

# Presentation given to opening reception of The Institute of International Monetary Research,

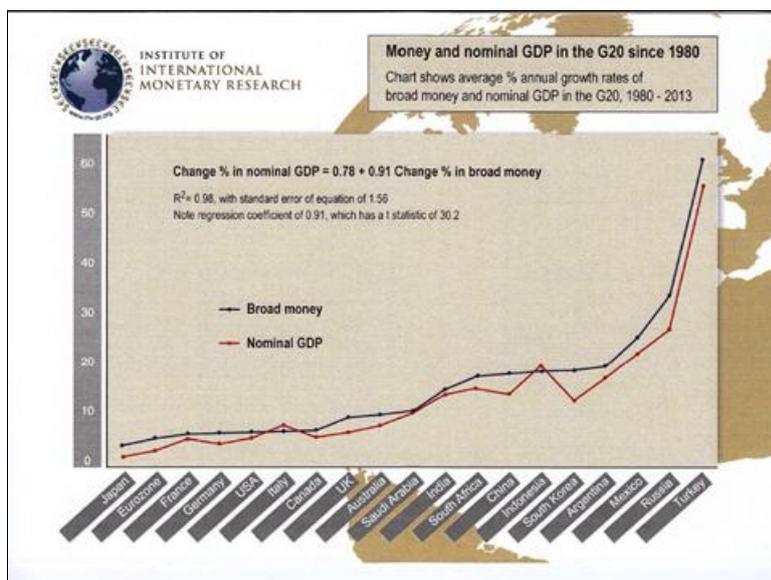
at the Royal Automobile Club in Pall Mall, London SW1, on 11<sup>th</sup> June 2015



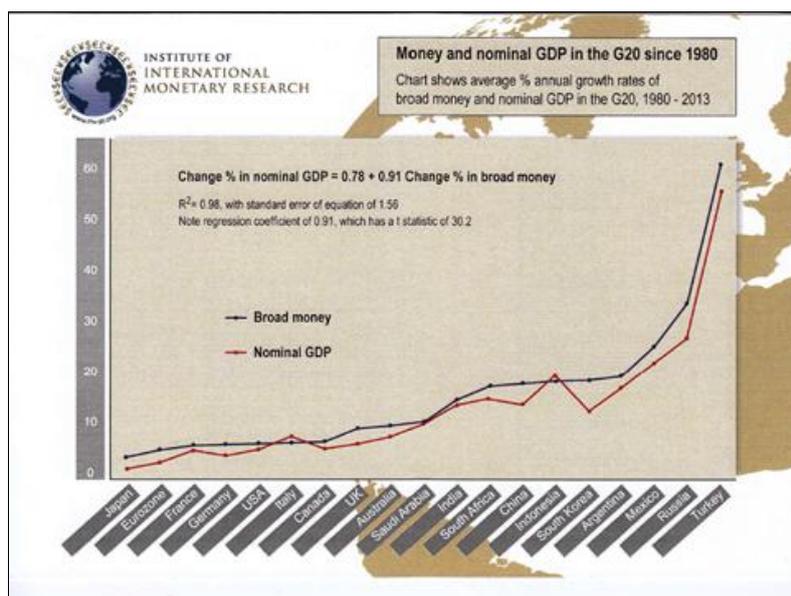
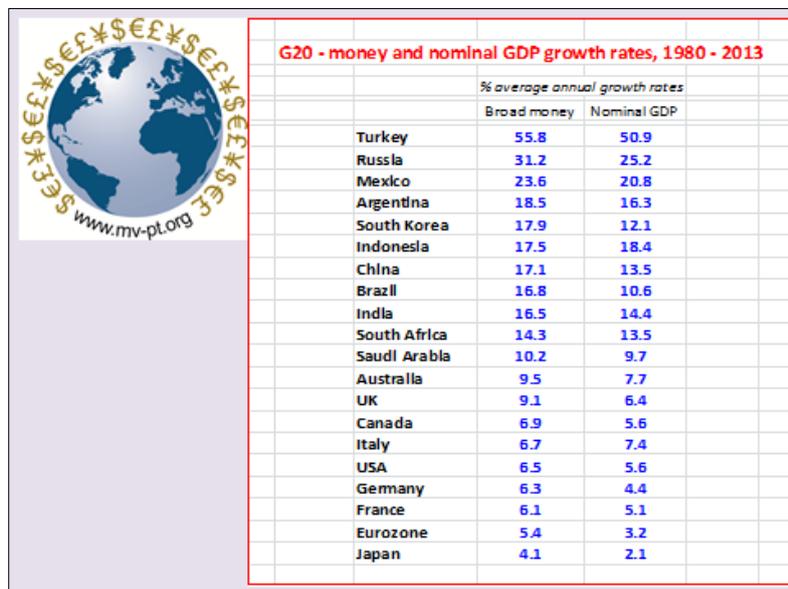
**INSTITUTE OF  
INTERNATIONAL  
MONETARY RESEARCH**  
Analysis and insight into trends in money and banking,  
and their impact on the world's leading economies

