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# **An income gap theory and its effects on unemployment and economic growth**

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**An Income Gap Theory and its Effects on Unemployment  
and Economic Growth**

**By Drs Kees De Koning**

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## Introduction

An income gap is usually defined as the inequality gap in incomes between rich and poor. One may call such a gap the relative income gap or *rig*. From time to time in an economy a different type of income gap can occur: the absolute income gap or *aig*. This income gap can be defined as the income shortfall to all individual households together to purchase all goods and services available in an economy. This paper will focus on the absolute income gap only, either referred to as income gap or *aig*.

A well known counterpart to the income gap is the output gap reflecting the un-used capacity to produce goods and services in an economy. The latter reflects the producers' unfulfilled expectations of demand levels; it reflects the supply side in an economy.

This paper aims to set out why individual households can collectively experience an income gap independent of whether producers have set up an output capacity which may under- or overestimate demand levels.

The U.S and the U.K. produce statistics on the balance sheet of households and non-profit organisations. The assets side is divided into nonfinancial assets (mainly homes and consumer durable goods) and financial assets. The financial liabilities side includes all liabilities entered into by individual households. Usually the collective liabilities -government debt levels- are excluded. The result is the net worth position -the equity base- of all individual households together. These statistics measure the changes in assets and liabilities; they produce the evidence when part of an income gap -the equity gap- occurs, but not the reasons for such income gap occurring.

In 2008 U.S. individual households saw their net worth -equity level- reduced by about 110% of U.S. GDP value of the same year. In the U.K. individual households lost about 90% of the value of the U.K. GDP in the same year.

The magnitude of these losses were enormous and had and still have major consequences on what individual households could and still can afford to spend in the years following 2008 and how their attitudes to savings and spending did change. These losses had serious effects on government deficits in the years after 2008 and on the banking system. Unemployment levels increased rapidly due to the lack of purchasing power; labour participation rates dropped, wages grew less rapidly than inflation levels and asset prices tumbled, especially home values and equity prices.

All existing economic policies have shown few signs of making a substantial impact on unemployment levels and on economic growth rates. Even unusual policies, such as quantitative easing, did not bring back economic growth rates and higher levels of employment and incomes.

The main reason is that existing economic policies start from the premise of what governments and central banks can do, rather than what individual households need in order to get back to work and earning their own incomes. The focus of economic theories need to be switched from focussing on governments' and central banks' actions to actions which help overcome the absolute income gap for all individual households together.

What is of particular importance to individual households is to study the links between their incomes and inflation levels in both consumer prices and in asset values. The borrowing levels of both the individual households and the government together need to be studied as individual households are responsible for paying back both types of debt. The developments in nominal equity levels of individual households need to be a subject of study as they can be influenced by true savings, but also by excessive price rises in homes or shares for instance. Finally an impediment in moving equity wealth into cash for consumption is also the subject of this study. This is especially applicable to pension funds' wealth owned by individual households.

## 1 The income gap approach

The study of economic events under an income gap approach does not start with whether a government runs a budget deficit, or whether banks make huge losses and need to be rescued or even whether some companies need bailing out because they are too important to an economy to let them fail; no, it does start with the collective group of individual households in an economy and studies what happens to them. An income gap occurs for a number of reasons:

- Individuals cannot find jobs: a major source of income loss,
- Average wages do not keep pace with inflation levels; another income loss,
- Available disposable incomes are reduced due to increased taxes, mortgage charges, reduced interest rates over savings, increased import costs and repayments of outstanding debt,
- Asset prices for homes, shares and other investments can change due to a number of factors, which influence the ability or preference of individual households to borrow. Such asset price changes influence the equity levels -the net worth- of individual households
- The liabilities side is influenced by the changes in the level of borrowings by individual households and governments; increased borrowing levels increase consumption levels (quantities) or inflation (price changes); reduced borrowing levels mainly reduce consumption levels.

As the evidence shows in the Balance Sheet of Households and Nonprofit Organizations for the U.S<sup>1</sup> and The Households & Non-Profit Serving Households: Total Net Worth by asset and year for the U.K.<sup>2</sup> individual households lost respectively \$12.6 trillion in the U.S. or 19.1% of their net worth in 2008 and £841.2 billion in the U.K. or 12.4% of their net worth in the same year. The loss in the U.S. should be seen against the context of an average annual profit of \$3.3 trillion over the period 2000-2007. The total change was therefore \$15.9 trillion in 2008. This “loss” was 111.2% of U.S. nominal GDP in 2008.

For the U.K. the average profit made by the individual households was £452.6 billion per annum over the years 2002-2007. Add this average profit over previous years to the loss of £841.2 billion in 2008 and the real “loss” was £ 1.29 trillion. This represented a 90.3% loss in nominal GDP terms in 2008.

Just these two figures: a loss of more than the whole GDP value of 2008 in a single year in the U.S and practically the whole GDP value in the U.K. in the same year should have alerted economists that something was fundamentally wrong for the individual households. The latter households did not volunteer to lose such substantial amounts; collectively they did not change their behaviour of turning themselves from prudent households to super gamblers.

The U.S. and the U.K. are just two country examples of the major changes which happened to individual households in the world since 2008. Other countries, like Spain, Italy, Greece, Ireland, Portugal and Cyprus do not have the same type of statistics, but all circumstantial evidence like house price developments, stock markets’ indices as well as the number of unemployed indicate that the same economic processes took place in the latter countries.

In my opinion the most amazing fact has been that since 2008 the economic policy priorities seem solely focussed on rescuing governments and banks and that the unemployed, the income growth below inflation levels for those in work and the net equity position of individual households has been totally forgotten. Not only have individual households’ financial position been forgotten, the actions in some countries by central banks and governments have further undermined the restoration of the financial muscle of the individual households. Collective entities like governments and banks have claimed priority over individual households. Lord Keynes understood the importance of individual households in the demand process in countries. Perhaps his emphasis on additional government spending has become somewhat outdated in view

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<sup>1</sup> <http://www.federalreserve.gov/releases/z1/current/z1r-5.pdf>

<sup>2</sup> <http://www.ons.gov.uk/ons/rel/cap-stock/the-national-balance-sheet/2012-results/stb---national-balance-sheet-2012.html>

of the extremely high levels of government debt already existing in most developed countries, but his priority was individual households' income and demand management.

