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The world's dream: economic growth : the balance sheet approach

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The World's Dream: Economic Growth

The Balance Sheet Approach

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Executive Summary

Currently the signs of slow growth and recession are every where; an economic slowdown in China and Japan, a slowdown in Germany, the U.K. and other Northern European countries; recession in Southern European countries with extremely high levels of unemployment and slow economic growth in the U.S. Fast growing government debt levels. Fiscal austerity, banks in trouble, shops and businesses closing down. The economic picture is gloomy around the world. This gloom has more or less continued from the onset of the crisis in 2008.

The 2008 crisis was different from previous crises. It did not start with consumers tightening their belts due to a higher price of commodities, either agriculture produce or natural resources. It did not start with general inflation levels outstripping increases in income levels. There were no supply problems back in 2008. It also did not start with governments raising taxes and reducing expenditure levels and finally companies did not stop investing all of a sudden. World exports and imports were up rather than down in 2008 (in volume by 3.1%, according to the OECD Economic Outlook figures). The 2008 crisis did not start as an economic crisis, a crisis caused by factors negatively effecting wages or salaries (incomes) or expenditure levels. The 2008 crisis was not an economic growth crisis.

The crisis did start from the assets and liabilities side. It was and is a world balance sheet crisis. Balance sheet crises can be caused by assets reducing in values and/or liabilities not being serviced out of incomes. The balance sheet crisis started in the U.S. with banks and mortgage providers selling mortgages to people who could not afford the mortgage repayments out of their incomes. The total subprime market segment was "only" \$1.2 trillion out of the total mortgage market of \$10 trillion. In the U.S in the period 2007 till 2011 the total number of bank repossessions of homes was 4.4 million out of a total of 78.6 million owner occupied homes. Over this five year period 5.5% of all owner occupied homes were repossessed and offloaded into the housing market. It was this bankers' action which moved the goalposts from an income related issue for 4.4 million American households to an asset value issue for all 78.6 million home owning households. Over the period 2007-2011 the U.S Balance Sheet of Households and Nonprofit Organizations as published by the Federal Reserve showed a loss to households -a drop in equity, in savings- in home values of US\$6.6 trillion, representing a loss of 28.9% as compared to end of 2006 values. Every American homeowner lost on average \$84,000 out of the original \$ 289,000 value in 2006, over the period till the end of 2011. Just to put it in perspective: this loss was practically equal to all U.S Federal Government combined revenues of 2009, 2010 plus 2011, which added up to \$6.78 trillion.

What a balance sheet can show and what a GDP growth rate does not show, is the reward for savings. The securitisation of U.S home loans and the doubtful debtor performance of 5.5% of all owners over the last five years did not allow for a gradual work out program. Investors wanted their money back as they were promised a "safe" AAA rated asset and this promise was broken. Investment banks should have paid the price for broken promises but they did not. So the adjustments were made by selling off homes. This action caused substantial losses to the savings levels incorporated in the homes of all U.S home owners; a 28.9% loss since 2007 to be precise. Collectively individual households adjusted their spending and borrowing behaviour by paying off home loans and borrowing less for homes. The negative effect on GDP was -6.9% per annum for the last five years. Such behaviour influenced demand levels and government tax revenues as well as the returns on pension savings.

The negative returns on savings in homes, on company shares and other equity, on government bonds -the latter in returns below inflation level- and the losses in pension funds returns all do not show up in GDP figures. They are however the key economic issue and they do show up in the Balance Sheet of Individual Households. These savings losses draw attention to some flaws in the U.S. economic set up -the econsystem flaws- which have greatly contributed to the length and depth of this period of recession and slow economic growth. Some system changes will be suggested for the U.S. and a final section will be devoted to drawing a few parallels with some European economic actions.

1. The Balance Sheet Crisis

1.1 Introduction

It may be as basic as setting out what individual households own and what they owe - the balance sheet- which makes the difference in understanding to what happens in an economy. The United States¹ and the United Kingdom collect such data; Eurostat, the European Union statistical agency has the intention to publish such data, but not until 2020. In this study the main focus of attention will be on the United States for several reasons. The first reason is that if it would be possible to find solutions for the U.S economic problems -a country which has the largest GDP and wealth of any country in the world- than other countries would benefit from the positive side effects. The second reason is that the policy solutions which the U.S. government may choose and implement may well help other governments to decide which of these policies are appropriate for their own countries.

In the U.S. the net asset base of the collective of individual households -its net savings level or net worth- reached \$62.7 trillion as per the end of the second quarter of 2012. Compare this to the revenue level of the U.S government over fiscal year 2011 of \$2.4 trillion and it might be obvious that government actions need to focus on creating and maintaining the economic environment -the economic infrastructure or "economy"- for the private sector to create further wealth. Such wealth creation is for the benefit of individual households -self interest- but also simultaneously for government functions which the private sector cannot easily execute, like healthcare, defence and social support for the unemployed and other groups which have no way to earn a living.

The main focus of this paper is to analyse what has happened to the returns over the accumulated savings elements of the U.S individual households over the last five year period: the returns over savings invested in homes, in equities, in government bonds and in mutual funds and pension funds. Elements of the economic infrastructure like the banking sector, the mortgage lending process, the possible adjustment process if things go wrong and the timing of government action over its own balance sheet and profit and loss accounts will be discussed.

What has changed over time in the U.S. and elsewhere is that the economic emphasis has shifted from what people earn in a year and how much output they produce to what happens to their accumulated savings build up over many years. Returns over savings are not just expressed in terms of dividends and interest -the income side which shows up in GDP figures- but also in asset values- the balance sheet side of society. Measuring GDP is not unimportant but it only reflects how well savings are being used in a society.

1.2 How it all started

Generally speaking, when banks get involved with the funding of home loans, their risk taking is based on predicting individual income levels and - as a fall back position- on the expected future home values. If one studies the trends in the U.S. home markets it should be clear in hindsight that the stress in the home mortgage markets started in 2006 already.

In the U.S. during the few years preceding 2008, mortgage originators started to have mortgages approved by banks on basis of doubtful principles. A Deutsche Bank study² came to the conclusion that 37% of the sub-prime mortgages granted were interest only mortgages; 38% of the mortgages also required no down payment so 100% of the value of the home was borrowed; 43% of the borrowers were not required to provide any proof of income and finally 80% of borrowers were attracted by providing them with a low start up interest rate for a period of two years, after which interest rates were hiked steeply.

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

² http://www.globalsecuritisation.com/08_gbp/gbp_gssf08_022_031_db_us_subprm.pdf

According to the study, the subprime market segment “only” amounted to U.S.\$1.2 trillion out of the total home mortgage market of U.S.\$10 trillion in 2008.

U.S. investment banks started to package these subprime mortgages into Collateralised Debt Obligations. Based on AAA ratings from the U.S. credit rating agencies, the investment banks sold these CDO's around the world, but also to U.S. money market funds. When the real risks to these mortgages appeared, as cash flows faltered, the U.S investment banks broke their promises and were in no position to maintain a market in these CDO's., something they had promised to do. The CDO's turned from “going concern” to “liquidation” securities. The pricing fell off a cliff and many securities' holders could not get out of the risks. Huge losses on savings were made. Banks got into trouble and interbank lending almost dried up. In the U.S, risk taking on house prices was further complicated by the government sponsored enterprises Fannie Mae established in 1938 and Freddie Mac established in 1970 as well as by the Federal Housing Administration. Fannie Mae and Freddie Mac raise their funds by issuing Mortgage Backed Securities. The two entities were caught between a (small) percentage of individual households not keeping up with their mortgage payments or they themselves defaulting on their payment obligations to the mortgage backed securities holders. Defaulting on the latter obligations would have made the whole U.S. housing market collapse. Subsequently Fannie Mae and Freddy Mac were put under U.S. government conservatorship in September 2008. The role of the FHA is to underwrite -insure- mortgage risks

From about 2005 onwards, major errors were made by the mortgage originators and by the mortgage risk distributors -the investment banks.

In the United States, economic system errors occurred in the years leading up to 2008. This was particularly the case in the decision making process in home mortgage lending. Such system errors can easily be traced back through four types of statistics: the foreclosure filings, the level of actual bank repossessions of homes, new housing starts and the price developments in the housing market.

