated Phillips curve relationships appear to be time-specific, data-specific and/or country-specific. **Chart 7** shows the standard relationship for the UK. There is evidence of a downward-sloping curve at points during the 1970s and 1980s, but since the 1990s the curve has been flat. In other words, for the past 15 or so years there has been no trade-off between inflation and unemployment – we have had our cake *and* eaten it. The Phillips curve does not exist in the UK data, and doesn't appear to hold in many other countries.

In contrast, the wage curve describes an inverse relationship between the wage *rate* and the local unemployment rate, where the causality runs from the amount of joblessness to the level of wages. The wage curve is derived from micro-data and is concerned with aggregation and missing variable biases. It is very much in the tradition of the economics of walking about.

The wage curve is stable across time and countries or regions – the wage curve seems universally described as

$$\ln w_t = \ln w_{t-1} - 0.1 \ln U_t + \text{other terms},$$

where $\ln w$ is the log of the real wage, $\ln U$ is the log of the unemployment rate in the worker's area, and the other terms control for characteristics of the worker (and t is time, usually years). The equation tells us that the unemployment elasticity of pay is -0.1. A doubling of unemployment is then associated with a drop in real wages of 10%. The wages of the workers in the smallest, usually non-union workplaces who are excluded from the main wage surveys have a much larger wage-unemployment elasticity of around -.20.

There is no evidence that measures of labour supply enter wage equations (Bartik, 2000). The wage curve is not a supply curve but replaces it (Blanchflower and Oswald, 1994a, p.12). As Woodford (1992, p.396) notes, this 'surrogate labor supply curve lies to the left of and is flatter than the true Marshallian labor supply curve'.

Wage curves of this general form have been found in random samples of individuals and establishments in over 40 countries. Sanz-De-Galdeano and Turunen (2007) find a euro area wage curve over the period 1994-2001. A recent example for the UK is by Bell, Nickell and Quintini (2002) who use data from the New Earnings Survey for the period 1976-1997 and reject a Phillips curve in favour of a wage curve. Their main findings are

as follows (Table 1 column 1, first stage panel).⁷ In all cases controls include region dummies, year dummies and regional trends.

Men

$$\ln \text{wage}_t = .730 \ln \text{wage}_{t-1} - .034 \ln U_t$$

Women

$$\ln \text{wage}_t = .679 \ln \text{wage}_{t-1} - .030 \ln U_t$$

Solving out the long-run unemployment elasticities for men gives -.126 and for women -.093.

The wage curve appears to be an *empirical regularity or law*, as confirmed by Nijkamp and Poot (2005) in a recent meta-analysis on a sample of 208 wage/unemployment wage curve elasticities from the literature. They conclude that

"the wage curve is a robust empirical phenomenon ... but there is ... evidence of publication bias. There is indeed an uncorrected mean estimate of about -0.1 for the elasticity. After controlling for publication bias by means of two different methods, we estimate that the 'true' wage curve elasticity at the means of study characteristics is about -0.07".

So why do we find evidence of wage curves, but not Phillips curves? Margo (1993) cites two principal reasons related to the use of microeconomic versus macroeconomic data, the former being typically used for the estimation of wage curves and the latter for Phillips curves. First, less-aggregated data provide many more degrees of freedom than a decade or so of time series data. And second, he suggests that work at a lower level of aggregation can reveal aspects of human behaviour that lie hidden in the aggregate time series. A number of authors, including myself, have attempted to model the Phillips curve using micro data, controlling for country/region and time fixed effects. When we do, we find that the autoregressive nature of the macroeconomic theory tends to disappear (Blanchflower and Oswald, 2005). These two factors suggest that much macroeconomic data is suspect as it suffers from aggregation biases of uncertain sign and magnitude. Except in isolated specifications, there is not persuasive support for a simple Phillips curve. It seems more sensible to view the data as being characterized by dynamic fluctuations around a long-run stable wage curve.

5) Money supply and inflation

Milton Friedman (1971) famously stated that 'Inflation is always and everywhere a monetary phenomenon'. His view, grounded in the Quantity Theory of Money, is that increases in the money supply directly give rise to inflation. This theoretical observation has led some market commentators to question the Bank's interest rate decisions given that M4 has been growing at an annual rate of over 10% since 2005. Have we been ignoring the story being told by monetary aggregates? The short answer is no. The

⁷ Results are similar using instrumental variables also.

longer answer requires a bit of background information on the controversial relationship between money growth and inflation.