**An introductory presentation**

- 1. Aims and purposes of the Institute**
- 2. Themes of the Institute's work**
- 3. How will the Institute approach its work?**



# 1. Aims and purposes of the Institute



The Quantity Theory of Money – which emphasizes an excess of money growth over the growth of output as the dominant cause of rising prices – is one of the most long-standing and well-developed theories in economics. It has an obvious basis in fact, with a clear link in the last 30 years between the rates of increase in money (broadly-defined, to include all or nearly all bank deposits) and in nominal gross domestic product across the G20 leading nations. (See chart.) While these comparisons *over space* are persuasive, support for the Quantity Theory also can be found from evidence *over time* in particular countries, including the UK. The three big boom-bust cycles of the last 40 years (the Heath-Barber boom and the subsequent bust, the Lawson boom and the bust associated with membership of the exchange rate mechanism, and the Great Recession) were all accompanied by large swings in the rate of growth of broad money.



The relationship between money and nominal GDP suggests that stable growth of money ought to be sought, in order to deliver similarly stable growth of nominal GDP. This was indeed the nub of Friedman's recommendation of stable growth of the quantity of money, which he first made in 1959. **If that recommendation had been followed, the growth of the quantity of money would be represented on a chart of money growth as a straight line, like a level plain in geography.** The Quantity Theory of Money is often nowadays seen as an associated of 'monetarism'. Although different schools of monetarism can be differentiated, Friedman generally favoured analysis with a broadly-defined aggregate, because it worked best in empirical testing. Broad money is dominated by bank deposits, which are liabilities of the commercial banking system. Monetary analysis is therefore to a significant extent involved with banks and their behaviour, and what might be termed 'banking policy' (i.e., the mechanics and institutions of monetary control, and banking regulation).

The aims of the Institute of International Monetary Research are

- i. To improve knowledge and understanding of the relationship between banking systems and the quantity of money, on the one hand, and macroeconomic outcomes, on the other, in modern economies,
- ii. To contribute to the achievement of greater macroeconomic stability, and
- iii. To help in educational work, including the educational work of the University of Buckingham which has provided the Institute with its first home.

## 2. Themes in the Institute's work

The Institute welcomes research input from economists in all countries, although initially it is likely that most of the research will be from economists at the University of Buckingham, including myself as the Institute's founder. The themes of the research will evolve over time, but within certain parameters defined by the Institute's aims. In this section I present some material, to show the sort of themes that have interested me in my work over the last 40 or so years as an economist.

### The economy under consideration

- Economy has two kinds of agent – banks (which issue money) and non-banks (which use money to make payments).
- Non-banks can be split into the private sector and the public sector/government.
- **The non-bank private sector consists of households, companies and financial institutions, and they hold almost 100% of wealth, and account for 80% of aggregate expenditure. Q: why do these agents' expenditures fluctuate?**

First of all, let us be clear about the kind of economy we are analysing. It has banks, who issue money in the form of deposits, and non-banks, who use money in payments. Of course there is also a central bank that issues legal-tender base money, but today I'm trying to move quickly. The non-banks are split between the state/public sector and the private sector, and the private sector consists of households, companies and financial institutions. Most spending is by the non-banks private sector. Our key question is, 'why do these agents' expenditures fluctuate, since such fluctuations cause similar fluctuations in income and output, and extreme fluctuations may constitute unacceptable macroeconomic instability?'

### The nature of macroeconomic instability

- Spending on 'current things' that are essential (food, heating, electricity, rent, etc.) is stable.
- Spending on capital items – items purchase of which can be postponed or accelerated – is volatile, and is heavily influenced by 'the balance sheet', e.g., net worth cf. debt or just net worth by itself. **So asset prices are very important.**

We also know from actual data that instability in spending on capital items is much greater than instability in spending on current items (i.e., private consumption, mostly). Capital investment adds to a balance sheet, while the value of assets depends heavily on asset prices. So asset price movements are fundamental to macroeconomic instability.