The stress in the housing market in the U.S. can be measured in the annual levels of foreclosure filings, which represent actions taken by lenders when borrowers get into a default situation. In 2005 such foreclosure filings were 801,563. In 2006 this level increased to 1.215,389, in 2007 the level reached 2.2 million and in 2008 it moved to 3.1 million. In 2009 it became 3.46 million. In 2010 the level moved further up to 3.84 million only to reach 3.92 million in 2011. In August 2012 it was still high at 193,508 in a month, or 1 in 681 housing units were affected by foreclosure filings. The highest stress level has been 1 in 298 housing units and the lowest 1 in 317,498 units. The number of housing units repossessed by banks was 269,000 in 2006, 489,000 in 2007, 679,000 in 2008, 945,000 in 2009, 1.125 million in 2010 and 1.147 million in 2011.(Source: Statistic Brain.com)

Keeping up with payments on outstanding mortgages is one element of the housing market, new housing starts and home values are the other two elements.

The level of new housing starts -monthly figures on a seasonally adjusted annual rate- reached its peak in October 2007 at 1.264 million. In January 2008 it dropped to 1.084 million and a year later in January 2009 it had more than halved to 490,000.(Source: Ycharts.com). The S&P Case Shiller home price index³ dropped from 170 by the end of 2007 till 139 a year later.

When new housing starts drop to half the level of a year earlier, this affects output, households income for those directly and indirectly involved in the home building business and thereby economic growth levels as well as unemployment levels. This drop in new housing starts also had a strongly negative effect on tax income for the U.S. government, especially in 2009 and 2010.

The repossessions of homes represent a different category. No longer did banks wait for repayment of mortgage debts out of an individual households' income level, the repossessions meant that the banks moved

³ <http://www.standardandpoors.com/indices/sp-case-shiller-home-price-indices/en/eu/?indexId=spusa-cashpidff-p-us>

their action to the asset side of a household's balance sheet. Once banks take possession of a home they will want to cut their losses on the property. It usually means that the net equity in the property has already been wiped out - a loss to a household's net worth. Secondly the extra supply of "second hand" homes puts all home values under severe strain as evidenced by the drop in the S&P Case Shiller index in 2008. Such repossessions and sales do nothing for economic growth, as the houses have all been built in earlier periods, but they do affect households' net worth values, through the change in speed of home values' depreciation.

The mistake in granting mortgages to people who could not afford such mortgages is that 850,000 rather than 269,000 used houses came on the market with a for sale sign in 2008. In total 4.4 million of such second hand houses came on the market in the five year period 2007-2011. On average 880 000 second hand houses per annum came to the market over this period. The impact of collecting mortgage payments out of household's incomes is bad enough for the families involved, but the impact of selling off 880 000 second hand homes annually for the last five years -the balance sheet method- has had a serious negative effect on all 78.6 million home owners in the U.S. The average U.S. home owner saw its home value drop from \$289,000 by the end of 2006 till \$205 000 by the end of 2011. 78.6 million home owners lost on average \$84 000 of their savings -for many their main source of savings- over the five year period. The difference between the income recovery method and the balance sheet recovery method is immense. The first one only involves 5.5% of the home owners, the doubtful debtors, while the balance sheet method affects all 78.6 million home owners.

The clash between the banks' actions and the interests of their clients -the individual households- became evident in 2006 and even more so in 2007. On the one hand some banks and some originators were pushing sales of home mortgages without due regards for risks. Regretfully for prudent banks, the behaviour of imprudent lenders affects the prudent banks' risk portfolios as well. The increased level of foreclosure filings in 2006, 2007 and 2008 showed that the banking system collectively had sold mortgages to people who could not afford it. They did not have the cash flow to service their debt. The forced house sale program spread the effects to all households owning a property and indirectly to all American households.

What one should note is that the mortgage periods agreed between banks and their clients do not coincide with the lifespan of a property. The mortgage periods will always be substantially shorter than the economic lifespan. Secondly home loans are often made on a variable interest rate basis, leaving individual households with a home related interest rate risk over their income levels. Usually households have no way of avoiding such risk.

What forced sales of homes do is to shorten the financial lifespan of a home. Banks increase the speed of financial depreciation of homes for their own profit motive; while the individual household's economic depreciation stays at practically the same level (see section 1.3). Economic and financial lifespan depreciation starts to deviate. This affects the net worth build up by individual households as retained in their own homes. The liability side of the individual household -the mortgage amount- does not change, but the asset values change. This leaves the individual household with a loss in equity value: the value of the households' savings in their home. The economic value of living in one's own home does not change for all practical purposes, but the potential financial buffer of their build up equity in their home changes. Bank's actions to get out of the non-performing home loans through the balance sheet method, directly negatively affects the net equity position of all 78.6 million individual households who own a home and indirectly all American households. Irresponsible lending practises are translated into having a major negative impact on the financial net worth of all home owning individual households. A small group of doubtful home loan borrowers, mainly caused by irresponsible lending and risk transferring practices as described in the Deutsche Bank study, make all individual households lose equity net worth in their homes, even for those who never borrowed a cent. The short term profit objective of banks led to huge home equity losses for individual households during 2008 and following years. The balance sheet actions of one group of institutions -the banks- negatively affected and still affect the net worth of all U.S home owners.

1.3 Economic Life Span of Homes

The Balance Sheet approach requires to make an assessment of how home values should be depreciated. Accountants and auditors, whose job it is to normally assess such values, do not spend much time on individual clients, as individual households usually do not require audited accounts.

If individual households were in a position to buy their home outright without relying on outside sources of funds, the question could be asked: What is the economic value of having the use of one's own home? Is the value of living in one's own home different from one year to the next? How should the acquisition price of the home be depreciated over time? Such question is all the more relevant if one considers the "What if" situation, whereby all households would have been able to buy their homes without any loans. The result would have been that the current balance sheet crisis would not have happened. The involvement of the financial markets did make it happen.

Four elements stand out:

(1) Generally speaking the owner-occupier does not buy a home for it to be traded in a market place. The aim of acquiring a home is to live in it. If there is no aim to trade, there is also no market value as such. There is an acquisition price and a potential future sales value as and when the needs of the owner-occupier change and a different type of home is required.

(2) The economic life span of homes is usually at least fifty years and in many cases very much longer. Some homes need modernisation from time to time, but apart from occasional updating and common maintenance, homes require very little else. It is an asset which gives a benefit over an individual's lifetime and sometimes longer than that.

(3) Usually -and this should be common practice- home owners pay back their mortgage loan on a monthly basis, which also includes an element of saving. The savings element constitutes the owner's income contribution to his own balance sheet; it increases or should increase the net equity position of a household. The savings element can easily be traced back to the Fed's net worth data. From 1995 till and including 2005, the owners' equity percentage in household real estate varied very little; with the variation between about 58 and 60%. This happened in a period that the values of households' real estate increased from \$8.1 trillion in 1995 till \$22.0 trillion by the end of 2005. In 2006 the turn around came when the increase in the level of home mortgages exceeded the value increase in households' real estate by about \$300 billion and the owner's equity level fell to 56.5%. The latter level continued to drop till the end of 2011 when it reached 39.7%. From 2006, for the first time in a long period, American home owner households saw their equity investment in their own homes drop in value. They reacted not by saving less but by saving more and borrowing less. Collectively American home owners changed their economic behaviour by actually reducing their outstanding home loans amount by \$1 trillion over the last five years or annually by, on average, \$200 billion. In doing so, they did not increase the home loans level annually by some \$ 700 billion as was customary in the years up till 2006. Since 2007, the equity levels build up in the homes -the accumulated savings- were rewarded with a very high "implied" negative rate of interest. The reasons for it were explained in the previous section. A glimmer of hope has occurred in 2012.