Chart 8 shows that there is a reasonably strong correlation between the growth of broad money and inflation (CPI) over the long run in the UK. However, in the short run the correlation is much less clear. As indicated in the table below, for the period 1875-2006, the contemporaneous correlation coefficient was 0.7; breaking down these series into the periods before and after 1972 shows that the correlation remains quite strong. However, if one looks at the data for 1992-2006, it becomes clear that in the shorter term, the correlation weakens, indeed the correlation coefficient for this period is just 0.3.

	t	t+1	t+2
1875-2006	0.7	0.6	0.5
1875-1971	0.7	0.5	0.3
1972-2006	0.5	0.6	0.7
1992-2006	0.3	0.3	0.3

The weakening of the correlation in recent years has arisen because of fast rates of money growth alongside remarkably stable and low inflation. So what are the explanations for this outcome? Part of the explanation is certainly the recent growth in financial innovation, in other words the proliferation of instruments which act as substitutes for traditional means of exchange. Furthermore, with increased liberalisation of capital markets and the associated free movement of money, the link between domestic monetary aggregates and the real economy has become weaker.

As a result of these issues, it has become increasingly rare for central banks to assign a prominent role to money in their monetary policy strategies. In the US, the ex-Governor of the Federal Reserve, Larry Meyer, noted back in 2001 that: “Money plays no explicit role in today’s consensus macro model, and it plays virtually no role in the conduct of monetary policy”. Significantly, in March 2006, the Federal Reserve ceased publication of the M3 monetary aggregate.

One notable exception to this trend is the European Central Bank, but some would argue that this is simply a legacy of its (successful) attempts to import the credibility of the money-targeting Bundesbank. In an important recent paper, with particular focus on the ECB’s strategy, Michael Woodford examines a number of leading arguments in favour of assigning an important role to monetary aggregates; he concludes that “...none of these considerations provide a compelling reason to assign a prominent role to monetary aggregates in the conduct of monetary policy” (Woodford, 2006).

The changes I have mentioned make it difficult to distinguish between supply and demand shocks to money stocks. The days when monetary policy could be conducted using a weather vane are long since passed!⁸ However, we know that in advanced

⁸ In the Court room of the Bank there is a dial linked to a weather vane on the roof of the building. This was installed in the early 19th century to serve as a highly effective, if primitive tool of monetary policy. An easterly wind would allow ships to sail into London, bringing their goods and resulting in a demand shock.

economies characterised by financial innovation, money stock movements tend to be dominated by money demand shocks rather than money supply shocks.

Looking more closely at the recent UK data, it is clear that the pickup in M4 growth over the past two years has largely been driven by rapid increases in the deposits held by non-bank financial companies (known as Other Financial Corporations or OFCs). As [Chart 9](#) shows, this sector is made up of many different businesses, which are likely to use their money holdings in different ways.

	2004	2005	<u>2006</u>		<u>2007</u>
			H1	H2	Q1
Notes and coin	5.5	3.1	5.7	5.1	4.1
M4	9.0	12.8	13.4	12.8	12.8
<i>of which:</i>					
Households	8.3	8.0	7.7	8.3	8.3
Private non-financial corporations	7.2	11.5	10.0	12.5	11.1
Other financial corporations	12.7	27.7	31.5	24.0	24.8

Consequently, it is difficult to interpret the likely implications for inflation of the increase in M4 holdings by OFCs. While one could speculate that institutional investors (such as pension funds) and securities dealers could use their increased holdings to purchase other financial or real assets, with inflationary implications, equally the increase could simply reflect a structural or portfolio shift in demand, in which case the inflationary implications would be limited. This difficulty in interpretation is exacerbated in that much of the increase has been from ‘Other Financial Intermediaries’. The demand for money by these companies, ranging from housing credit corporations to special purpose vehicles is not well understood. However, most economists believe that the current rapid rise in money in the economy is really the result of changes in the demand for money, which is consistent with the stable inflation experienced in recent years.

Despite the fact that the money supply is not targeted by the Bank, it is a variable that will continue to be monitored and analysed. Not only does money growth and its impact on liquidity contain important information about future economic developments, it can also play an important role in shaping inflation expectations.