### The nature of macroeconomic instability

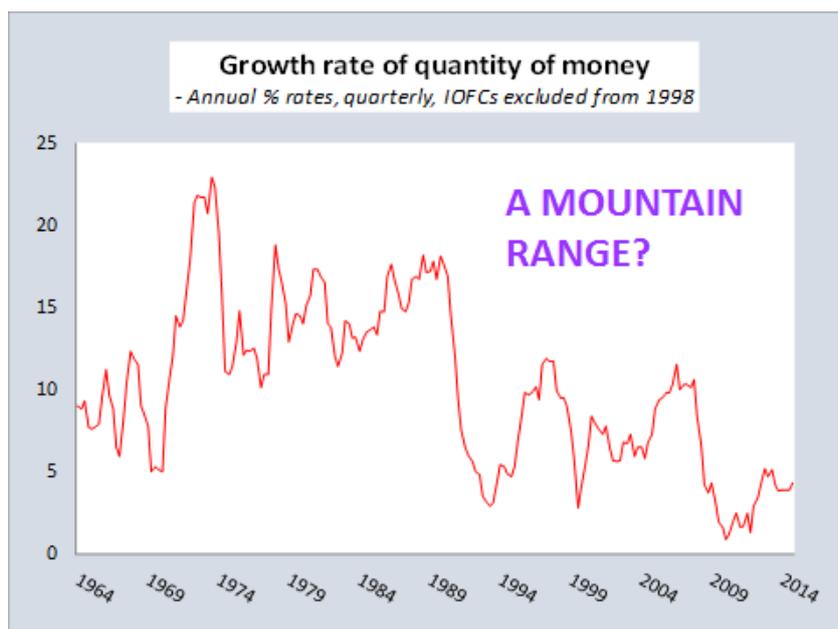
- **And what determines asset prices?**
- **Answer = THE QUANTITY OF MONEY, BROADLY-DEFINED TO INCLUDE ALL BANK DEPOSITS.**
- **Therefore, instability in money growth leads to instability in asset prices which, in turn, leads to instability in demand, output and employment.**

In my work I have found clear relationships between movements in the quantity of money, broadly-defined, and movements in asset prices. This is particularly true for large changes in money and asset prices. (It is far less apparent for small changes and in most ‘short runs’.) Money is held by both less well-off households (which generally do not have significant assets, and are not balancing money against non-money assets in portfolios), and wealthy individuals, companies and financial institutions (who in total do own significant assets, and are balancing money against non-money assets, sometimes on a regular basis).

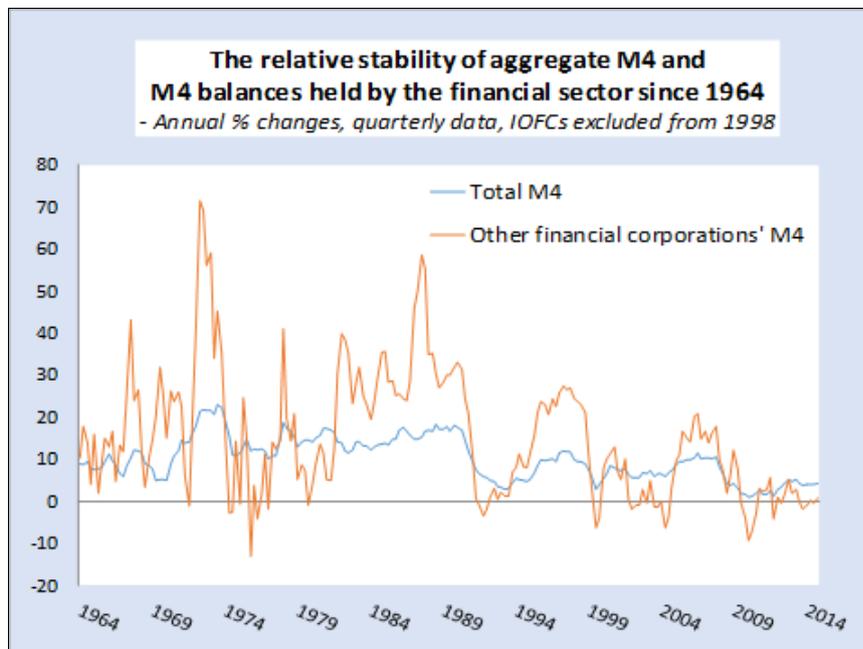
## The nature of macroeconomic instability

- **....instability in asset prices which, in turn, leads to instability in demand, output and employment.**
- Asset prices determined mostly by wealthy individuals (certainly those in the top 50% of the population), and by companies and financial institutions under their control/influence. Companies exist partly as buffer against shocks.
- **We must pay a great deal of attention to changes in money held by financial institutions and companies.**

It follows that – to understand the causes of macroeconomic instability – we must pay a great deal of attention to changes in the quantity of money held by companies and financial institutions.