The 2008 crisis was a crisis caused by the financial sector, especially in respect to home mortgages in the U.S., but certainly not restricted to the U.S. alone. Other countries like the U.K. and Spain for instance followed a similar pattern. Home loans were granted to individual households who could not repay such loans or homes were build, like in the case of Spain, for which there were no buyers. A substantial share of these loans was securitized, especially in the U.S.; which, in laymen terms, means callable at any time as long as there are potential buyers for such bonds. The losses on outstanding home loans caused the demand for such bonds to dry up completely. Investors wanted to get out of such loans instantly, rather than wait for households' income developments to improve. To try to get money back out of fixed assets in a very short period of time, did, of course, affect home prices. The 2008 crisis can best be described as a money conversion scheme into fixed assets - homes- gone wrong. Money was given to individual households who could not afford to pay back such loans and investors wanted as much of their money back as they could get and as soon as possible by selling off the underlying assets. The 2008 crisis was a financial liabilities crisis, which caused the subsequent financial assets crisis through the losses on liabilities, which subsequently caused non-financial assets (homes) to drop substantially in values. The combination of the non-payment on financial liabilities, the drop in financial assets values and the drop in home values caused the subsequent economic crisis in the real economy. Home owners who had fully paid off their mortgages were just as much affected by dropping house prices as those who saw their home equity position turn into negative equity. The 2008 experience showed that money flows rather than real sector activities seriously damaged the financial health of all individual households. It subsequently wrecked the income levels for many of those who wanted to work. Mistakes by the money managers caused the longest downturn in economic growth since the 1930's. For many European countries the hardship is not over yet.

This paper hopes to establish that when financial assets and liabilities' flows create havoc to economic growth and employment levels -as it has since 2008-, it will also be financial flows which can help to turn economies around.

In the next sections an attempt will be made to show that helping individual households in their efforts to provide for themselves has the best chance of turning economies around. Employment, unemployment and the labour force participation rates will be discussed in section 2. In section 3 the incomes earned as compared to inflation levels will be discussed and in section 4 the net equity position of the individual households will be highlighted. In section 5 some institutional and other adjustments will be worked out which could be used to close the income gap .Section 6 draws some conclusions.

## **2 Employment, unemployment and the labour force participation rates**

In the U.K. in 2006 29.025 million people had a job and the labour force participation rate was 72.8% of all individuals in the age group 16-64 years. In 2006 1.674 million people were unemployed, which was 5.4% of the labour force.

When the labour force participation rate drops, it means that less income is generated by the active labour force. For instance take the case of 2009 as an example. In 2009 the actual employment level was 28.960 million people and the labour force participation rate 70.9%. If the rate of 72.8% had been maintained, 776,000 more people would have had a job. At an average income of £23,410 per person, this loss in income amounted to £17.95 billion which was equal to 1.28% of nominal GDP in 2009. Add to this that -compared to 2006- 720,000 more people were registered as unemployed. This meant that unemployment benefits had to be paid for the unemployed, increasing government expenditure by 43% for the unemployed category. The additional unemployment benefits added up to £2.4 billion in 2009 or combined with the change in labour force participation rates a total income loss of £20.35 billion which equalled 1.46% of nominal GDP in the U.K. in 2009.

The income loss by those who could have worked, but could not get employment, as well as the costs of unemployment benefits, leads to a double loss for individual households still in work. The collective labour force earns less -for 2009 it was £17.95 billion less to be precise- and it has to pay more in taxes to support those out of work -again £2.4 billion more in 2009-. One should be reminded that there is no value judgment in this statement; the discussion is not about whether unemployment benefits should be paid and for which amount; this is a political choice. The income loss reflects the actual impact on individual households' incomes for those still in work -the economic impact-.

An element which is often overlooked is that such income loss cannot be recuperated in future years. It is a time related loss: the U.K. labour force did not work and has not worked at full capacity since 2009. The labour factor is different from the production capacity of machinery. Machinery can usually be used in future years until a technical collapse occurs. Since 2009 in the U.K., the labour force participation ratio has not reached 72.8% again and the unemployment rate has not dropped till 5.4%. In the U.K. losses on incomes have been accumulating year over year, reducing the prospects for economic growth, the financial health of banks and companies and the health of the U.K. government's finances.

One does not have to make a precise calculation for countries like Spain, Greece and Portugal where unemployment rates have soared, to understand how the very substantial income losses work their way into their respective economies.

Just one more country example: the United States. In December 2006 the size of the U.S. labour force stood at 152.732 million people of which 145.970 million were employed and 6.762 million were unemployed or 4.4% of the labour force. These figures were seasonally adjusted. In December 2009 the labour force stood at 153.120 million with 138.025 million employed persons and 15.095 million unemployed or 9.9% of the labour force. The labour force participation ratio was 66.4% in December 2006 and 64.6% in December 2009. While some demographic factors can play a role in the reduction of the labour force participation rate -retirement from work for instance- the reduced rate can also occur due to people being so disappointed in finding jobs that they no longer bother. The latter group are in the right age group 16-64 years, but are no longer actively seeking jobs. In the period December 1997-December 2006 the U.S labour force participation rate dropped from 67.2% till 66.4%. However since 2007 the drop has been much more severe from 66.4% till 63.5% in February this year (2013). This is unlikely to all originate from demographic factors, especially in the U.S. where it is quite common to work past retirement age. The income losses due to the reduced labour force participation rates are substantial. For instance, if in 2009 the labour force participation rate had been sustained at 66.4%, some 1.8% or 2.756 million people could have earned additional incomes. The amount would have been \$45,155 -the average employee income in the private sector- times the 2.756 million, which equals \$124.5 billion in lost income. The rise in unemployment figures from 6.762 million in 2006 to 15.095 million in 2009 -an increase of 8.333 million led to additional unemployment benefits of some \$126.5 billion in income losses to the working population. From these two factors alone, the U.S. economy suffered an income loss of 1.8% of nominal GDP in 2009.

Again, like in the U.K. and other countries, in the U.S. the income losses accumulate. However in the U.S. the unemployment rate has come down to 7.7% in February this year (2013). In the U.K. the latest data indicate a stagnating unemployment rate at 7.8%, while in the Eurozone countries the unemployment rates are still rising.

### **3 The income gap and inflation levels**

Inflation -price rises- have a negative effect on the value of the monies earned through employment as well as on the value of savings.

In the next table an overview is given for the U.K. for the period 2000-2012 for the retail price index, the average annual nominal earnings and the average annual real earnings.<sup>3</sup>

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<sup>3</sup> <http://www.measuringworth.com/ukearncpi/>

**Table 1: Retail Price Index, Average Annual Nominal Earnings, Average Annual Real Earnings U.K. 2000-2012**

| Year | RPI (2010=100) | Av. Annual Nominal Earnings (£s) | Av. Annual Real Earnings (in 2010 £s) |
|------|----------------|----------------------------------|---------------------------------------|
| 2000 | 76.176         | 16,545                           | 21,719                                |
| 2001 | 77.526         | 17,403                           | 22,448                                |
| 2002 | 78.818         | 17,953                           | 22,778                                |
| 2003 | 81.098         | 18,525                           | 22,843                                |
| 2004 | 83.513         | 19,331                           | 23,147                                |
| 2005 | 85.871         | 20,215                           | 23,541                                |
| 2006 | 88.615         | 21,164                           | 23,883                                |
| 2007 | 92.414         | 22,217                           | 24,041                                |
| 2008 | 93.256         | 23,019                           | 24,683                                |
| 2009 | 95.589         | 22,975                           | 24,036                                |
| 2010 | 100.000        | 23,504                           | 23,504                                |
| 2011 | 104.860        | 24,087                           | 22,970                                |
| 2012 | 108.100        | 24,472                           | 22,639                                |

In the period 2003 till 2008 the average annual earnings went up by 3.7% and inflation by on average 1.6% per annum, which left the average earner with an increase in real earnings before tax. However since 2009 inflation rates increased and the increase in nominal earnings slowed down. In real terms this meant a decline in income levels to the extent that the 2012 average earnings in the U.K. after inflation were no higher than in 2002.