(4) In 1995 home values represented 28.5% of the total net worth of American households. By 2005 it had risen to 36.0%. This happened over a period that American home owners had been able to maintain practically the same equity percentage over the whole period, in other words their savings efforts kept up with the homes' values appreciations. Regretfully, due to factors beyond their control, this percentage did drop to 26.9% as per the end of the second quarter of 2012. Such percentages matter as they -combined with the data on net worth and households' real estate values- show the implicit "interest earnings" over accumulated savings of one type of assets held by the American public: homes. Over the period 2006 till currently, this interest rate development showed an extremely negative reward for home savings. In figures for the three years 2006, 2007 and 2008 the home assets values minus home liabilities were respectively \$12.389 trillion, \$10.276 trillion and \$7.043 trillion. These figures reflect the net equity -savings levels- incorporated in the U.S. households' real estate for the three years. The return on equity -the implied interest

rate- in 2007 on homes was -17%; in 2008 another -31.4%. As stated before, the cause was not that the borrowing levels moved, but the asset values did. The collective individual households' net equity level in homes in 2008 dropped below the year 2000's equity level of \$7.384 trillion. All figures are in current US dollars, which make the returns even worse for the 2008 figures. What one has to realise is that the banks might have given themselves the right to sell off other peoples' homes, but home owners can collectively never exercise this right. They need a home and are the innocent victims of this flawed process. The whole home loan adjustment process reflects one of the flaws in the American econsystem; many other countries apply the same system as well.

The benefit of living in one's own home -fully funded from own savings- cannot be expressed in money terms in the usual way. One saves rent payments, but why would one compare such savings with the return over the original cash lay-out as no rent payments (cash flow) take place? One also saves on the interest payments as there has been no borrowing. Again why would one apply current interest rate levels over a home acquisition which may have taken place years ago in a totally different interest rate environment? If rents and interest rates are not useful in assessing the value of the benefit of living in one's own home, what is? The logical conclusion is to treat one's home as an asset which is to be depreciated over its useful life. The only reasonable yardstick is an equal depreciation amount per annum based on the original purchase price, corrected only for the variation in households' real estate values from one year to the next, but depreciated over the remaining life time.

A calculation example may make it clear. Assume Mr Johnson bought a home outright for U.S. \$100,000 in 2007 with an expected life span of say 50 years. This means the depreciation amount is U.S. \$2,000 per annum. According to the U.S. Balance Sheet of Households as published by the Federal Reserve⁴, home values dropped from \$20.844 trillion in 2007 till \$17.558 trillion in 2008, a drop of 15.8%. If this drop is spread out over the remaining lifetime of 49 years, this implies 0.322% per annum. Apply this to \$2,000 and the depreciation amount becomes \$1,993.56 per annum for the remaining 49 years. The dates of 2007 and 2008 were chosen on purpose, as the drop in home valuation was the steepest for at least 25 years.

The variables for assessing the economic benefits of living in one's own home are the acquisition price, the expected lifetime of the property, the level of home improvements and the level of changes in home values, however the latter corrected for the remaining life time period.

1.4 Economic implications

1.4.1 Individual Households

In 2006 owner occupied housing represented 34.6% of the total net worth of individual households in the U.S. The owners' equity percentage in their homes stood at 56.5%. The events in 2007 should have alerted regulators and policy makers that something was going wrong. The equity percentage of owners' real estate dropped to 49.3% and dropped further to 40.1% in 2008. In the household's balance sheets the liability is non-variable -households generally cannot pay back home mortgages quicker than income levels permit- and the asset value became the variable. Collectively all home owners did not enter into increased levels of borrowing in 2008, but they were punished by the actions of banks trying to get out of a small increase in doubtful home mortgages via the balance sheet method. What one should consider is how such small percentage changes can have such a great impact. The construction of 1.264 million new homes at an annualised basis on the top of the market in October 2007 meant that the average lifespan of the newly build homes was 62.5 years. The latter represents the number of years it would take to replace the total owner occupied housing stock. By January 2009 with 490 000 new homes being build on a per annum basis, it meant that the average lifespan of the new homes had changed to 167 years. This change in lifespan shows how economic activity was not based on real factors but on a financial market driven liquidation sale. When households want to move, they offer their house for sale and generally buy another one. When banks force people out of their homes, there is no replacement factor. It has the same effect as if new homes come onto

⁴ <http://www.federalreserve.gov/releases/z1/current/z1r-5.pdf>

the market. Under such circumstances, builders of new homes cannot compete with banks; they are driven out of the market. One can no longer speak of normal market conditions if home builders are driven out of their jobs by bankers. The home value prices are based on false market information. They cannot be based on an average lifespan of 62.5 years at one moment and 15 months later at 167 years.

The application of the balance sheet method by the banks -forced sales of homes- had another highly undesirable side effect. Instead of rewarding savers for putting money aside to reduce their debt on the home, the balance sheet method application by the banks turned the return for all savers into major savings losses on an asset which should be regarded as safe as houses as pointed out in the previous section. The initial forced sale of homes in say 2008 also had a long lasting impact on the value and wisdom of putting more savings into the home, which individual households did to an extent of nearly \$1 trillion between 2007 and the end of 2011. The latter repayment actions were basically intended to protect the asset -the home- in order to get the owners equity percentage back up to around 58% of homes. These actions were certainly not based on steps taken to improve the returns over existing savings locked up in the home. The trend line of increased collective borrowing for home financing to the extent around \$700 billion per annum, which was customary till 2007, was broken and the owners collectively decided to pay back about \$200 billion per annum from their mortgage debt from 2007 till currently.

Such a negative impact adds up to approximately \$900 billion per annum, equivalent to about 6.5% of annual U.S. GDP. The increasing number of households and the increasing government budget deficits prevented such negative growth impact to stay at the level of -6.5%. However a preferable situation would have been to reverse the house price decline quickly, so that the individual households' net worth levels and the government's budgets would not have been so seriously affected in 2009, 2010 and 2011.

The latest figures of September 2012 show that, in the U.S., new home building is finally on the way up with an annualised volume of 872 000⁵ new homes being constructed. This brings the average lifespan down to 91 years. House prices are also finally turning the corner with a 3% rise from the second quarter 2011 till the second quarter 2012.⁶ At the same time, the home ownership equity percentage also jumped to 43.1% in the second quarter of 2012 based on reduced borrowing levels and increased home values. Perhaps there is a glimmer of hope.

1.4.2 U.S Banks

Regretfully it is not the action of many, but the actions of a few, which spoil it for the rest of the banking sector. Aggressive sales techniques were not applied by all, but the herd instinct -called competition and bonuses- induced many banks to follow one another. A newspaper⁷'s headlines of 25th October 2012 encapsulate banks' actions very well. "Banks could face thousands of new claims over mis-sold interest rate swaps"; "Bank of America faces \$1 billion lawsuit over Hustle mortgages related to Countrywide, once America's biggest mortgage lender"; "Royal Bank of Scotland agrees to settle with Nevada's attorney general after an investigation into its US 'reckless' mortgage loans"; "Ex-Goldman director jailed over trading"; "SocGen rogue trader loses appeal over Euro 4.9 billion fraud" and finally "Small businesses have 'vital' overdraft limits cut by banks". The same newspaper also carried the headline "More protection for 'mortgage prisoners' at mercy of lender".

This one day selection of headlines shows that banks both in the U.S. and in Europe have been acting strongly in their own short term interests rather than in that of their clients. In the case of the U.S. home mortgages, the banks' balance sheet related actions had very negative effects on nearly all the individual households' net worth levels and thereby on economic growth levels in the U.S. Banks did shoot themselves in the foot by their own -short-sighted- actions.