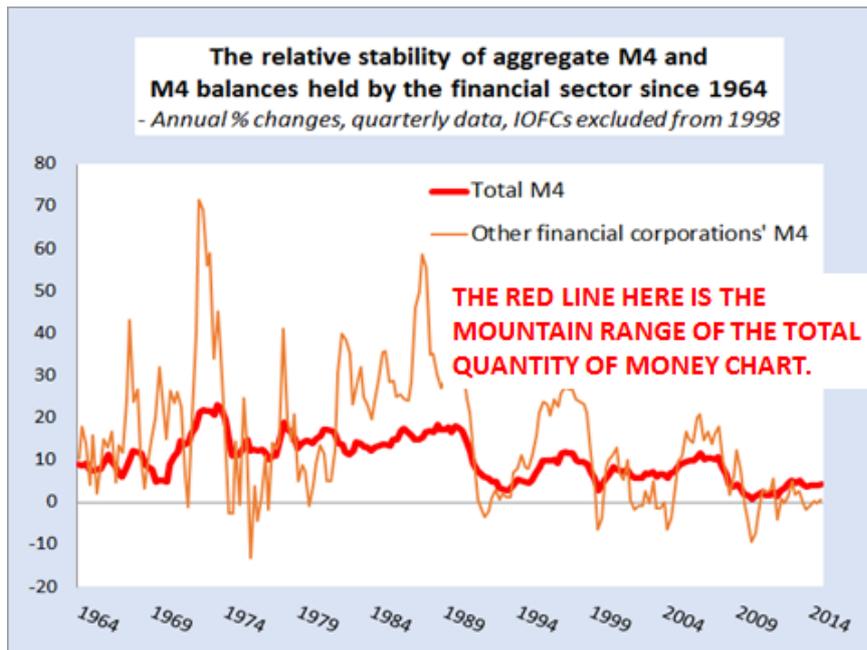


I said earlier that one implication of Friedman’s recommendation for stable money growth was that a chart of money growth ought to look like a flat plain. Well, that isn’t true of the chart of broad money growth in the UK since 1964, when modern monetary statistics were first prepared. **The chart above – which is of the annual growth rate of broad money in the aggregate, i.e., held by all private sector non-bank sectors – instead looks like a mountain range.** The peaks and troughs have been less marked since the early 1990s, but they continue.