The disposable income levels are also influenced by government tax takes. In fiscal year 2002-2003 the U.K. Government's expenditure levels were at 38.5% of GDP and in fiscal year 2011-2012 such expenditure had gone up to 45.4% of GDP. The fact that the U.K. Government had to borrow a substantial part of such expenditure does not take away the responsibility of individual households to pay back such expenditure.

The conclusion for the U.K. is that since 2009 the real incomes of individual households have been dropping and the tax obligations have gone up, a scissor movement which leaves individual households in a much weaker position to expand consumption levels.

For the U.S. the following table shows how the production workers hourly compensation in nominal dollars compares with the U.S. inflation levels over the period 2002-2012.

**Table 2 Production Workers Hourly Compensation and U.S. CPI levels 2002-2012**

| Year | Production Workers Hourly Compensation (nominal dollars annual increase %) | Consumer Price Inflation % | Households Gain (+)<br>Households Loss (-) |
|------|--|----------------------------|--|
| 2002 | 8.57   | 1.58                       | +++  |
| 2003 | 2.47   | 2.28                       | +  |
| 2004 | 7.10   | 2.66                       | +++  |
| 2005 | 3.68   | 3.39                       | +  |
| 2006 | 1.88   | 3.23                       | --   |
| 2007 | 2.88   | 2.85                       | +/-  |
| 2008 | 3.19   | 3.84                       | -  |
| 2009 | 1.08   | - 0.36                     | ++   |
| 2010 | 1.11   | 1.64                       | -  |
| 2011 | 1.67   | 3.16                       | ---  |
| 2012 | 1.00   | 2.07                       | --   |



This table only gives a partial picture of what happened in the U.S. Firstly it deals with those in work and not with those who could not find jobs any longer. The income shock for those who lost their jobs was significantly more extensive than for those still in jobs or those in self employment. Secondly from 2009 the U.S. Government budget deficit increased from \$458 billion in 2008 to \$1.413 trillion in 2009. In 2010 it was reduced somewhat to \$1.293 trillion and stayed practically at this level in 2011 and 2012. This all means that U.S. individual households not only saw their real income levels drop over the last three years, but also simultaneously saw their debt obligations increase sharply as a consequence of the budget deficits run up by the U.S. Government.. Again the scissor movement occurred as was the case in the U.K.: higher debt levels combined with real income drops.

Disposable income levels are not only determined by income out of work, but also by incomes out of savings and by changes in the levels of borrowings.

In a previous paper: The United Kingdom: Economic Growth, a Draft Master Plan<sup>4</sup>, I compared the interest rates received on short term cash -the base rate- and on long term cash -the 10 year Gilts yield- with the inflation rate over the period 2002-2012. From 2002 till and including 2008, there was a positive margin for both short term and long term cash savings over the inflation level. From 2010 till current date, inflation levels have substantially exceeded both the short term base rate (0.5% at the moment) and the long term government bond yield (1.98% over 2012). The inflation rate was respectively 4.6% in 2010, 5.2% in 2011 and 3.1% in 2012.

The collective individual households' incomes in the U.K. were not only hit by higher unemployment levels, lower labour force participation rates and higher government debt levels, they also suffered from below inflation level rewards over their savings. The income gap did become wider and wider over the period 2009 till to-day.

For the U.S. the income gap created out of savings was smaller than in the U.K., but still relevant over the last few years.

What has been striking both for the U.K. and the U.S. is how individual households have reacted to the economic and housing crisis. In the U.S. the outstanding level of home mortgages reached its peak in 2007 at \$10.549 trillion. According to the most recent data as per end 2012 it now stands at \$9.431 trillion, which is \$1.1 trillion less than per end 2007. On top of this one should take into account that over the period 2008 to to-date about 3 million new homes were built in the U.S at an average value of \$165,000 per home. The money used for acquiring these homes - \$495 billion- did not come from individual household's borrowings but out of their incomes and savings. Less borrowings plus the money spend on additional homes amounts to some \$1.6 trillion, which reduces incomes available for other consumption spending. As a result U.S. homeowners are working their way back to the pre-crisis owners' equity percentage of 56.6% in stead of the current 46.6%.

In the U.K. according to the most recent data per end of 2011 the total nominal mortgage level stayed the same over the whole period as from 2008, notwithstanding relatively high inflation levels. Over the years 2008-2011 480,000 new homes were built in the U.K. with an average value of £180,000 per home. This amounts to £86.3 billion in savings out of current incomes over these years (2008-2011), another income loss -reduction in monies available to spend on other consumer goods and services- out of current incomes.

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<sup>4</sup> <http://mpira.ub.uni-muenchen.de/44369/>

#### 4 Net equity levels for individual households

There are a series of factors which influence the net equity levels of individual households. Basically these factors can be split up into three categories:

- Income related factors.
- Assets related factors and
- Liabilities related factors.

The income related factors are jobs related as was explained in section 2; they are inflation related as was explained in section 3; they are also related to the level of taxes imposed on individuals, but also on companies. Government regulations can impose charges on individual households in an indirect manner; for instance green energy charges and increased train fares above inflation levels. The latter charges do not count as direct taxation levels, but they do affect individual households' incomes. The same services will cost more.

Another income related factor is related to import prices. If oil or gas or other imported commodity or consumer good prices rise above inflation levels, this means a reduction in disposable incomes for domestic consumption.

The next group of factors which influence both incomes and asset values for individual households is home mortgages. Interest rates can change; the type of mortgages available can change, for instance the shift from interest only mortgages to repayment mortgages; the banks or financial markets' losses on mortgages can change which have a direct effect on individual households' net equity levels. On the other hand home prices can change both upwards as well as downwards; this is an asset related factor.

The liabilities include all debt levels which have to be serviced by individual households. Such debt levels include all government debt. An increase in debt levels can make money available above income levels and can help consumption levels to continue above income levels. If borrowings grow too fast, it can also induce asset price inflation. Debts need to be serviced otherwise an economy -which means individual households- lose out in reduced equity levels. Write offs -both of individual and corporate as well as sometimes government debt- of uncollectable debts show up instantly in the equity net worth position of all individual households.

In Table 3 an overview is given of the increase (+)/decrease(-) (factor P) in individual households' financial liabilities as derived from the collective households statistics mentioned previously and the increase/decrease in the U.S. and U.K. government debt levels (factor G) over the period 1996-2012 for the U.S and to 2011 for the U.K. These "credit extensions or reductions on outstanding loans" are added up into one figure per annum and expressed as a percentage of nominal GDP per annum.