⁵ <http://www.bloomberg.com/news/2012-10-17/housing-starts-in-u-s-surged-in-september-to-four-year-high.html>

⁶ <http://www.fhfa.gov/webfiles/24216/q22012hpi.pdf>

⁷ <http://www.telegraph.co.uk/finance/>

The flaws in the U.S. ecosystem as applied by the banks in the home mortgage market involve all the elements as set out in the Deutsche Bank study plus a few more. They are:

- (1) 38% of the subprime mortgages required no down payment. One is not serious about bank risk management if only one side -the lender- takes all income risks and the borrower does not give up any of his savings. This bankers' method forced the risks towards an excessive reliance on the asset: the home.
- (2) 37% were interest only mortgages. Again the risk is skewed against the income method as no equity buffer is build up and reliance for repayments becomes practically totally dependant on the value of the asset. Both lender and borrower gamble upon a rising house price, the wrong type of long term funding. From a household perspective the principal loan amount does not decrease.
- (3) Banks and mortgage sellers were not serious in that in the case of 43% of the subprime mortgages no proof of income was required. Self certification is not the best method to check whether the borrower can afford the loan servicing. Again such lack of bank integrity showed that the banks attached more importance to home values than to the income flows of their customers.
- (4) 80% of the mortgages granted were mortgages which had a build in steep hike in mortgage interest rate applicable after the initial period of some 2 years. This risk is of course a risk taken by the borrower, but again the lenders failed in their stress tests of the clients' income flows. Again this action pattern collectively pushes the risk taking towards the balance sheet approach, the home value.
- (5) Investment banks with the support of the credit rating agencies multiplied the risks by transferring such risks to domestic and international buyers via CDO's. Again the gamble was totally skewed towards house prices going up, rather than coming down. Foreign buyers, but also American money market funds did not and could not check on the ability of individual households to repay the mortgages. They believed the promises as made by the investment bankers and the credit rating agencies. In many cases the CDO holders did not even have a legal title over the mortgages. Such promises were broken by the sellers: the investment bankers.

The drop in house prices caused by the actions of some U.S. banks also required the U.S. government to come to the rescue of two main supporters in the home acquisition process in the U.S.: Fannie Mae and Freddy Mac. This happened in September 2008. The role of these entities is well spelled out in a study⁸ made in 2010 by the Congressional Budget Office and called: "Fannie Mae, Freddy Mac and the Federal Role in the Secondary Mortgage Market". This role is hugely important as in 2009 three quarters of all new residential mortgages got either a Fannie Mae or Freddie Mac involvement according to the study. Together with the Federal Housing Administrations' role of insuring against home loan risks, the current situation is that 95% of all new mortgages have a link to these three institutions.

1.4.3 Fannie Mae and Freddy Mac and the Balance Sheet Approach

Prevention is better than a cure. The reason that Fannie Mae and Freddy Mac got into trouble in 2008 is that these institutions carried both the income related risks on individual households -the credit risks, the liability side of households' balance sheets- as well as the funding risks for the asset side of households -the homes. This sounds logical, but it is not necessarily the case. In covering both the income and the asset risks, the combined risks taking became the institutions' Achilles Heel during 2008.

Fannie Mae was established just after the Great Depression of the 1930's. Its aim and that of Freddie Mac as well, is to provide liquidity, stability and affordability to all American households who wish to purchase a home. For many years this role was fulfilled with great success. However the success was undermined when investment banks saw an opportunity to privatise the risks associated with home mortgage lending. From

⁸ <http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/120xx/doc12032/12-23-fanniefreddie.pdf>

being sidelined during the run up to the crash in 2008, the return of the three institutions has been impressive as they currently cover some 95% of all new mortgages granted.

Fannie Mae and Freddie Mac buy home loans from banks and other mortgage originators provided they meet strict standards all related to sensible mortgage risks decisions. They subsequently package them into mortgage-backed securities and they guarantee that principal and interest are paid on time to the outside investors. Currently they fund or guarantee about \$5 trillion out of a \$9.6 trillion home mortgage market (second quarter data 2012). With an involvement in 95% of new mortgages granted, their relative position will improve even further. In section 4.3. some recommendations will be formulated in line with the Balance Sheet approach. Such recommendations will be set off against other proposals which have already been made in order to reorganise the home loan structure in the U.S.

Apart from the study by the Congressional Budget Office, many scholars have studied and made clear proposals on how Fannie Mae, Freddie Mac and the FHA should all be fitted together. The Center for American Progress has funded its own group of experts and it has set out a list of another 21 proposals⁹.

2. The U.S. Government and the Balance Sheet Approach

2.1 Assets, Liabilities and Income

In the U.S. the Government publishes a Citizen's Guide to the Financial Report of the United States Government. The latest version covers 2011.¹⁰

Before setting out to what happened to the U.S. Government's Budget, a few remarks need to be made about the character of a government as an economic household. Governments around the world are in some ways like individual households, they are mainly income and expenditure oriented. They are however unique in that being a government household, they can borrow funds in the financial markets, in case income levels do not suffice to meet expenditure levels. Governments are also unique in that they create debt - a balance sheet item- which is not covered by Ministers paying such debt back out of their own incomes, but by the collective of individual households having the responsibility of paying more taxes in the future. All private sector households -companies and individuals- can only borrow against their own future income levels or to a limited extent against their asset values. This limits the private sector borrowing capacity. Governments generally do not build up huge assets' bases. In the case of the U.S. its asset base as mentioned in the Citizen's Guide was \$2.7 trillion per 30 September 2011 on an income base of \$2.4 trillion. The same report mentions that the total Government debt per same date was \$14.8 trillion. The Congressional Budget Office reckons -as a preliminary figure- that the government debt increased by \$1.09 trillion in fiscal year 2011-2012, bringing the current debt level up to \$15.9 trillion. The ratio of government debt to government income level is around 6.6 times. The U.S applies a Federal Debt Ceiling level, which leads to substantive discussions in Congress before a new bill increasing the ceiling is approved.

The Citizen's Guide also issued a warning: "If budget deficits continue to occur, the Government will have to borrow more from the public. Instances where the debt held by the public increases faster than the economy for extended periods can pose additional challenges".

What is striking is the extent to which the Government of the U.S. has become the victim of the home mortgage debacle, just like home owners. In 2008 the budget deficit nearly tripled from \$163 billion in 2007 till \$455 billion in 2008. As a consequence of the home mortgage debacle it tripled again in 2009 till \$1.42 trillion. It came somewhat down to practically \$1.3 trillion in both 2010 and 2011.

⁹ <http://www.americanprogress.org/issues/housing/news/2012/08/02/12025/the-5-trillion-question-what-should-we-do-with-fannie-mae-and-freddie-mac/>

¹⁰ <http://www.gao.gov/financial/fy2011/11guide.pdf>

In the above, the negative influence from the households drop in home values was calculated as a loss of around 6.5% of GDP per annum based on individual households reducing their absolute home loans level by practically \$1 trillion over the period 2007-2011 and also by not taking up the usual annual increase in home loans as was common between 1996 and 2006 of around \$700 billion per annum. These actions had a negative impact on GDP of about \$900 billion per annum.

Such negative influences showed up on the Revenues side. In 2009 the actual Revenues dropped by \$463 billion as compared to 2008. Taking into account that Revenues would have grown with the economy by some 1.5% per annum, the Revenue drop should also include about \$40 billion due to the lower economic growth effect. This led to about a \$500 billion drop in Revenues. The actual budget deficit was \$962 billion more than in 2008, which means that the “automatic stabilisers” implied an extra expense of \$462 billion for the U.S. Government in 2009.

What the subsequent two years 2010 and 2011 showed was that only a very minor improvement took place in the budget deficit during these years. The asset based home value adjustments, forced through by the banking sector, continued practically unimpeded; as a consequence both individual households were faced with a severe loss on savings accumulated in the homes and the government continued to face revenue losses and additional expenditures at an increased level from previous years.

If, as stated in the introduction, the drop in home values could have been avoided and the net worth of individual households would have improved in line with the experience of 1996 till 2006 with \$3.2 trillion per annum in Country Profit - the net savings level of all individual households-, then it would have been very likely that the government's budget deficit would not have increased by the \$962 billion as it did in 2009 compared to 2008, but by a very much smaller amount. The same applies for 2010 and 2011 and also for the figures when they become known for 2012. One can make an estimate of the impact of the balance sheet crisis on government debt over the period 2007 till the end of fiscal year 2011. In 2007 the budget deficit was \$163 billion on government revenues of \$2.63 trillion or 6.1% of revenues. If this line had continued the Federal government deficit funding needs would have been some \$3.8 trillion less over this period (2007-2011) than they actually were.