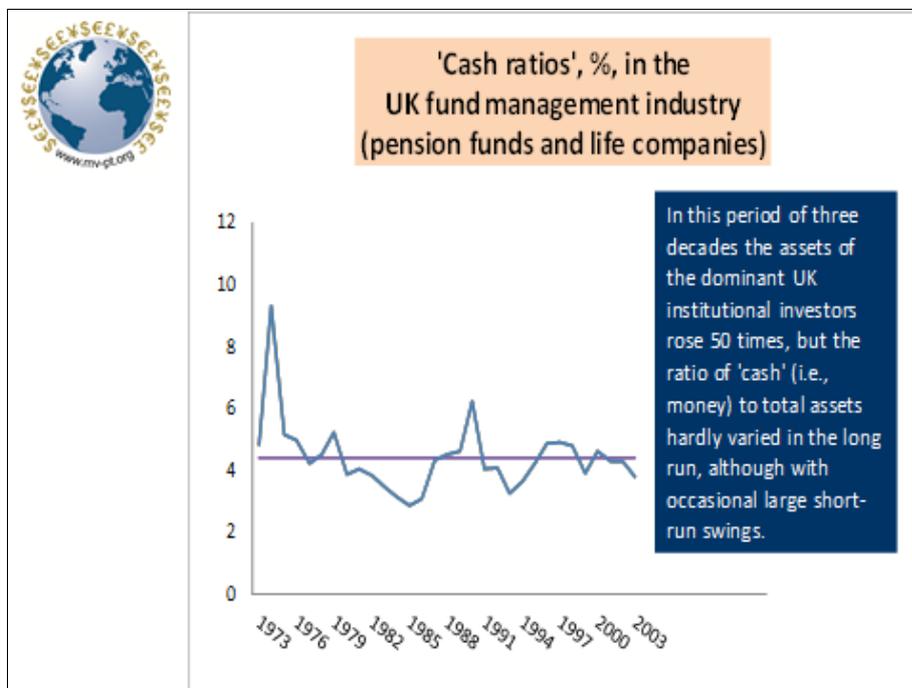


This chart – again of the annual growth rate of money variables – is perhaps even more alarming than the previous one. The scale has been changed, with the highest and lowest values being +80% and -20%, instead of +25% and zero. **The increased band is needed to accommodate the extreme swings in the rate of change of money held by non-bank financial institutions, which is the brown line in the chart. We have a range of Matterhorns.** In general, a change in the growth rate of aggregate money is accompanied by a more pronounced change in the growth rate of money in the financial sector’s hands. Non-bank financial institutions take various forms, but they are dominated by the large institutional investors, namely the pension funds, the life assurance companies, the unit trust and investment trust managers, and nowadays increasingly venture capital, private equity and hedge funds. These institutional investors have both to choose particular long-term, non-cash investments for their portfolios, and to balance high-return non-cash investments (equities, bonds, etc.) against low-return ‘cash’, which in practice means bank deposits. The ‘bank deposits’ in question are in fact the ‘other financial corporations’ M4’ that appears in the chart.

The chart shows that in the frothiest stages of the Heath-Barber boom and the Lawson boom the highest annual growth rate of financial sector money were 71.6% (year to second quarter 1972) and 58.7% (year to Q3 1987) respectively. Plainly, if fund managers were determined to keep the ratio of money to total assets stable at a fairly constant figure, the explosive growth in their money balances implied dramatically high rates of asset price inflation. 1972 and 1987 were indeed years of buoyant asset markets, and also of very strong growth of demand and quite high growth of output. (Some of the extra demand was diverted abroad, because of the inability of UK suppliers to meet all the orders.) The Bank of England – or indeed any central bank – ought to have reacted with alarm to such money growth patterns.



I said earlier that – if Milton Friedman’s money growth rule had been followed – a chart of money growth would look like a flat plain, whereas in practice the chart of *aggregate* money growth in the UK resembled a mountain range. The purpose of this further chart is to show that – in the chart with the -20% to +80% y axis – the line for aggregate money appears quite subdued. But that is only because the axis has been changed. Because of the greater amplitude of fluctuations in financial sector money, the mountain-range effect is restored with the series for this type of money.

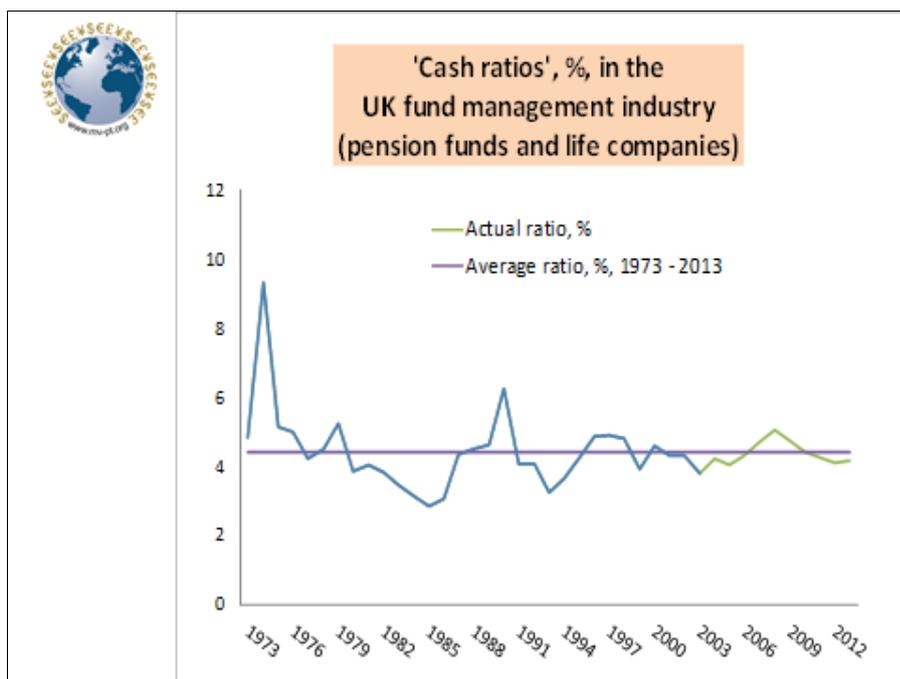
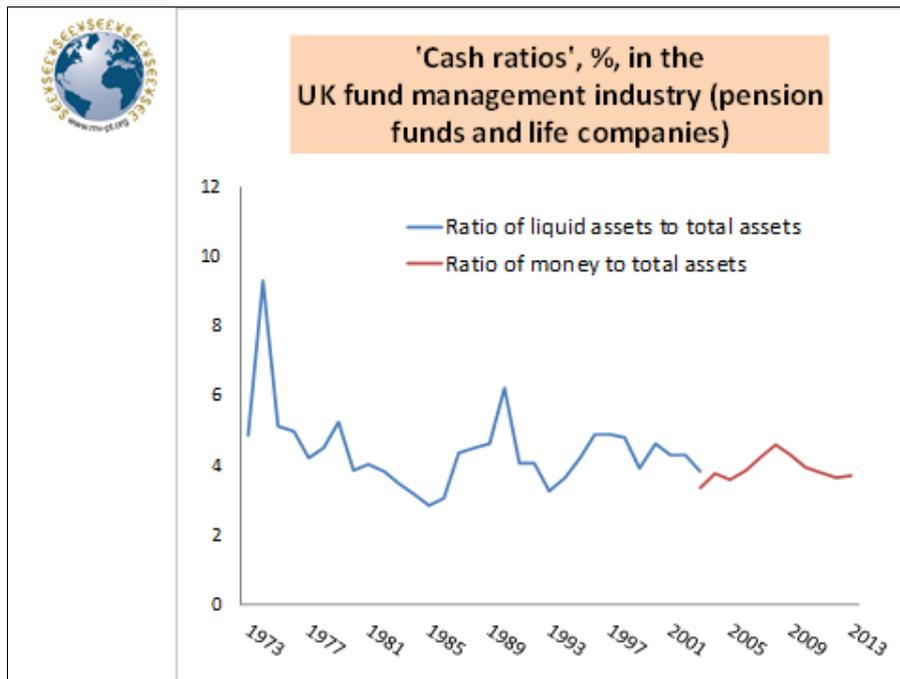