Conclusion

Over the course of the past hour I’ve shown you a number of areas of research that I’ve been working on to investigate recent developments in the UK economy. In some cases the results I have obtained have been surprising, and not necessarily in line with what theory would tell us.

We saw that there has been an increase in employment over the past couple of years, driven by an increase in self employment. At the same time, there has been a strong increase in inactivity – mostly discouraged workers unable to find work as the labour

To accommodate this shock, the Bank would increase notes and coins in circulation. The increase in money supply would only cause inflation if it wasn’t warranted by an increase in demand.

market has loosened – and unemployment, particularly among those under the age of 24. It is hard to reconcile this with survey evidence that seems to indicate capacity shortages, and increased labour productivity which suggests firms have been working their workforce and capital more intensively.

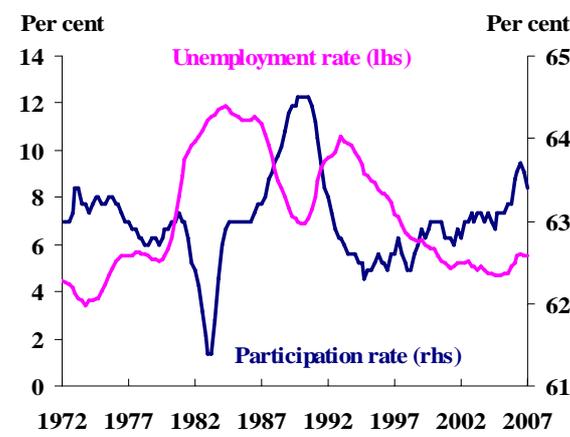
The rapid rise in self-employment has also been something of a mystery; it has arisen partly on account of immigration, partly through moves to self-employment from some older workers who had previously been inactive, and possibly partly a result of rising house prices, which have loosened capital constraints. However, we have found no evidence that the commonly-held reasons for people to turn to self employment – changes in regulation, tax changes, or changes in the minimum wage – have been significant. And despite the claims of the doomsayers, wages remain benign, which as far as I am concerned is to be expected, consistent with the loose labour market and increased self-employment.

On the last topic of my research, the relationship between money supply and inflation, we've clearly seen the importance of walking around; the relationship appears to have broken down in recent years, but in the context of financial innovation and capital market liberalisation, we understand why this might be so. As for whether this is important for monetary policy, we have to form our own judgements based on the data.

I hope this has shown you the importance of 'sniffing the air', and putting the data before the theory where this seems warranted. This is of particular relevance in my role as a member of the MPC, where rate setting decisions must be made on the basis of a wide variety of data, both quantitative and qualitative, and even small developments can have significant implications – such developments have particularly influenced my voting decisions over the past few months. The rationale for my decision to vote for a rate rise this month was to ensure that inflation expectations remain anchored, given rising food prices, recent further increases in oil prices, more robust world growth, and the March inflation outturn.

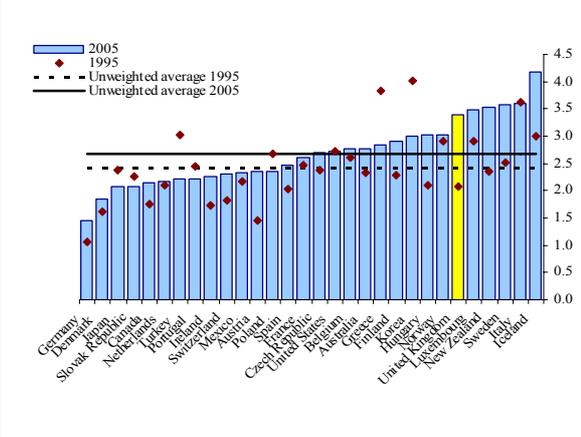
As you can see, I owe a lot to Bernard Corry. He was a big influence on me, and on the way I conduct my research. And although he first opened my eyes to the importance of the man on the Clapham Omnibus, perhaps more importantly he revealed to me the importance of a more basic form of transport – Walking About.