A more immediate problem is that tax concessions on the income side are coming to an end on 31 December 2012 raising both individual and corporate taxes, while at the same time expenditure cuts are also to be implemented over the next fiscal year. This problem is often referred to as the fiscal cliff. According to the Congressional Budget Office the corrections to the Federal Government income and expenditure levels is expected to lead to a budget deficit reduction of \$607 billion or 4% of GDP from January 2013 and stretching into 2014. As elections for President and Members of Congress have just been concluded, it is too early to say if a compromise solution will be reached between Democrats and Republicans before the end of 2012 or that these matters will drag on into 2013. The only observation one can make is that the negative influence on economic growth arising from the forced sales of homes is just starting to become slightly less, as evidenced by the latest data, but that the growth of the four other main elements of Country Profit apart from homes: Corporate equities, Mutual fund shares, Pension fund reserves and Equities in noncorporate business seem still to be in a rather fragile state. These elements together represent 56.8% of the total net worth of all individual households as per the end of the second quarter 2012. The savings rewards over corporate equities, mutual funds and pension funds are still in negative territory and it is recommendable that those matters are first remedied before major changes are implemented in taxation levels.

With the statistical database available from the Federal Reserve on individual households net worth, with the Citizen's guide to the 2011 Financial Report of the United States Government and some other databases, it has been relatively easy to analyse how economic developments took place and what could have happened if the home asset conversion into cash had not occurred or occurred at a much slower pace. It is another matter to see which policy actions could be taken under the current circumstances to help increase economic growth with -in the background- a U.S. government which needs to reduce its deficit at the same time and perhaps even starts to consider how to gradually repay some of its debt. In the next Section attention will be paid to three other aspects which influence Country Profit levels. They are Time and Savings deposits, Corporate and Equity in noncorporate business and Pension Fund reserves.

3 Country Profit Generators

3.1 Time and Saving Deposits and Money Market Fund Shares

In times of economic upheaval one can expect that individual households will adopt a cautionary attitude to risks. The Balance Sheet data on Individual Households as supplied by the Fed confirms this. Time and savings deposits plus money market fund shares, both reflecting the short term liquidity that households prefer to maintain, did increase in absolute and even more so in relative terms, the latter as a consequence of dropping house and share prices. For instance the combined assets in deposits and money market funds were \$6.6 trillion in 2006, \$7.3 trillion in 2007, \$7.7 trillion in 2008 and \$7.6 trillion in 2009. The precautionary motive was clearly present as interest rates on short term deposits dropped since 2007, but this obviously did not deter households to improve their short term savings relative to their total savings. Per the end of the second quarter of 2012 the combined asset level of these two items reached practically \$8 trillion.

One element is the reward over these savings. While most of the deposits with banks are safe in the sense that a loss of principal amount is unlikely with the deposit insurance schemes, they are not safe from a reward point of view. The current level of interest received over short term time deposits is less than the inflation level in the U.S., implying a real negative interest rate reward.

3.2 Corporate and Equity in noncorporate business

The clear conclusion out of the Balance Sheet of Individual Households is that the value of the corporate equities and the equity in noncorporate business together was higher in 2007 than it was as per the end of the second quarter 2012. The actual figures are \$18.85 trillion as per end of 2006 and \$16.9 trillion currently. The Dow Jones Industrial Index was 14 165 in October 2007 and stands to-day -7 November 2012- at exactly 13 000, which represents a drop of 8.3%. The equity values of both corporate and noncorporate businesses, which represent all companies, dropped by 10.4% over practically the same period. Such values represent one of the main balance sheet items of individual households. Companies through their activities employ many, many workers who make a living out of the production process. Companies create incomes for employees and pay dividends to shareholders, both elements are contributors to economic growth. Companies and their employees also pay tax which allows the government to spend. Companies in their contributions to Defined Benefit pension schemes also help individuals save to create a pension pot.

The income items - salaries and wages, taxes, and dividends- helped economic growth. The company contributions to building up pension pots for their employees helped company income being turned into assets for future use. The total result of all company activities in the U.S. over the last five years was not that companies did not create profits and shared income between employees and shareholders, but that the net result of all these activities did not add value according to the national balance sheet of individual households. The return over the savings invested in the U.S. company sector turned negative over the last five years.

One article in the U.K. Daily Telegraph of November 3, 2012 showed this fact extremely clearly. It stated: "If one would have invested £1,000 five years ago in the shares of Britain's biggest banks they would now be worth for HSBC £810, for Bank Santander £534, for Barclays £452, for Lloyds Banking Group £83, and for Royal Bank of Scotland £58." Banks, on both sides of the Atlantic, have not looked particularly well after their savers over the last five years. This fact has been extended to all company values together.

One can safely assume that if demand levels would have been higher over the last five years -implying a higher rate of economic growth- then the combined values of companies would have shown a positive growth pattern.

3.3 Pension Fund Reserves

Nothing exemplifies the level of savings so much in a society as the pension funds' reserves. They are the balance sheet item from which individual households hope to draw a decent income once they retire. They are assets on which income will be released far away in the future for the younger generations. Their assets include: shares, government and corporate bonds. All pension assets are owned by individual households. These assets may be managed collectively but the right to a specific pension amount is fixed in a pension agreement and is often subject to investment results even for Defined Benefit schemes.

The OECD publishes an annual overview of the pension fund situation around the world, called Pension Markets in Focus¹¹. A number of aspects highlighted in this review deserve particular attention.

The first element is scale or size of the pension sector compared with GDP levels. To start with the U.S., while the U.S. -among all countries in the world- does not have the highest savings ratio as compared to GDP -its ratio was 70.5% of GDP in 2011- in absolute terms with \$13.1 trillion in savings as per the end of 2011, it represented 65.1% of all pension fund reserves in the world. The latter level was \$20.1 trillion as per end 2011. Countries with a higher ratio of pension savings relative to the size of their GDP as compared to the U.S. are: The Netherlands 138.2%, Switzerland 110.8, Australia 92.8%, the United Kingdom 88.2% and Finland 75.0%. One may note that for the U.S., individual retirement accounts have not been included in these figures. Towers Watson in their global pensions' asset study 2012¹² estimates such IRA's to be worth \$2.93 trillion as per the end of 2011.

The second element is the return on assets. One element which needs highlighting is the accounting issue for the returns on assets, the income level out of assets. Pension funds are obliged by the pension supervisory agencies to "mark-to-market" their mainly government and some other bond portfolios. In the declining long term interest rate environment -as happened especially over the last five years- pension funds have had to book capital gains. Such drop in interest rates has happened in the U.S. but also in the stronger European countries including the U.K. and the Northern Eurozone countries. The implication has been that government bond values held in pension fund reserves increased for no other reason than that new issues came out with a lower interest rate than the prevailing average interest rates on the bonds held in the pension funds' portfolios. The result: pension funds booked gains on the balance sheet; capital gains which made them temporarily look better. The reverse effect will happen when long term interest rates will start going up again. However, simultaneously when booking the capital gains or losses, new contributions come in. These need to be invested at the interest rate of the day. As contributions out of incomes are only a small proportion of pension assets build up over time, their effect on the overall yield cannot outweigh the capital gains or losses booked over the whole bond portfolio.

For pension funds, which have at least a 40 year time horizon, the aim is to build up financial assets for future use. With this aim in mind, only those gains should be booked which are in line with keeping assets to maturity; therefore not a mark-to-market valuation, but a "mark-to-maturity" one. For pension funds income gains have a much greater long term value than short term capital gains. Pension funds prefer or should prefer a higher real reward in current cash terms over accounting gains or losses.

It is for this reason that the pension fund industry was generally unhappy with quantitative easing practices as the latter suppresses interest rates to very low levels, while the risks to individual households -the total size of a government's debt- does not decrease. In fact, government debt levels in many countries have risen rather rapidly over the last five years.

¹¹ <http://www.oecd.org/finance/privatepensions/pensionmarketsinfocus.htm>

¹² <http://www.towerswatson.com/assets/pdf/6267/Global-Pensions-Asset-Study-2012.pdf>

4. Policy Considerations.

4.1 Introduction

An “Ecosystem” is a complex set of different types of households, which each make their own financial decisions, but whereby the decisions made by one type of household is dependent on what other households decide. Some decisions may harm others, which may have an effect on everyone.