A key issue from the recent discussion is, ‘how much does the ratio of financial institutions’ money to their total assets vary over time?’. Plainly, if the ratio were unalterably fixed, the institutions’ total assets would have risen in the year to Q2 1972 by 71.6% and in the year to Q3 1987 by 58.7%. In reality the institutions’ ‘cash ratio’ (i.e., the ratio of liquid assets or money to total assets) has varied considerably from year to year. It is not possible to draw mechanical and precise conclusions about the movement of nominal asset prices merely from the change in financial sector money. But over the medium and long terms the institutions have kept their cash ratios quite close to the long-run average value. In 2005 I published a short book on *Money and Asset Prices in Boom and Bust*, which used UK data over the 1963-2003 period. The cash ratio of the UK’s pension funds and life assurance companies was much the same in 2003 as in 1973. The stability of the ratio is remarkable, in that the LAPFs’ total assets climbed by about 50 times in these four decades, which saw both high inflation and a tendency for people to hold their savings increasingly in institutional form.



But what has happened since 2005? The argument that ‘money matters’ depends, crucially, on the stability of agents’ money preferences. It is that stability which means that large changes in money have most impact on national income and wealth, instead of on the velocity of circulation in the  $MV=PT$  identity. Have the UK’s large savings institutions maintained much the same cash ratio since 2005?

The presentation of the official data has changed since I wrote *Money and Asset Prices in Boom and Bust*, but an official series is available, if on a slightly different basis from that in my 2005 exercise. The new series has a ‘cash ratio’ for 2003, defined in a slightly different way from the old series, of 3.3%. On the old series the cash ratio at end-2003 was 3.8%. Clearly, they relate to much the same underlying concept. The chart below shows the old and new series, with two values for 2003 of course, over the whole period from 1973 to 2013. On the chart beneath that, I have cheated a bit and added 0.5% (50 basis points, i.e., the difference between the two series in 2003) to the values of the new series from 2004 onwards, and presented the resulting series as a continuous one from 1973.