Chart 1: UK unemployment and participation rates



Source: Labour Market Statistics (ONS)

Chart 2: Ratio of youth unemployment to adult unemployment



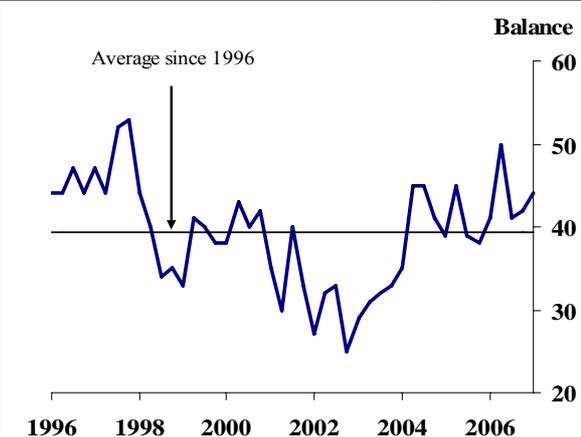
Source: Quintini et al (2007)

Chart 3: UK self-employment and unemployment rates



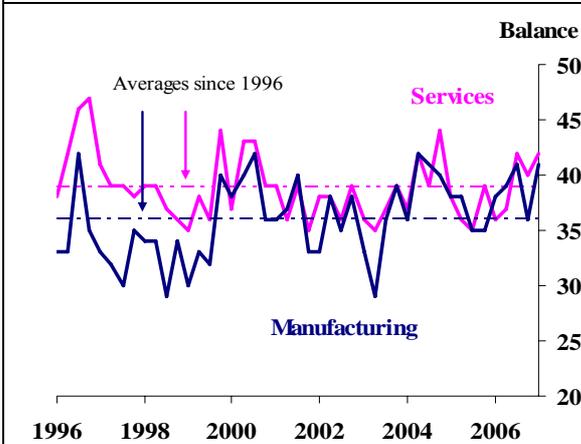
Source: ONS & Employment Gazette (for pre-1992 self-employment data).

Chart 4: CBI measure of capacity utilisation within manufacturing firms



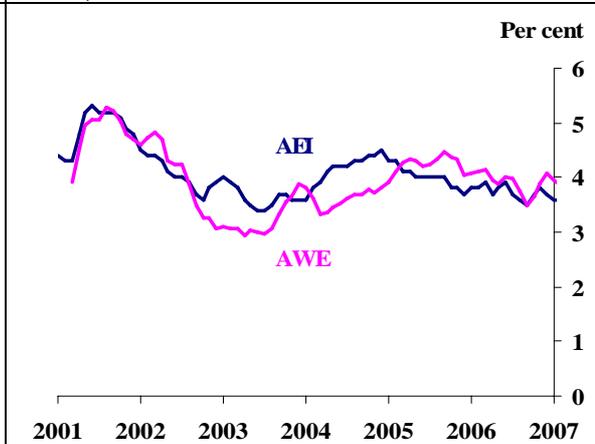
Source: CBI

Chart 5: BCC measures of capacity utilisation within firms



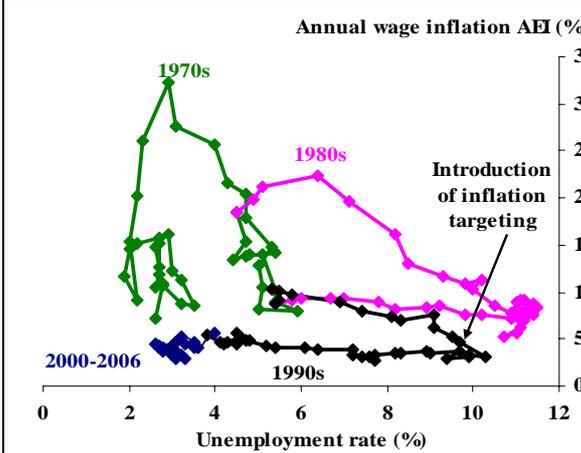
Source: BCC

Chart 6: Whole economy regular pay: AEI vs. AWE (Three-month average, annual rates)



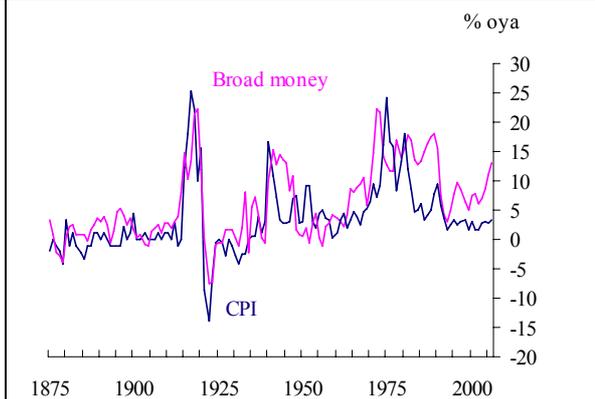
Source: ONS

Chart 7: UK Phillips curve?