In 1934, after the Great Depression, deposit insurance was introduced in the U.S. The aim was to protect the public that in case of a bank going bankrupt their cash would be safe. The 2008 crisis showed that banks can also seriously damage customers' wealth and the whole economy by moving from an income based lending programme to an asset based system. Customers' cash may be safe, but their savings in their homes were certainly not. Individual households lost on average 28.9% of their savings in their homes, since 2007. The cumulative effect of this risk to savings was spread via the reactions of the individual households. They started to save more in order to protect their homes and borrow less for new home building. The effects of the value drop in housing affected the banks and insurers themselves. Some of them had to be rescued. It affected Fannie Mae and Freddy Mac and they had to be rescued. The cumulative effect spread to the U.S. government which experienced a substantial drop in its tax revenues and through the “automatic stabilisers” an increase in expenditure. This led to exceptional budget deficits in relation to its tax revenues level. It also spread to lower demand levels for goods and services, which caused another wealth factor to occur.

Since 2008 individual households' savings in companies in the U.S. accounted for another loss, in this case a loss of 10.4%. Furthermore it spread -through the flight to safety for cash holdings plus the quantitative easing exercise- in lower and lower long term interest rates notwithstanding rapidly rising government debt levels. Such long term interest rates are currently rewarding savers at a level below inflation levels. Finally it spread to individual households' savings for the future through their pension funds. In 2008 such pension funds lost 22.3% of their values and this figure included new contributions made in 2008. The actual loss was higher. The saddest element of all is that this loss on savings not only affects people's wealth levels, but also their ability to find jobs and earn their way out of the crisis. It led to much higher unemployment levels. In May 2007 the unemployment level was 4.2% of the labour force. It rose to 10% in November 2009 to drop back to 7.9% in October 2012. This still leaves 12.3 million American people unemployed.

When savings do no longer earn a positive return in a society, one has to question the set up of the structure of the ecosystem. Which elements need to change?

In the U.S Ecosystem review a number of elements will be considered:

- The flaws in the set up of the banking system, which gave rise to such mismanagement of the economy,
- The flaws in the mortgage lending system and the role of Fannie Mae and Freddy Mac therein,
- The flaws in the adjustment process for a faster pace of economic growth, including the possible role of pension funds,
- The timing of the government budgetary measures, and finally
- The flaws in the government bond interest rate policies.

The U.S. is an excellent example to illustrate how an Ecosystem works as both its data supply and the extent of its domestic market are second to none. However the lessons which may be learned from the U.S' experience may apply to a smaller or larger extent to Europe as well.

4.2 Flaws in the Banking Structure

What is surprising is that the Fed and other U.S. regulators as well as all international bank regulators seem to focus so strongly on bank balance sheets and so little on bank profit levels. Banks are different from most companies in that their only “product” is managing other people’s monies. Banks’ profits consist of paying less for monies entrusted to them -the liabilities side- than they receive on their loans to customers less the provisions for doubtful debtors -the asset side. They also earn commissions on facilitating domestic payments, foreign exchange and securities trading. Finally they gamble on financial markets for their own account.

In the past when banks did make accounting gains by providing in an insufficient manner for future loan losses, the bank managements awarded themselves large bonuses. When bank losses were made, it was up to the shareholders to cover the losses and finally in a number of cases up the state on behalf of all taxpayers; a strange game of if I win according to my accounting practices you pay me and if I lose you lose. This practice represents a very unsatisfactory state of affairs and reflects a very inappropriate distribution of risks.

If banks had no equity base, they could and should still be profitable. What banks should do is establish an economic balance sheet and profit and loss account. The difference between these accounts and the audited accounts lies in the treatment of risk provisions. When risks are taken on any customer base, the logical assumption is that some of these risks will turn out to become doubtful. From the day the risks are incurred, the provision policy for an economic balance sheet and P/L approach should be that a percentage of such risks are reserved out of the annual gross income base of the year that the risks are started and for any subsequent year that the risks are on the books. Selling of risks to other parties should only be recognised if such other parties take over the full responsibility for the loans, including the straight diversion of cash flows and legal documentation from their clients to the new risk takers. Banks -including investment banks- should not get away with transferring risks to other fund providers if the client’s cash flows and legal documentation still run through the selling bank’s books.

For instance in the case of U.S. home mortgages, the five year experience showed that 5.5% of all mortgages became doubtful. By dividing the risks into sub risks for different income classes, the banks could work out which percentage of the total outstanding home mortgage portfolio would be affected. Let us assume that 4% of the total portfolio would be affected over a five year period. This requires a risk provision of 0.8% per annum to be put aside out of profits for covering potential future losses in the economic balance sheet approach. The interest margin between the lending portfolio and the funds utilised should accommodate such provision element. The interest margin plus the commission income should also cover the costs of salaries etc.

Even commissions income can constitute a major source of risks. In the U.K., banks have now had to admit that about £11 billion of commissions “earned” on payment protection insurance has had to be repaid to customers; as such insurance policies were mis-sold. In above economic balance sheet and P/L accounts, provisions should have made as soon as these products were started to be sold.

Banks do not need an equity base to take risks. They are “only” risk intermediaries between the fund providers and the borrowers. They should achieve a profit margin after proper provisioning takes place and all staff and other costs are paid. Banks can and should survive on basis of net current incomes and on the confidence customers have in bank managers knowing what they are doing.

The equity base -a balance sheet item- only confuses the risk taking process -which is an income based activity. Banks are much more like individual households than they are like production companies. The latter companies need equity resources to fund their capital goods, their long term assets. Banks have very little in terms of “capital goods”, apart from computers and bank buildings and both could be leased rather than bought outright.

Relating risks to shareholders equity rather than to income levels restricts banks for no other reason than that some investors need to have sufficient confidence in the managerial expertise of bank managers to provide

them with additional equity resources. In the current market climate, the managerial teams of many banks seem to have lost the confidence of the investing public, especially as some major banks had to be rescued by the taxpayers. The experience over the last five years has not inspired confidence. If nothing changes why would the future look any different?

Relating risks to immediate risk provisioning levels within the income based method solves two problems: The income base of the banks absorbs the potential loan losses, rather than having the luxury of having outside investors paying for bankers' errors. Risk provisioning forces bankers to properly account for risks taken. If done well, the skills of bank managements will shine; they can be rewarded for such skill, if not they cannot expect the remuneration levels some are used to. Well run banks can expand their business without the need for outside capital resources; less well run banks will need to up their game.

What one may do is to split the income from the balance sheet method for banks. The income method recommends that banks pay a premium for subordinated debt. The income method should also stipulate that such premium is always payable. The balance sheet method is to have a funding type for a bank which may be written up or down if gains or losses are made. One funding structure which would fit into the income based method and make bank profits even clearer is to gradually replace bank share equity with perpetual notes which pay a fixed return. These notes could over time fully replace bank equity as the ultimate buffer to risk taking. The notes values may be written down or back up to 100% of the issue price for accounting purposes -a balance sheet item- but the reward -an expenditure item- could remain at the same level compared to the original issue price, say 5% of each \$1000.- note per annum. If these notes would be publicly traded, it would show which banks manage their risks best. It is easy to convert existing bank shares into perpetual notes, simply by fixing the dividend policy. If this policy is set that always say 5% of the value at a date to be set will be paid to share holders, irrespective of the results of the bank, than the same result will have been achieved as if perpetual notes would have been issued.

If profits -according to the income method- were chosen as the lead indicator for banks to do business, than the restrictions on banks to do such business would not come from a lending ratio against equity levels, but from provisioning rules for banks which make too low a provision for certain risks. The earlier method punishes the shareholders of the banks -the evidence over the last five years shows by how much that has already happened- the latter method holds the managements of the banks to account.

If above income method had been applied to U.S. banks from before 2006, the provisions would have been in place to gradually absorb losses rather than force home asset sales through in a very short period of time. Banks would have been better off. So would have been their customer base: the individual households. Also the companies would have seen their sales levels kept up and the government would not have had to rescue banks and see its own tax income drop while government expenses went up.

Perhaps a final remark on bank risk taking. Investment banks trade in risk products. The financial markets -the individual households who supply all funds to all users- would be better off if the income method is applied to all banks, including investment banks. One should not be able to sell risks to the markets and carry no responsibility for the losses caused by such action. Provisioning for future losses incurred by the markets should be a proper method for trading in risks, be they derivatives trading, stock market listings, mergers and acquisitions, collateralising risks taken by selling mortgage obligations or risks incorporated in other fixed income obligations. If such provisioning method had also been applied to investment banks during the years up till 2008, investment banks could not possibly have sold the levels of risks they did; they also could not have rewarded their bankers for actions which led to huge losses on savings for the 78.6 million U.S. home owners.