My main point here is – I think – obvious. We have in the last few charts evidence of extraordinary underlying stability in the money-holding of the UK’s long-term savings institutions, despite all the turmoil and uncertainty of the period under consideration. Between 2003 and 2013 LAPFs’ assets rose another 150% or so. So the ratio of money to assets was much the same in 2013 as in 1973, but LAPF assets had soared by 125 times. Not surprisingly, a core theme of my work is that money is relevant not just to current expenditure (‘spending in the shops’) and certainly not only to retail transactions. In equilibrium, it must also be willingly held – at the prevailing asset prices (and the associated value of national wealth) – in the portfolios of wealthy individuals and the financial sector (i.e., the LAPFs, unit trusts, etc.) So to summarize,



In a period of 41 years inclusive (1973 – 2013) total assets of the UK's pension funds and life assurance companies rose by about 125 times. Throughout this period they were the UK's dominant institutional investors. **But the ratio of liquid assets, of money-like assets, including money, to total assets barely changed.**



LAPFs' total assets at end-2013 were just under £4,000b., about two and half times GDP.) But the ratio of liquid assets – of money-like assets, including money – to total assets barely changed over the four decades. **It was 4.8% at end-1973, compared with 4.1% at end-2013 and an average over the 41 years of 4.4%.**

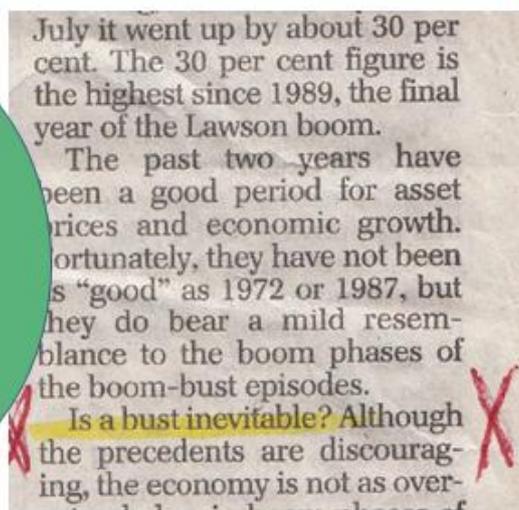
Further, the lesson of the years that followed the asset price excesses of 1972 and 1987 is that boom inevitably gives way to bust. High asset prices affect demand, rising demand reduces unemployment and spare capacity, excess demand causes an upturn in costs and inflation, and so on. Policy-makers should always be alert to money data, and they need to keep a watchful eye on, for example, the rate of growth of money held in the financial sector. In late 2005 and 2006 signs of another boom-bust cycle were emerging, with some increase in the rate of aggregate broad money growth, and a marked and well-defined sharper acceleration in the rate of growth of financial sector money. My interpretation was that the money data were worrying, and I wrote reports and newspaper articles expressing concern. (I also organized a couple of letters to *The Financial Times*.) Below I show one of the articles, which appeared in *The Sunday Telegraph* in early September 2006.

## 'Why did no one see it coming?'



## 'Why did no one see it coming?'

A clear warning, over two years in advance of the Queen's question at the LSE



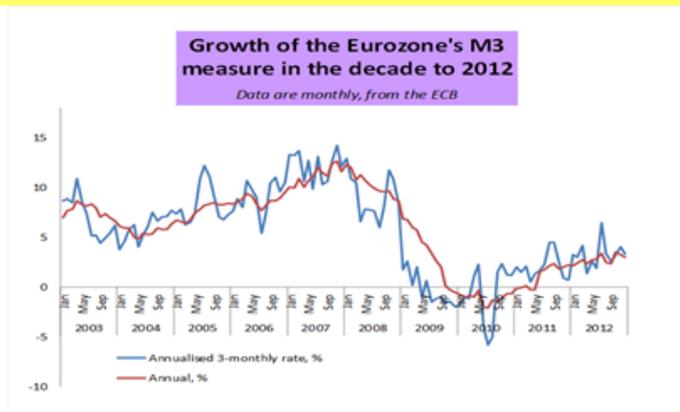
As I noted earlier, in 2008 the Queen used the occasion of a visit to the LSE to ask a large group of economists, 'why did no one see the Great Recession coming?'. I concede that I did not anticipate the severity of the Great Recession. However, I did give a clear warning two years ahead of the trauma that monetary policy was not being conducted properly and that future instability was all too likely.

An implication of the Quantity Theory of Money – and particularly of Friedman's prescription of stable money growth – is that policy-makers should avoid large fluctuations in the rate of growth of the quantity of money. They should prevent big swings in money growth, in both upwards and downwards directions. However, in the run-up to the Great Recession central banks and finance ministries around the world were not watching trends in the rate of money growth. The result was a disaster.