Source: ONS

Chart 8: Money growth and inflation



Source: Capie & Webber (1985) & O'Donoghue et al. (2004)

Chart 9: Contributions to annual OFC's M4 growth

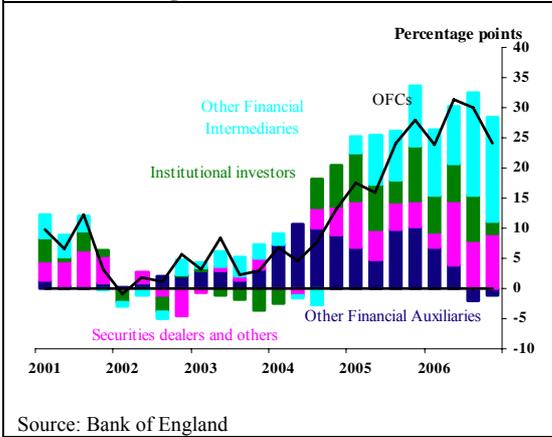


Table 1: Recent developments in the UK labour market – 000s

	16+ Population	Unemployment	OLF	Employment	Employees	Self-employed
1997	45,497	2,045	17,005	26,448	22,969	3,479
1998	45,661	1,783	17,164	26,713	23,327	3,386
1999	45,862	1,759	17,051	27,052	23,741	3,311
2000	46,107	1,638	17,036	27,434	24,174	3,260
2001	46,413	1,431	17,291	27,691	24,410	3,281
2002	46,704	1,533	17,305	27,866	24,526	3,340
2003	46,995	1,479	17,350	28,166	24,631	3,535
2004	47,324	1,429	17,485	28,410	24,780	3,630
2005Q1	47,650	1,411	17,563	28,676	24,823	3,622
2005Q2	47,753	1,433	17,627	28,693	25,063	3,630
2005Q3	47,853	1,447	17,611	28,794	25,133	3,661
2005Q4	47,946	1,554	17,634	28,758	25,059	3,699
2006Q1	48,038	1,599	17,552	28,887	24,966	3,740
2006Q2	48,131	1,683	17,518	28,930	25,023	3,719
2006Q3	48,224	1,711	17,528	28,986	25,026	3,759
2006Q4	48,316	1,687	17,593	29,036	25,039	3,794
2007Q1	48,409	1,700	17,728	28,981	24,939	3,839
Change						
2005Q1-2007Q1	759	289	165	305	116	217
	1.59%	20.48%	0.94%	1.06%	0.47%	5.99%
2006Q1-2007Q1	371	101	176	94	-27	99
	0.77%	6.32%	1.00%	0.33%	-0.11%	2.65%

Source: ONS and Labour Market Statistics First Release, ONS May 2007

Table 2: Self-employment rates and house prices (in logs)