Segregation of investment banks from retail banks will help little in reducing the overall financial risk taking in a society. Until all banks and other financial intermediaries are forced into the income method, risks will pop up in unexpected places without proper risk provisioning. Why should individual households need to act as the ultimate fund providers for carrying such risks when neither the banks themselves nor their supervisors were capable of containing the banking' risks. The income method would force banks in the right

direction, including for risk provisioning for derivatives trading. It works like a product guarantee, rather than being based on broken promises for which there was no penalty.

To ensure that provisioning takes place properly in an economic balance sheet and profit and loss account, the tasks for auditors need to be expanded. The government should play a role in this, for instance the Fed could appoint which auditing firm establishes the economic accounts for what bank. Of course, the costs of the audit have to be repaid to the Fed by the bank concerned. Such a system avoids potential conflicts of interest between auditing firms and the banks.

4.3 The Flaws in the Mortgage Lending Process

What the Congressional Budget Office study did not consider and neither did the Center for American Progress' expert group proposals or any of the 21 other proposals, is to reform Fannie Mae and Freddie Mac by separating the role of funder of home mortgages -the balance sheet part of the transaction- and the role of taking on the credit risks -the income related part of the home mortgage process. In funding -especially with a net worth guarantee from the Federal Government- funds could be attracted for the longest periods of time and at the lowest fixed interest rates. Both Fannie Mae and Freddy Mac have a competitive advantage over private sector banks and this advantage could be transferred to the home buyers, via the banks. The banks would take on the credit risks on the home buyers, but funding would only be made available for products that Fannie Mae and Freddy Mac approve of. The banks will provide a bank guarantee to Fannie Mae and Freddy Mac for the full amount of the funding plus accumulated interests. Non-performance on a mortgage loan is the bank's business; the bank will still have to service the debt to Fannie Mae and Freddy Mac.

This also provides the opportunity to grant powers to Fannie Mae and Freddy Mac to jointly agree on the required reserve requirements -or risk provisioning requirements if banks are judged on the income based methods- that banks need to maintain against their home loans' related credit risks. If banks behave in an orderly manner in line with what the market can absorb -funding homes and new home buildings in line with average lifespan and in line with the increases in numbers of individual households- the reserve requirement can be set at 0%, making it attractive to banks to lend for home buying purposes. If however aggressive banking behaviour is noticed, the 0% could be increased to slow down such behaviour. If the income method is applied, aggressive behaviour would lead to instructions for more provisioning. An ultimate course of action is that both Fannie Mae and Freddy Mac -for a short period of time- stop lending for homes to banks which do not fall into line. If the collective of banks misbehaves, total lending could be stopped for a short while.

If Fannie Mae and Freddy Mac would be following above approach, they will become both the preferred source of funds for individual households acquiring homes as well as the protector of wealth creation in this asset area for them. Such a role would be of utmost importance for the U.S. economy in general.

The balance sheet approach to individual households ties in very well with the original objectives of Fannie Mae and Freddy Mac. These objectives are: providing liquidity, stability and affordability to individual households. How this can work is set out below.

To start with **liquidity**: Banks and other mortgage lenders require funding from the financial markets. By the very nature of their private sector ownership, their funding base consists to a large extent of short term deposits which are rolled over. These funds, plus some longer term funds, are used to provide home mortgages. Banks do not want to expose themselves to sizeable interest rate mismatch risks. They transfer such risks to their borrowers -the individual households- by lending on a variable interest rate basis. For home buyers this can constitute a major risk factor when income growth does not keep up with mortgage payments. The practice of low start up interest rate levels for a couple of years, followed by major interest hikes, was one of the main factors for the current mortgage disaster.

Banks are restricted in what they can do on their asset side, among others for extending home loans, in how they can fund themselves. For this reason, they cannot easily offer 30 or more years fixed interest rate

mortgages; they need profits and an equity base (or preferably accumulated loan loss reserves) to absorb potential losses on loans; their competition drive can lead to undesirable risks being accepted for short term gains. Such gains can turn into macro-economic losses: reductions in Country Profit levels or even outright Country Losses.

As stated above, Fannie Mae and Freddy Mac are ideally placed to attract very long term fixed interest rate funds from the financial markets at the lowest possible market costs if the U.S. Government continues to undertake to provide a net worth guarantee to both institutions, which it already did in 2008. Such liquidity can be used to support individual households to acquire a home with long term fixed interest rate mortgages at the lowest possible rates. Fannie Mae and Freddy Mac are not ideally placed to absorb credit risks on home loans; this should remain the responsibility of the banks. The latter know -or should know- their customers best.

The second element is **affordability**. Affordability is clearly aimed at the individual household. Four elements play a role here: the mortgage period, the monthly amounts payable, the mortgage transferability and the flexibility to prepay some of the amounts due.

Generally speaking the working life period, say from the age of 20 till 67, is the maximum period in which a mortgage should be redeemed. For convenience sake one may assume a maximum mortgage period of 40 years. The mortgage loans can be structured so that the financial burden to repay the mortgage stays equal over the lifetime of the mortgage, i.e. amortisations. Such amortisations reduce the repaid principal sum in the early stages of the loan and increase them in the latter stages. If a household buys a home before the future owner is 27, a forty year mortgage may be granted. The mortgage period could be reduced by the number of years that the householder is older than 27. The length of the mortgage period and the system application of amortisations lead to the highest possible level of affordability, with the least chances of loan defaults. The third element deals with mortgage transferability. It is obvious that home owners may want to move from time to time for work reasons, for personal reasons like marriage or divorce or for some other life factors. If such reason does not require continuation of the mortgage Fannie Mae and Freddy Mac may accept such reason. If, on the other hand the aim has clearly been property speculation on home prices -“flipping practices”- than the shorter the mortgage period has been, the higher the penalty fee for prepaying the mortgage should be. The fourth element introduces the flexibility to repay additional amounts at times when the householder is in a position to do so. This flexibility helps the householder to increase his home equity base sooner. Of course some of the risks should be with the individual household. They are a minimum down payment of 5 or 10% of the acquisition price, so no 100% mortgages. Secondly no interest only mortgages, which in any case will not be needed as the mortgage periods are being extended. Thirdly and finally a proof of income needs to be provided, no self certification.

Fannie Mae and Freddy Mac are ideally placed to provide such funding to the individual households via the distribution channel of the banks and other mortgage providers. Over time both institutions will build up an experience level of how much needs to be borrowed in 10 or in 30 years funding. Some funding-lending mismatch risk may exist for a while, but this is a risk worth taking in order to achieve the next element: stability. This potential mismatch risk is covered by the taxpayers anyway, but such risk is minimal compared to the distortion of the housing markets as happened over the last five years.

The third element is **stability**. Here Freddie Mac and Fannie Mae can be of great importance. If the credit risk on the customer stays with the banks and other mortgage providers and the two institutions provide liquidity to the banks according to the affordability principles as set out above: fixed amounts per months, escrow accounts for insurance and government taxes on homes, full amortisations over the total loan period and the option of early partial prepayments, than the most stable elements on the affordability level are build in into the system. With a lower overall risk profile, the Government may give Fannie Mae and Freddy Mac the collective power to decide about how banks are behaving on the home loan front. They may reward the positive collective behaviour of banks by granting them a temporary waiver of equity reserve requirements against home loans; the tariff for home loans to be set at 0%. If banks collectively act conservatively in granting home loans, such waiver may stay in place. In aggressive home loan sales periods, a higher level of reserve requirements may be introduced. Low risk behaviour is rewarded with no reserve requirements,

aggressive sales techniques with strict reserve requirements or under the income method higher risks provisions. Finally Fannie Mae and Freddy Mac have the “nuclear” option of temporarily halting all new mortgage funding applications.