**Table 3 U.K and U.S. Individual households' and Government' borrowing levels as compared to GDP**

| Year | U.K P<br>(£ billion) | U.K G<br>(£billion) | P+G<br>(£ billion) | % GDP  |  | U.S P<br>(\$ billion) | U.S G<br>(\$ billion) | P+G<br>(\$ billion) | % GDP  |
|------|----------------------|---------------------|--------------------|--------|--|-----------------------|-----------------------|---------------------|--------|
| 1996 | 21.8                 | 25.1                | 46.9               | 5.95%  |  | 363                   | 251                   | 614                 | 7.83%  |
| 1997 | 37.2                 | 4.8                 | 42.0               | 5.03%  |  | 362                   | 188                   | 550                 | 6.60%  |
| 1998 | 38.2                 | -1.3                | 36.9               | 4.18%  |  | 636                   | 114                   | 750                 | 8.53%  |
| 1999 | 51.3                 | -6.3                | 45.0               | 4.84%  |  | 442                   | 130                   | 572                 | 6.12%  |
| 2000 | 60.8                 | -33.3               | 27.5               | 2.82%  |  | 597                   | 18                    | 615                 | 6.18%  |
| 2001 | 74.2                 | 3.2                 | 77.4               | 7.58%  |  | 623                   | 133                   | 756                 | 7.10%  |
| 2002 | 107.3                | 31.7                | 139.0              | 13.00% |  | 783                   | 421                   | 1204                | 11.31% |
| 2003 | 126.6                | 35.5                | 162.1              | 14.26% |  | 1064                  | 555                   | 1619                | 14.53% |
| 2004 | 133.4                | 40.6                | 174.0              | 14.50% |  | 1468                  | 596                   | 2064                | 17.41% |
| 2005 | 73.1                 | 39.6                | 112.7              | 8.92%  |  | 1151                  | 553                   | 1704                | 13.50% |
| 2006 | 157.3                | 36.1                | 193.4              | 14.50% |  | 1207                  | 574                   | 1781                | 13.31% |
| 2007 | 107.7                | 29.9                | 137.6              | 9.74%  |  | 851                   | 501                   | 1352                | 9.64%  |
| 2008 | 29.5                 | 96.3                | 125.8              | 8.73%  |  | -151                  | 1071                  | 920                 | 6.03%  |
| 2009 | -17.4                | 204.7               | 187.3              | 13.35% |  | -222                  | 1885                  | 1663                | 11.93% |
| 2010 | 8.0                  | 172.8               | 180.8              | 12.33% |  | -179                  | 1652                  | 1473                | 10.14% |
| 2011 | 0.6                  | 102.1               | 101.5              | 6.76%  |  | -210                  | 1229                  | 1019                | 6.75%  |
| 2012 |                      |                     |                    |        |  | 32                    | 1276                  | 1308                | 8.24%  |

Quite a few conclusions can be drawn from table 3.

The first conclusion is that it is useful to add up government incremental borrowings and individual households' incremental borrowings, for the simple reason that individual households are the sole group responsible for paying back both type of debts. Individual households' capacity to pay back such debt depends on their income and equity base. Incomes depend on job levels, the labour force participation rates and income' increases above or below inflation levels. They collectively determine whether the individual households have any chance of paying such debt back. Equity levels depend on income, asset price developments and liabilities incurred. When some households do not fulfil their borrowing obligations -either as individuals, companies, banks or even governments-, such losses will find their way into home prices, share prices, dividend flows and increased taxation levels. They affect the net worth levels of individual households. Surpluses or deficits on the current account of the balance of payments determine whether a country has to borrow from abroad or can lend overseas

The second conclusion is that increased borrowing levels by individual households plus governments together are only sustainable in an economy if they do not force asset prices to go up. Studying the experiences of the U.S. and the U.K. leads to the conclusion that an annual 5%-6% increase in borrowing levels by individual households **plus** governments as compared to the nominal GDP level, seems to be the norm for avoiding asset price inflation. Such levels of borrowings avoid the boom and bust scenarios. In this context inflation should be defined as inflation in consumer good prices **plus** asset price changes. Any level above the 6% seems to lead to asset price inflation. This implies that governments need to manage their own borrowing behaviour in conjunction with that of individual households.

The third conclusion is that the year 2004 was the most excessive year of increased borrowings. In the U.S not only did individual households borrow nearly 2.5 times as much as they did in 2000, the U.S. Government also increased its borrowings by over 33 times its 2000 level. 17.41% of GDP was created with borrowed funds. The Federal Open Market Committee did raise interest rates a number of times in 2004, but two factors made such increases ineffective. The first one was based on expectations. If individual households expect house price increases to exceed the costs of borrowings, they will not be stopped by small adjustments in interest rates. For instance over the fourth quarter 2003 U.S house prices increased at 14.67% on an annualised basis. In 2004 over the whole year they increased by 11.17%<sup>5</sup>. Compare this to the available 5.9% fixed rate for a 30 year mortgage in 2004 and the choice made by many individuals was for more borrowing, helped by banks that were more than eager to comply. Secondly not a single government in the world seems to be guided in their borrowing behaviour by what the prevailing interest rates are. After all a government does not itself pay back the debt it has created. When interest rates are not effective, other measures, like increased reserve ratios on loans, should have been applied to stop the rapid increase in (home) loans. Such measures should also have been applied to investment banks, which sold mortgage bonds to the public.

For the U.K, just like in the U.S., the year 2004 showed that borrowings by individual households increased at a rate of 2.2 times the pace of the year 2000. On top of this the U.K. government borrowed additionally £40.6 billion while in the year 2000 the same Labour Government had reduced its borrowings by £33.3 billion, a swing of £73.9 billion.

The fourth conclusion is that from 2008 individual households in the U.K. and the U.S. basically stopped borrowing additional sums. Not only that, they started paying off debt as can be seen from the U.S figures. Individual households both in the U.K. and U.S. did fund all new home buildings -at a reduced home building start rate- from incomes rather than from borrowings. All this shows that individual households act much more in line with expectations, rather than react to interest rate changes.

The fifth conclusion is that the U.S. and U.K. governments (had) to increase their borrowing amounts since 2008. However, with a reduced equity base and reduced incomes, individual households can not easily absorb the increased tax levels that are needed to get government finances back in balance. In a recent study of 17 countries made by Messrs Luca, Castro and Sousa about adjustments to government deficits, they concluded that it would be better to make sharp cuts in government expenditure rather than increasing tax levels; the earlier method would affect income levels of individual households the least.<sup>6</sup>

## **5 Some possible remedial actions**

### **5.1 Considerations**

#### **Pension funds**

A structural change has taken place both in the U.S. and in the U.K. This change has been the accumulation of financial resources in pension reserves. Pension reserves are assets owned by individual households and invested in financial assets. In line with the objective to build up a pension pot sufficient to cover the income needs over the retirement period, the build up sum of financial assets is only very gradually released back to incomes. This all means is that individual households have substantial financial savings, but are unable to access any of such savings, even at times when an income gap occurs.