	(1)	(2)	(3)	(4)	(5)
Log house prices _t	.2742 (6.68)	.0431 (1.97)	.2078 (4.33)	.1543 (3.63)	.1383 (5.16)
Log unemployment rate _t	-.1298 (2.95)	.0041 (0.19)	-.0350 (0.83)	-.0063 (0.17)	.1634 (5.35)
Log self-employment rate _{t-1}		.8817 (26.80)		.4078 (7.97)	.6046 (13.10)
Price deflator					-.0001 (1.20)
East Midlands			-.0513 (2.98)	-.0310 (2.03)	-.0197 (1.20)
London			.0567 (1.45)	.0159 (0.46)	-.0593 (0.98)
Northern Ireland			.2464 (11.78)	.1644 (7.58)	.0592 (2.02)
North West			-.1871 (8.51)	-.1123 (5.18)	-.1337 (2.61)
Scotland			-.0770 (4.27)	-.0489 (3.02)	-.0621 (4.96)
South East			-.1846 (9.64)	-.1159 (6.15)	-.1226 (2.93)
South West			.0290 (1.27)	.0006 (0.03)	.0196 (5.13)
Wales			.1841 (9.97)	.1020 (5.32)	.0845 (0.83)
West Midlands			.0868 (4.75)	.0521 (3.15)	.0057 (3.54)
Yorks & Humberside			-.0968 (4.96)	-.0661 (3.78)	-.0789 (0.28)
1987	.0418 (0.72)	.1653 (5.63)	.0513 (1.92)	.1037 (4.21)	
1988	-.0240 (0.41)	.1041 (3.49)	.0174 (0.61)	.0548 (2.11)	
1989	-.0401 (0.66)	.1365 (4.41)	.0273 (0.86)	.0726 (2.52)	
1990	-.0517 (0.85)	.0781 (2.55)	.0171 (0.54)	.0409 (1.45)	
1991	-.0407 (0.68)	.0757 (2.50)	.0103 (0.32)	.0342 (1.20)	
1992	.1326 (2.15)	.2571 (8.28)	.1959 (5.93)	.2200 (7.49)	
1993	.1393 (2.27)	.1040 (3.40)	.1984 (6.04)	.1507 (5.05)	
1994	.1674 (2.80)	.1315 (4.32)	.2085 (6.68)	.1758 (6.08)	
1995	.0665 (1.11)	.0225 (0.76)	.1166 (3.83)	.0683 (2.46)	
1996	.0169 (0.28)	.0699 (2.33)	.0756 (2.43)	.0680 (2.46)	
1997	-.0605 (0.99)	.0549 (1.78)	.0168 (0.52)	.0294 (1.02)	
1998	-.1340 (2.13)	.0443 (1.39)	-.0427 (1.24)	-.0078 (0.25)	
1999	-.1755 (2.75)	.0617 (1.88)	-.0760 (2.11)	-.0188 (0.58)	

2000	-0.2427 (3.70)	.0457 (1.33)	-.1272 (3.29)	-.0548 (1.56)	
2001	-.2807 (4.17)	.0609 (1.70)	-.1534 (3.74)	-.0632 (1.67)	
2002	-.3228 (4.65)	.0617 (1.66)	-.1847 (4.07)	-.0834 (1.99)	
2003	-.3314 (4.54)	.1012 (2.56)	-.1762 (3.42)	-.0645 (1.36)	
2004	-.3841 (4.99)	.0536 (1.30)	-.2114 (3.67)	-.1089 (2.09)	
2005	-.4021 (5.15)	.0439 (1.04)	-.2269 (3.79)	-.1232 (2.28)	
2006	-.3630 (4.55)	.0940 (2.19)	-.1902 (2.98)	-.0831 (1.45)	
Constant	-.1291 (0.26)	.2684 (1.12)	.3395 (0.60)	-.2029 (0.40)	-.7612 (2.29)
Adjusted R ²	.3688	.8473	.8706	.8995	.8219
N	250	248	250	248	248

Source: LFS and Nationwide
T-statistics in parentheses

References

- Baker, D., A. Glyn, D. Howell and J. Schmitt (2005), 'Labor market institutions and unemployment; a critical assessment of the cross-country evidence', in David R. Howell (ed.), *Fighting unemployment; the limits of free-market orthodoxy*, Oxford University Press.
- Bartik, T. (2000), "Group wage curves", working paper, Upjohn Institute.
- Bell, B., S. Nickell and G. Quintini (2002), "Wage equations, wage curves and all that", Labour Economics, 9, pp. 341-360.
- Black, J., De Meza, D. and Jeffrey, D. (1996), 'House prices, the supply of collateral, and the enterprise economy', Economic Journal, 106, January, pp. 60-75.
- Blanchflower, D.G. (1991), 'Fear, unemployment and pay flexibility', Economic Journal, March, pp. 483-496
- Blanchflower, D.G. (2000), 'Self-employment in OECD countries', Labour Economics, 7, September, pp. 471-505.
- Blanchflower, D.G. (2001), 'Unemployment, Well-Being and Wage Curves in Eastern and Central Europe', Journal of Japanese and International Economies, 15(4), December 2001, pp. 364-402
- Blanchflower, D.G. (2005), "Self-Employment: More May Not Be Better," Swedish Economic Policy Review, 11(2), Fall 2004, pp. 15-74
- Blanchflower, D.G. (2007), 'Recent developments in the UK labour market,' Bank of England Quarterly Bulletin, Spring, 47(1), pp.158-171.
- Blanchflower, D.G., P. Levine and D. Zimmerman (2003), "Discrimination in the small business credit market," Review of Economics and Statistics, 85(4), November, pp. 930-943.
- Blanchflower, D.G. and A.J. Oswald (2005), 'The wage curve reloaded', NBER Working Paper 11338.
- Blanchflower, D.G. and A.J. Oswald (1998), "What Makes an Entrepreneur?", Journal of Labor Economics, January, 16(1) pp. 26-60.
- Blanchflower, D.G. and A.J. Oswald (1994a), The Wage Curve, MIT Press, Cambridge, MA