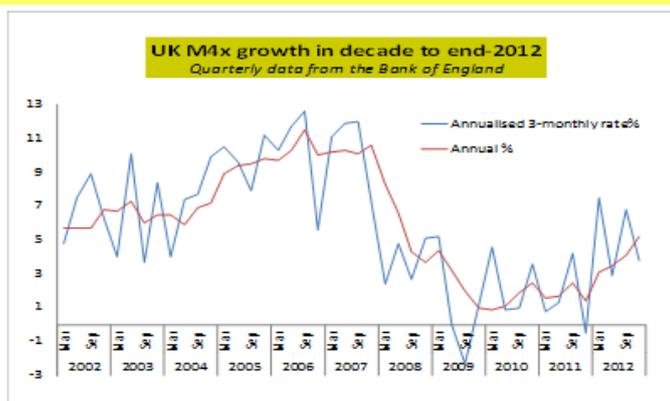
**1. The USA –** Late 2009 saw significant drop in money, for 1<sup>st</sup> time since 1930s, but a coincident not leading indicator, perhaps due to early breakdown in shadow banking 'system' resulting in re-intermediation



**2. Eurozone –** Fairly resilient in 2008, but plunge in money growth from October 2008 preceded slump in H1 of 2009, in line with Friedman's generalizations.



**3. The UK –** Money slowdown in late 2007, after Northern Rock fiasco, and UK early into downturn



In the USA a collapse in broad money growth was associated with the Great Recession. (The timing did not work well for the Quantity Theory of Money in this cycle, in that money did not precede output. Perhaps the explanation is that the main trouble in the USA was in the ‘shadow banking system’, which did indeed implode ahead of the major downturn in demand.) In the Eurozone a slump in broad money growth from October 2008 came before the intensification of demand weakness in 2009. In the UK money growth slowed earlier than elsewhere, probably because of the shock to confidence from the Northern Rock affair. At any rate, in all three jurisdictions a slide in money growth – from roughly double-digit annual growth rates to about zero – occurred in conjunction with the Great Recession.

### **Abrupt G7 money slowdown from 2007 explained the Great Recession**

- Monetary theory of national income determination readily explains the central facts of the Great Recession. In this respect the Great Recession was much the same as the Great Depression, as interpreted by Friedman and Schwartz’s 1963 *A Monetary History of the United States*. (Argued in my 2014 paper in *World Economics*.)
- The monetary interpretation of the Great Recession, as with that of the Great Depression, implies that nothing much was or is wrong with the financial system or with free-market capitalism.

This again confirms the importance of money in cyclical instability. Of course, many commentators want to pin the blame exclusively on the banks and the banking industry. The Great Recession has led to demands that financial institutions explain and justify their behaviour to the societies in which they operate. However, a monetary interpretation of recent events – like Friedman and Schwartz’s monetary interpretation of the Great Depression – argues that bad monetary policy, rather than incompetent banks and bankers, deserves to be condemned for the collapse in demand, output and employment suffered in the Great Recession. At any rate, the role of the financial sector in modern liberal capitalist democracies needs to be debated and clarified, and that may become one of the areas where the Institute of International Monetary Research promotes new research.

## **3. How will the Institute approach its work?**

The Institute of International Monetary Research will pursue its aims in various ways, including

- Guest lectures and conferences on money and macroeconomic issues,
- Publications, including a series of research papers,
- Videos and other material on the website, and

- Work with other educational institutions, including possibly sixth forms in schools, as and when resources allow.

The Institute is an educational charity, with the legal form of a 'charitable incorporated organization'. Its activity will be financed by a combination of donations, research grants, and revenue from non-profit making publications and services that are available to all. As a charity, the Institute cannot sell a high-cost research advisory service to companies and financial institutions. However, International Monetary Research Ltd. is able to sell a high-cost research advisory service to companies and financial institutions, and a new website and set of services is in preparation. I do not intend to charge my time to International Monetary Research Ltd. and 100% of its profits will be paid to the Institute. Former clients of International Monetary Research Ltd. can help the Institute by renewing their subscriptions to the company when its new service becomes available. I am the Institute's first Director, and am unpaid and working on a part-time basis. I plan to stand down shortly, so that a full-time and paid Director can take over, and devote more time and energy to the Institute than I can. The Great Recession has demonstrated the importance of banking and money to both macroeconomic outcomes and economic efficiency in liberal democracies. An institute focussing on the relationship between money and national income has long been needed. May I finish by quoting from Professor Mark Blaug's *Economic Theory in Retrospect*, often regarded as the best single-volume survey of economic thought?



I did not know, when checking this quote in *Economic Theory in Retrospect*, that Professor Blaug had been heavily involved in the early development of the University of Buckingham or that he was one of the strongest supporters of a university free from state control. I hope he would have given his blessing to the new Institute. Thank you.

Tim Coyle