How important these savings are can be illustrated by the most recent figures in the U.S. At the end of the fourth quarter 2012 pension reserves stood at \$14.06 trillion, while all liabilities by individual households, excluding government debt, stood at \$13.45 trillion per same date. Individual households in the U.S. have

<sup>5</sup> <http://www.fhfa.gov/webfiles/1189/4q03hpi.pdf>

<sup>6</sup> [http://www3.eeg.uminho.pt/economia/nipe/docs/2012/NIPE\\_WP\\_18\\_2012.pdf](http://www3.eeg.uminho.pt/economia/nipe/docs/2012/NIPE_WP_18_2012.pdf)

been saving very substantially over the period 2008-2012. As per the end of 2008 these figures were: pension reserves: \$10.51 trillion and collective household liabilities \$14.11 trillion.

For the U.K. the figures are equally striking. At the end of 2011 the insurance technical reserves stood at £2.21 trillion, of which pension reserves at over £2 trillion, and total household liabilities -excluding government debt- at £1.54 trillion. Per end 2008 the comparable figures were insurance technical reserves: £1.90 trillion and financial liabilities: £1.55 trillion.

The assets of nearly all pension funds are practically completely invested in marketable financial assets. Pension funds allocate their financial resources over a portfolio of shares, bonds, mortgage backed securities or other securities. Such investments represent the liabilities of banks, companies, government entities and, to a very limited extent, individual households. Such investments help economic growth, but only in periods that individual households do not experience the income gap phenomenon. Collectively pension funds are pro cyclical institutions, in good times they raise the pay-out to pensioners, in bad times they reduce the pay-out. Individual savings in pension funds are not used to help close the income gap; in effect they help to widen the gap when such a gap occurs.

### **Banks**

Banks are different from companies. If companies sell their products, they know what price they will receive for their produced good or service. They know their costs of production, so they can assess their profit levels quite quickly. Banks sell risk products. They sell longer term loans based on assumptions on income developments of their clients and on asset values. Whether the clients of a bank: individuals, companies, other banks and even governments, will pay them back is an uncertain event. However in order to stay in business, banks have to pay their depositors -their costs of funds, their working capital costs-. In the U.S. 70% of all liabilities of individual households are constituted by home mortgages and a further 20.7% by consumer credits. The 2008 crisis was caused by excessive lending to individual households in previous years, who could not afford to pay back the home mortgage loans. Such loans were sold to investors who, when loans turned into bad debts- had no link to the bank clients and only wanted to get out of such bonds as soon as possible. Long term loans had been turned into daily tradable obligations, which stopped being tradable, when buyers for such obligations disappeared. Bank losses, both for commercial banks, specialised mortgage banks and for investment banks became so extensive that a number of them were rescued.

### **Other financial institutions**

The Balance Sheet of Households in the U.S. shows that per end of 2012 the total financial assets of individual households added up to \$54.4 trillion and the nonfinancial assets (homes, equipment and consumer durable goods) stood at \$25.1 trillion. Of course with this distribution of wealth, clever financiers try to make money out of money by gambling on the outcome of all types of future developments: interest rates, currency rates, commodity prices, credit risks to name but a few. The derivative business was created. The drive for derivatives was not just created for speculation purposes. Banks, companies and pension funds and sometimes individuals have a genuine wish to transfer specified risks on future cash flows in order to ensure that the outcome can be fixed. However from a macro-economic point of view the speculation aspect is not particularly productive; economies will become more productive if the underlying reasons for the volatility of prices would be managed better.

In the U.K. the non-financial assets of individual households came to £4.30 trillion per end of 2011 and the financial assets came to £4.28 trillion per same date.

### **Companies**

When companies create a production capacity, as they did in the run up to 2008, they do this in the expectation of using such capacity nearly to the full extent. When a major drop in sales occurs as it did in 2008 and subsequent years, companies scramble to reduce their capacity. Employees are laid off and less machinery and equipment is ordered. Multinationals and major companies started hoarding cash rather than

invest or employ more people. They also kept and keep tight checks on salaries, so as to restore their own profitability levels.

### **Central Banks**

When discussing the experiences of the last 18 years, the term Central Bank is used to include all authorities which supervise and set rules for the banking and financial sector, so as to avoid the opportunity for some entity to hide behind others in claiming it was some one else's responsibility.

Central banks in the U.S. and the U.K., just like in many other countries, did fail in controlling the volume of lending going into the housing markets. This led to asset price inflation far higher than the RPI or CPI level. As stated above, in the fourth quarter of 2003 house prices in the U.S. increased by 14.67% on an annualised basis and for the whole year 2004 by 11.7%. 30 year fixed interest rates at 5.9% were no deterrent to borrowing. This showed up in table 3 in that 17.41% of the U.S GDP and 14.50% in the U.K. GDP in 2004 was financed, not by incomes, but by borrowings. The seeds of the 2008 crisis were sown.

Central banks did not insist that banks guarantee the home mortgage obligations sold to outside investors. Had central banks done so, most commercial banks would not have entered into such large volumes of home mortgage lending and investors would have had the benefit of bank guarantees rather than the collateral base of homes. In the U.S. alone 5.5 million "second hand homes" were brought back into the market since 2008, distorting home prices for all home owners, not just the doubtful debtors. Also investment banks would have made substantially lower profits on mortgage bonds as only bank guaranteed risks would have been sold.

It is somewhat short sighted to state that the only Central Bank inflation objective deals with consumer goods and not with individual households' asset values. Incomes and asset values are intricately linked for individual households as the 2008 crisis has shown.

Central banks have no control over the borrowing behaviour of a government. As table 3 shows, the creation of debt by a government should be added up to that of individual households as the latter group is responsible for paying back both types of debt. Non- inflationary debt creation levels for P + G would seem to hover around 6-7% of nominal GDP.

Interest rates do not seem to have any impact on government borrowing levels. They also seem -as the evidence shows- to have little impact on individual households when house prices increase at a rate far above the costs of borrowing. Interest rates do have an impact on company borrowings, as they constitute one element in profit assessments. Lowering of interest rates has little impact on individual households' borrowings when an income gap has occurred. Rather than borrowing more as when house prices rise, individual households will save more when house prices drop, notwithstanding low interest rates. This has been the case for both the U.S. and the U.K.

Central banks have used the recession period to buy up government debt -quantitative easing-. In creating money to do so, central banks have achieved two unwanted targets: (1) the price of fixed rate government bonds or gilts has been artificially altered, to create an accounting gain for holders of such bonds, like banks and pension funds. However such gains will turn into losses when interest rates over such bonds start to rise. (2) Individual households, who are main government bondholders -mostly indirectly through pension funds and mutual funds-, have seen a drop in income levels over such bonds. This was realised at a time that additional incomes would be most welcome to close the income gap for individual households. If governments had mainly issued index-linked bonds, such gains and losses would have been substantially smaller and fixed rate loans to companies would not have been affected. However individual households would have benefitted from such a move.