Blanchflower, D.G. and A.J. Oswald (1987) "Profit sharing: can it work?" Oxford Economic Papers, vol. 39, pp. 1-19, 1987. Reprinted in P. Sinclair (Ed.), *Prices, Quantities and Expectations*, Oxford University Press, Oxford.

Blanchflower, D.G., A.J. Oswald and M.D. Garrett (1990), 'Insider power in wage determination', Economica, 57, pp. 143-170.

Blanchflower, D.G., J. Saleheen and C. Shadforth (2007), 'The impact of the recent migration from Eastern Europe on the UK Economy,' Bank of England Working Paper.

Blanchflower, D.G., and C. Shadforth (2007), 'Entrepreneurship in the UK,' Bank of England Working Paper.

Campbell, D., A. Carruth, A. Dickerson and F. Green (2007), 'Job insecurity and wages', The Economic Journal, Volume 117, #518, March, pp. 544-566.

Campbell, M. and Daly, M. (1992), 'Self-employment: into the 1990s', *Employment Gazette*, June, pp.269-291.

Davis, S. and Haltiwanger, J. (1998), 'Measuring Gross Worker and Job Flows,' in J. Haltiwanger, M. E., Manser and R. Topel: Labor Statistics Measurement Issues. Chicago and London: University of Chicago Press, pp. 77-119

Friedman, M. and Schwarz, A. (1971), Monetary History of the United States 1867-1960, Princeton University Press.

Grainger, H. and M. Crowther (2007), 'Trade union membership, 2006', *Employment Market Analysis and Research*, Department of Trade and Industry.

Harberger, A. (1993), 'The search for relevance in economics', American Economic Review, Papers and Proceedings, 83, pp. 1-16.

Kerr, C (1988), 'The neo-classical revisionists in labour economics (1940-1960)-R.I.P.', in How labor markets work. Reflections on theory and practice by John Dunlop, Clark Kerr, Richard Lester and Lloyd Reynolds, edited by Bruce E. Kaufman, Lexington Books.

Layard, R., Nickell, S. and Jackman, R. (1991) Unemployment, Oxford University Press.

Margo, R.A. (1993) "Employment and unemployment in the 1930s," Journal of Economic Perspectives, 7, pp.41-60

Meyer, L. (2001), 'Does money matter?' speech given at the 2001 Homer Jones Memorial Lecture, Washington University, St. Louis, Missouri, March 28 2001.

Nickell, S.J. (2006), 'Monetary policy, demand and inflation', Bank of England Quarterly Bulletin, Spring, 46(1), pp. 95-104.

Nijkamp, P. and J. Poot (2005), "The last word on the wage curve? A meta-analytic assessment", Journal of Economic Surveys, 19, 421-450.

Quintini, G., J.P. Martin and S. Martin (2007), 'The changing nature of the school-to-work transition process in OECD countries', IZA Discussion Paper # 2582.

Sanz-De-Galdeano, A. Turunen, J. (2006), 'The euro area wage curve', Economics Letters, 92 (1): July. pp.93-98.

Summers, L.H. (1991), 'The scientific illusion in empirical macroeconomics', Scandinavian Journal of Economics, 93(2), pp, 129-148

Taylor, M. (2004), 'Self-employment in Britain: when, who and why?', Swedish Economic Policy Review, 11(2), Fall, pp. 141-173.

Weitzman, M.L. (1984), The share economy, Harvard University Press

Woodford, M. (1992), 'A book review. "Seven schools of macroeconomic thought" by E.S. Phelps', Journal of Economic Dynamics and Control, 16, pp. 391-398.

Woodford, M. (2006), 'How important is money in the conduct of monetary policy?', working paper presented at the Fourth ECB Central Banking Conference, November 9-10 2006.