## Financial assets and liabilities and economic growth

More money in circulation does not mean a higher economic growth rate or higher profits for companies or more jobs and incomes exceeding inflation levels. If economics were so simple, just print money and give it away. However such action would totally undermine the value of money. Individual households would return to a barter economy. In the above it was made clear that money flows transferred from one group of savers to another group of users can induce asset price inflation and consumer goods inflation. If the collective of individual households incur losses due to some groups -individual doubtful debtors, companies going into receivership, banks going bankrupt or severely restricting lending levels, governments not paying back their debts- such losses reduce the values of the accumulated savings -the equity net worth of individual households-. Such net worth losses can and does sometimes change the attitudes to savings by individual households. A major loss in net worth occurred both in the U.S. and in the U.K. in 2008. It affected banks in many countries and led to a major loss in confidence. Individuals lost their jobs and incomes and the downward cycle was set in. Increased borrowings by individual households in previous periods were turned into actions to reduce debt levels. Lower house prices were not accompanied by increased sales of homes but rather the reverse, especially in the U.S., where the overhang of repossessed homes had to be digested before new homes could be sold again.

All these factors led to individual households' incomes and net worth -the changes in assets and liabilities- to show an income gap: individual households were collectively unable to increase their consumption patterns, due to the losses made. In the next section some possible solutions are suggested.

### 5.2 Remedial Actions

The formulation of remedial actions needs to start with the analysis of the causes and effects of an income gap occurring:

- The start of creating an income gap for individual households begins with accelerated lending levels to both individual households and to governments (the year 2004 in table 3). Such increase in liabilities for all individual households was not followed by more production at stable prices, but by an asset price inflation level, far above the consumer price increases (again 2004 as the example). A high rate of asset price inflation makes the use of interest rate adjustments ineffective as expectations over interest rate costs and asset price inflation deviate. For a substantial number of individual households increased liabilities did not keep pace with increases in incomes. The “doubtful debtor loss rate” went up; the effect of it was postponed for some time as many mortgages were granted with a low start up interest rate for a few years. Increased losses followed the steep interest rate hikes. Through the sales of such mortgages to third parties, banks forced the doubtful debtor issue into the open. From the moment investors realised that they would not be paid back for a substantial part of their investments, investors wanted the assets to be sold off. Losses were realised and the net equity level of individual households both in the U.S and the U.K. was severely affected. Home prices dropped in a major way, leading to more equity losses to individual households. This deterioration in their net equity level led individual households to stop increasing their borrowing levels and start saving more (2008 till currently). Companies reacted to lower demand levels by dismissing staff. They also kept staff remuneration increases below their price increases (2009 till currently). Furthermore companies reduced their investments in capital goods and bigger companies started hoarding cash. The income gap for individual households was created. Last but not least governments experienced substantial deficits in their own budgets as tax revenues dropped.

The remedial actions can be clustered around four items:

- An income injection scheme: economic easing
- A different set of interest rates used for individual households as compared to those being used for companies

- Setting up a National Mortgage Bank and National Mortgage Insurance Company, and
- A different approach to bank capital rules

### 5.3 An income injection scheme: economic easing

The absolute income gap situation reflects the period over which individual households are unable to find a sufficient number of jobs; see the labour force participation rate drop for reasons other than normal retirement patterns; see their earnings increase with less than inflation levels and see governments trying to bring order to their own budgets by increasing tax rates. When all this happened -as the evidence shows- individual households in the U.K. and the U.S. continued to transfer incomes into financial and real assets through two channels. They firstly stopped borrowing and started repaying outstanding loans, while they simultaneously funded new homes' building not through additional borrowings but by using incomes and savings. In this manner individual households are hoping to restore their equity base in their most important real asset: their homes. Secondly, again both in the U.K. and the U.S., individual households continued to pump more money into their pension savings; again this represented a net cash flow from incomes to financial assets.

Paying off debts is a sound policy for individual households after a period over overindulgence in borrowings. However such policy does little to restore economic growth and/or increase employment levels as jobs and incomes are kept under pressure due to the lack of disposable incomes. Such adjustments can take many years. As stated before when the labour force is not used to its full capacity, it reflects a loss which cannot be regained in future years.

In the above, reference was made to the importance of pension funds both in the U.K. and in the U.S. Currently in each of these two countries, these funds together have financial assets outstripping all financial liabilities of individual households. However the net pension funds contribution to the incomes of individual households is very restricted. This is due to the composition of the pension savers and retirees per pension fund, whereby the savers get no income in the year that the savings are made and the retirees get only a small percentage of their total pension pot. Furthermore the authorities are strongly involved in ensuring that pension funds keep sufficient reserves. This involvement causes individual pension funds to pay out less to pensioners in bad economic times and increase the pay-outs in good times. The existence of pension funds and their current size enhances the continuation of the income gap phenomenon.

My proposal -as expressed in several previous papers- is to help pension funds understand that it is in their own self-interest to help close the income gap. It is also in the interest of their savers by creating a better business environment for companies and banks, which will lead to higher share prices, lower government deficit levels and most importantly getting people back into work.

Individual households cannot change the rules of savings in pension funds, only governments can. Even individual pension funds cannot act on their own, only collective action will get the desired result.

Economic easing is based on the thought that the level of equity owned by individual households is of little use, if from time to time -at times of an income gap occurring- equity cannot be turned into incomes.

Take the case of the U.S. If, for instance, the US authorities would accept that the U.S. pension funds pay out about 2% of their equity base: U.S\$ 280 billion over four quarterly instalments, and request the U.S pension savers and retirees to spend such money on consumer goods, demand for goods and services would increase substantially. Such action will create jobs and start the process of recovery.

As economic easing is of national importance, the U.S. government could provide a shortfall guarantee to pension funds if, in say 3 years, pension funds have not recovered the amounts spend (the \$280 billion plus interest) through increases in their financial assets portfolios. The U.S. government, companies and banks



will all profit from the extra cash injection, which is nothing more than a temporary switch from equity into cash, both owned by individual households. Individual households do not incur extra debt; they use their own financial resources. The only risk individual households incur is that the shortfall guarantee is called upon. Even this risk is mitigated in that higher levels of economic activity will nearly automatically lead to lower government deficits.

To help make the pay-out most effective it is helpful that all pension savers and pensioners receive an equal amount; this will benefit the younger savers more, but they have to contribute the most in future years and run the highest level of investment risks. It would also be helpful if the pay-out is tax free as the aim is to supplement individual households' incomes. Such "temporary pension dividend" can be stopped at any time that a nearly full employment situation is reached.

Pension funds -and society- will benefit tremendously from economic easing. Those individuals, who are not yet saving for a funded pension, will have a strong incentive to start doing so. At any time the income gap reappears, such pension dividend policy could be used.

#### **5.4 Interest rate setting and government debt**

There is no law which states that savers need to receive the same interest level as borrowers. There is also no law which says that different groups of borrowers -individual households and companies- could not have different borrowing rates suited to them.

What individual households and their long term savings institutions need (pension funds in particular) is the availability of index-linked government bonds, which pay a positive spread over inflation. Income flows over inflation levels is highly desirable for savers. What individual households need, in their capacity as borrowers for the acquisition of homes, is the availability of 30 years fixed rate mortgages. In section 5.5 a proposal for a national mortgage bank will be set out. What companies need is the availability of short term working capital loans and somewhat longer term loans on a fixed rate basis.

Government debt has to be repaid by individual households, even if a central bank buys up such debt titles through quantitative easing. Therefore there should be no obstacle in granting the wish of savers to have, say 80% of public debt financed with index linked bonds. They can be of long maturities -ten years or longer-. Such bonds eliminate the inflation risk out of the equation, making holding on to such bonds much more attractive. Governments with large accumulated debt levels -which cannot be repaid in any other way than over many years- need long term funding for their debts for which index-linked bonds are ideally suited.

For individual households acting as borrowers for buying a home, a long term fixed rate loan is advisable as income developments are uncertain. Fannie Mae and Freddy Mac fulfil this role already in the U.S. Again in the next section some further thoughts will be developed.

For the funding of companies, banks do generally cater well. However if an economic easing policy is followed, banks will have an easier task in predicting future cash flows for large and smaller sized companies. On the whole companies are better off with fixed rate loans, but their maturities do rarely exceed ten years.

In conclusion different groups need different interest rates for the varied reasons of saving and borrowing.

## 5.5 A National Mortgage Bank and National Mortgage Insurance Company

The key consideration is to organize stability and predictability for mortgage payments as income developments are already quite unpredictable for individual households. Long term fixed rate mortgages are therefore desirable. Banks do not have 30 year fixed rate funds to lend. They also cannot reasonably be expected to take on maturity mismatches, by funding short and lending long. Most banks prefer to lend on a variable interest rate basis, which of course does not guarantee stability and predictability. However the latter elements are just the elements of risk management which individual households need.

In the United States 30 year mortgages are the standard rather than the exception. Of all new mortgages granted in 2012, 95% of these mortgages have an involvement of either Fannie Mae or Freddy Mac. Their January 2013 interest offer on a 30 year fixed rate mortgage was 3.41% per annum. This percentage includes both the funding costs plus the risk premium for good clients.

The proposal for the U.K. is to set up a State sponsored enterprise (NMB) along somewhat similar lines as Fannie Mae or Freddy Mac.

Its aim is to help individual households, especially the low and medium income households, to buy their own homes or move from smaller to larger accommodations when households' needs change. Its aim is also to protect individual households -and as a consequence the economy- against interest rate rises, which were not foreseen at the time of taking out the mortgage.

### **-Shared Risks between NMB and the banks and building societies**

In the case of the U.S. both Fannie Mae and Freddy Mac not only take up the funding risks for clients, they also take the client default risks. In the proposed set up for the U.K these risks are split up between the NMB taking the funding risks and the commercial banking sector taking the client credit risks.

NMB would be providing the long term funds for a home acquisition to an individual household in an indirect manner, via the commercial banks and building societies. These latter organisations will add their risk premium to the interest rate set by the NMB according to the payment risk that different households represent. The commercial banks/building societies will also set up a time table with their client to see how the long term loan will be repaid. The banks and building societies will provide a guarantee to the NMB for the servicing of the mortgage loans taken out by their customers through NMB funding. Banks and building societies would also do well to require their mortgage customers to have their salary account with the lending bank/society, so that they can follow income developments of their client. If a client wishes to move the mortgage to a different bank, the salary account should preferably move with it. Credit monitoring should remain the role of the banks/societies.

The technicalities of the funding process for the NMB could be similar to the way both Fannie Mae and Freddy Mac raise funds out of the money and capital markets. Of course banks and building societies as well as pension funds and individual investors could participate in these fund raising exercises.

Both Fannie Mae and Freddy Mac have private shareholders. In my view NMB should be a collective enterprise and therefore the ownership should be all individual households together, represented by the Government. An initial equity capital injection could come from the Government or the Bank of England. In case the NMB turns in a profit, this should not be distributed but added to the reserves of the Mortgage Bank. Its liabilities would not constitute government debt as the loans would not have been used for government expenditure.

The creation of a National Mortgage Bank brings mortgage lending to one main point in a society. This has the great advantage that competition between lenders is about credit risks and not about taking undue funding risks. If individual households want to expand their home mortgage levels too quickly as was the case in 2004 and later years, the best financial organisational structure to deal with such demands is a centralised lending organisation. This centralised financial company, the NMB -owned by all individual

households together- can speed up or just as in the case of the 2004 situation slow down the process of granting home mortgages.

### **-The National Mortgage Insurance Company**

Adverse life events will have an effect on the payment performance of some customers. The aim of the NMI is to cover these effects to the extent that they are not self inflicted. Such protection is especially essential for the lower and median income classes. Nearly all of them have to rely fully on their own employment income and do not possess large sums of available cash other than the amounts accumulated in their pension pots.

The NMI can also help first time buyers by insuring the first 10 or 15% of the mortgage loan after say a 5% or 10% down payment was made. The remainder 80% of the credit risk would remain the risk of the lending bank. Once individual households have reached the 20% equity, the policy would stop to be effective. The NMI can act as a catalyst as well as a brake in the number of home mortgages granted, by temporarily changing the risks it underwrites when mortgage levels grow too slowly or too fast.

The equity pattern for the NMI can follow the pattern of the NMB.

### **5.6 A Revised Bank Risk Management Structure**

When bank regulators consider changing the operating rules for banks, they focus strongly but not exclusively on bank solvency. Solvency reflects the assets and liabilities of a bank, its balance sheet. In section 5.1 it was already stated that banks are different from companies. This is most clearly shown in the flexibility companies have when sales are below or are expected to be below the planned level. They can cut expenses on staff, raw materials and intermediate goods and sometimes reduce borrowings and or even save some cash.

Lending banks' main expense is the interest expense, as they are highly geared operations. Their main income is interest income over loans. This interest income is influenced by doubtful debtors' not fully returning interest and principal. This is similar to a company selling an item at a price, but only receiving part of the price. For banks such reduced cash flow might happen years after the loan was made. The conclusion is that banks are income -cash flow- based companies rather asset based ones. They do not know from the outset what "price" they will receive over the risks taken.

At a British Bankers' Conference held in October last year the Deputy Governor of the Bank of England was quoted as stating that "doubtful debtor accounting are holding banks back"<sup>7</sup>.

My proposal is in line with this thinking. The proposal is:

#### **-Change bank risk accounting standards**

Allow banks to make provisions for doubtful debtors from the moment they enter into loan contracts, be it a mortgage, a consumer loan, a corporate loan, or corporate or government bond. Banks know or should know, from experience, what the payment performance is among their chosen client base. They should anticipate the risks; which means the potential provisions to be made. Allow banks to foresee the write-offs and the period over which such provisions should be made, which in any case should be shorter than the lending period. Once a bank has decided on the potential write-offs, they should be fixed in the accounting ledger. Only the amounts entered at the time of entering into the loan agreement or bond purchase should be recognised for tax deductibility. If actual write offs would turn out to be more, such extra loss should come

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<sup>7</sup> <http://www.guardian.co.uk/business/blog/2012/oct/17/accounting-rules-banking-valuations>

out of shareholders funds and not from the taxpayers. If actual write offs turn out to be less than anticipated, this constitutes a bank profit and corporate tax rates would be levied.

Banks do not need equity capital related to categories of risks that banking supervisors decide for them. Leave it to the bank involved; leave it to the managements whose job it is to assess risks. They should know their clients. However banks need buffer funds and such buffer funds could be in the form of perpetual notes rather than equity share capital. The difference is that the perpetual note holder gets a fixed amount of interest per annum. (Barclays Bank of the U.K. has just announced the issuance of such risk notes). If banks pay interest over such notes, it means that all classes of money depositors get paid for providing the banks with different classes of risk money. In case banks have not set aside enough risk provision money out of their income, the losses are reflected in a value write down of the perpetual notes, which are listed on the stock markets. If banks have over provided, such income after tax may occasionally be distributed over the perpetual notes holders.

In this set up all money providers to banks are regularly paid for their risks in the banking business. Sound risk judgments lead to adequate up-front provisions and the profits made are not distorted by insufficient provisioning. Conservative and well managed banks will gain at the expense of aggressive risk seeking banks. Too low a provisioning level will punish perpetual note holders. Bankers' bonuses should be paid out on a deferral basis and after perpetual note holders have been paid. Bonuses should be paid in perpetual notes. Good bank managers should be rewarded and poor managements will have to forego their bonuses before perpetual note holders are affected. In any case the markets can follow which banks are the healthy ones. Under current accounting rules, they have not got a clue.

In the categories of risk taking, all types of investment banking activities should also be included. For instance own account trading requires at least a fifty percent provisioning; some derivatives trading also require a higher percentage than individual household loans or corporate loans. Mergers and acquisitions activities require a better level of provisioning; so do stock market introductions. Again the more conservative banks will win it from the aggressive banks as too low provisioning is punished by not being tax deductible. In the latter case, this means that more perpetual notes will be needed to keep up the banking buffer. The markets will know which bank has acted most prudently with customers' monies.

In the manner set out above, conservative banks will put their clients' interest first and bankers' rewards second. Aggressive banks will need to convince the markets that they need increasing amounts of perpetual notes in order to survive. The rewards and brakes are built in into the revised bank risk management structure.

A major discussion among bank regulators and governments is going on about how to avoid government bail-outs. Up-front tax-deductible risk provisioning; paying all fund providers for their funds with the difference of risk taking reflected in the interest rates paid and perpetual notes acting as the buffer for errors made by the bankers. Independent accountants appointed by a Central Bank to check on the risk provisioning.

However the key to stable banking activities is to create the economic environment which reduces the risks for individual households, companies, banks and governments together: what economies need in my view is a policy to deal with the absolute income gap.

## **6 Conclusions**

The concept of an absolute income gap is a useful tool to help analyse what went on in the two countries that were subject of this study: the United States and the United Kingdom. Such an income gap can be defined as a shortfall in incomes and equity for all individual households in a country to purchase all goods and services in their economy. Unemployment, underemployment, lower labour force participation rates, wage increases below inflation levels are all symptoms of an absolute income gap appearing. Accelerating borrowing levels by both individual households and governments can create asset price inflation and can cause higher levels

of doubtful debtors throughout the economy. This can happen for individual households, for companies through higher insolvency levels, through bank failures and reduced lending opportunities and even through governments through higher budget deficits. All these “losses” lead to negative equity adjustments for individual households.

If individual households are not helped -through helping themselves- in readjusting their income levels, than the process of adjustment takes quite a few years. After the 2008 individual households’ equity crisis, they reacted by saving more and borrowing less in order to restore their equity base. However at higher unemployment rates and wages growth below inflation levels, such readjustments take a long time, while in the meantime their collective obligations to service rapidly increasing government debt levels presses the readjustments to extend even further in time.

Pension funds represent equity for individual households - financial markets assets- but very little in terms of incomes. Economic easing was suggested as a means to overcome this equity-income gap.

Individual households and the economy as a whole are well served, if a centralised funding organisation would be created: a National Mortgage Bank and a National Mortgage Insurance company. The Bank would provide commercial banks with mortgage loans for which these banks underwrite the credit risks on their clients and the NMB takes the funding risks. The NMI could, among others, from time to time help first time buyers to get onto the property ladder. The NMB and NMI together would be well placed to manage the volume of new mortgage loans, so as to avoid asset inflation levels far above consumer price increases.

There is a need and justification for separate interest rates according to the supplier of funds or the user. Governments are in a position to make this happen. Individual household’ savers deserve protection from inflation levels when it comes to government debt; the tool is index-linked government bonds. Individual households have to repay any government debt; therefore the income granted to the savers is an income enhancing measure -especially useful when an absolute income gap occurs- while the debt repayment obligation has to come out of future incomes. Bringing incomes forward helps to cut short the period of the income gap occurring.

Individual households’ borrowing for the purchase of a home requires very long term fixed rate mortgages. Commercial banks cannot attract such funds and they thereby transfer such risks to the individual households, which at times of interest rate volatility can lead to an income gap occurring. In the above the cases for establishing the NMB and NMI have been discussed.

Companies are usually well served by banks, but stability in an economy is not something individual banks can organise. Short and medium term loans at fixed rates are what most companies need.

Finally banks are different from companies in that they depend on uncertain incoming cash-flows from their clients. Different accounting rules are needed as well as a transition to perpetual notes with a fixed reward rather than rules on bank equity levels. Good conservative banks should be rewarded, while over aggressive banks be stopped by the drop in the values of the perpetual notes.

The main focus in this paper has been on individual households as in my view these households provide the key to economic prosperity or failure. Indirectly the government, companies and banks will all thrive if individual households thrive. What is the world waiting for?

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8<sup>th</sup> April 2013

## Tables and References

Table 1: Retail Price Index, Average Annual Nominal Earnings, Average Annual Real Earnings, U.K. 2000-2012

Table 2: Production Workers Hourly Compensation (Nominal Dollars, annual increase %) and Consumer Price Index 2000-2012

Table 3: U.S. and U.K. Individual Households' and Government Borrowing Levels (annual incremental amounts) as compared to nominal GDP 1996-2012

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