Another element of instability is caused by “flipping practices”, buying homes for short term price speculation purposes. The penalties for exiting home loans after short periods should be high, so as to discourage individual households to turn homes into a speculation object. The beneficiaries of such penalties should not be the banks but Fannie Mae and Freddy Mac as they arrange the main part of the funding for home acquisitions and may be made responsible for maintaining orderly markets.

If the income and the balance sheet risks are separated between banks taking on the credit risks on their customers and Fannie Mae and Freddy Mac taking on the funding risks, individual households will have the best of both worlds in terms of home acquisitions: liquidity, affordability and stability. When income developments allow it, the customers may also save more by repaying part of their mortgage early. Banks will be rewarded for conservative behaviour rather than for reckless lending and short term home value speculators will have to pay the price for discontinuing living in an own home.

4.4 Flaws in the Adjustment Process

It has been five years since the crisis started and the adjustment process has been “achieved” only by the efforts of individuals in saving more for paying off home loans out of incomes and in saving more for pensions. During the first six months of this year and for the first time in the long adjustment period, the asset values of homes have gone up by \$730 billion, showing that the pressure of the forced sales is receding somewhat. Home prices are up by 3% over the same period last year and the latest figures on new housing starts -on an annualised basis- were 872 000 in September 2012. Corporate equities are still lower in value now than in 2006. Unemployment rates are also still very much higher than in 2006 but slightly improving. The government deficit has increased substantially over the last five years. Economic growth has not reached its long term potential by a substantial margin. The threat is that the budget policies of reducing expenditure and increasing taxes may come too soon for the recovery to take hold.

What the balance sheet action by the banks has caused is that the income side of the U.S economy runs below its optimal level. In the above it has already been pointed out that the (re)action of the collective of individual households has been to save more and borrow less with a negative impact on GDP of -6.5% per annum since 2008. The U.S individual households are collectively still very wealthy in balance sheet terms as evidenced by the half year figure of 2012 of \$62.3 trillion. In income terms there has been above mentioned negative impact of -6.5% Secondly the number of employed persons has dropped from 146.1 million in November 2007 to 142.1 million in August this year (-3%); a lower number of employed persons also reduces the collective spending power by some similar figure. Both these negative growth factors show that the income side still requires a boost. It is clear that boosting economic growth by the U.S government through increasing its budget deficit any higher than it is already is no option. It does not own enough assets to convert such assets into cash and just increasing liabilities will reduce future government's spending on vital services. This leaves the possibility of a conversion of private sector assets into cash as the only other option. The most logical choice is to use assets which are not linked to current liabilities from the individual households. This excludes homes and equities as liquidation of the latter would destroy the production side of an economy on which all incomes depend. Therefore pension reserves, as they represent an asset base which is clearly intended to be used in future years for income generation, can help out on a temporary basis. Such a method could be called the “economic easing” method.

How it could work in practice is set out below:

The Economic Easing Method

Individual households in the U.S., the U.K, the Netherlands and Canada have build up large pension fund reserves in order to pay for future incomes. These reserves have been accumulated via the contributions of

individuals and sometimes companies or even governments on their behalf. The savings have been invested nearly all in the financial markets in order to create investment returns. In a way pension funds, in their investment returns, closely resemble the country profit levels in a country. Pension funds usually have no gearing; they consist of pure savings allocated over the asset classes. Their accumulation and distribution pattern of savings is closely monitored by the countries concerned. Much debate is going on about the manner of measuring, predicting and allocating future investment results over the different age groups as longevity plays a major role in the changes. What, so far, has not been discussed is how pension funds could contribute to economic growth. The principal concept is to link accumulated savings directly with consumer spending in the current period. The current size of pension funds in the U.S., the U.K., the Netherlands and Canada make such a link possible. In all these countries the accumulated fund levels now exceed or closely resemble the annual GDP level. An assets-to-incomes solution could be using the concept of 'Economic Easing' to stimulate economic growth.¹³ This was elaborated upon in my paper: "When Capitalism No Longer Works -A Profit Warning".

Economic easing can be defined as the action of turning a small part of savings accumulated for future expenditure -the pension savings- into current consumption. It is using households' balance sheets to turn assets temporarily into cash incomes and when economic growth has reached its desired level turn incomes back into assets.

Take the U.S. case as an example. If 3% of pension savings were distributed in 2013, this would mean that \$400 billion extra consumer demand would be created, provided all beneficiaries spend their pension dividend on consumer goods, something they should be encouraged to do. If, assuming again, that markets know that such action would be repeated in later years until economic growth reaches its optimal growth path, than such certainty will make companies wanting to invest their cash reserves or obtain additional bank or capital markets funding. Jobs will be created. Production levels will be increased. Company profits will increase, hence share prices will improve. Country profit levels will start to improve. Finally the government will benefit from higher tax incomes. The positive multiplier effect will start to work as unemployment levels will also drop.

Of course the temporary cash injection into the U.S. economy out of pension reserves can not be done without a compensation for the pension funds. Such compensation will need a change in the tax laws. Until now the U.S. and other governments have always practised that taxes pay for government expenditure. To make economic easing a success requires a change in tax philosophy. Individual households provide all the funding for all business units, including a government, in the U.S. and in other countries. When an economy is stimulated in above described manner all households in a country benefit. It would therefore be appropriate that when the benefits are shared, also the costs of it are shared. This implies that a small portion of future tax receipts is set aside for returning the savings back to the pension funds as and when economic growth has reached its optimal growth level. The boost for the economy in 2013 would not be provided by the government -a Keynesian cash injection- but directly from individual households' savings- the balance sheet- to individual households' spending -the income based aspect of economic easing-. Government debt does not increase, but a small share of future incomes need to be returned into savings, which only a government can do through its tax collection. The savings into cash and back into savings cycle constitute a taxpayers' obligation as all taxpayers will be the beneficiaries of the economic boost in the first place. Pension funds in the U.S invest about 50% of their funds in equities and the remainder in other assets. If, as a consequence of economic easing, share prices will rise with 2 or more percent over inflation per annum, than for half the taxpayers' guarantee such share price movement will take care of the obligation. The other half will need to be repaid at some future date, for which pension funds may be compensated at a long term government bond rate at inflation plus 2% per annum.

¹³ <http://mpira.ub.uni-muenchen.de/cgi/users/home?eprintid=41671&screen=EPrint::View::Owner>

The practical implications for implementing an economic easing policy are as follows:

- **Step 1:** The Government aims to reach an agreement with all pension funds (DB as well as DC schemes) so that the latter can pay say 3% of their value to all pension savers and retirees. The values could be fixed as of 30th December 2012.
- **Step 2:** Once an in principle agreement has been reached, such pay out (a pension dividend) could be made available in four equal quarterly instalments of 0.75% of the value, starting as soon as administrative hurdles have been overcome.
- **Step 3:** The pay out could be for an equal amount per pension saver and retiree. This would benefit the younger and the less well off more than those closer to retirement date and those with the larger pension pots. However the younger participants have the longest period of contributions and investment risks ahead of them.
- **Step 4:** As the aim of this measure is to stimulate economic growth; the government might agree to have the pension dividend paid out tax free.
- **Step 5:** If pension funds are short of cash, they could be allowed to borrow these amounts from the Fed in the U.S., until pension contributions and dividend and interest flows have come in.
- **Step 6:** As a logical extension of economic easing, which is done to create more Country Profit for all households, a government could agree that the pension savings used for current consumption will be repaid by the taxpayers or partly by taxpayers (see point 8 below).
- **Step 7:** The logical conclusion could be that such repayments take place as and when economic growth rates have reached the desired level, in other words when Country Profit levels have reached their long term average.
- **Step 8:** The rewards for pension funds in participating in such a scheme could be a taxpayer's guarantee, based on an inflation level plus 2% remuneration per annum for the pension funds. The indirect rewards for pension funds are more substantial as the increased level of demand in the company sector will be translated in higher share prices. Banks will experience less loan losses. The government will also benefit indirectly by higher tax incomes. The maturity of the economic easing facility should be determined by the pension funds and the government jointly based on actual country profit developments. As US pension funds have collectively allocated about 50% of their portfolios in shares, if these shares -as a consequence of economic easing- rise by inflation level plus 2% or over per annum, the amount to be repaid out of future taxes should be halved.
- **Step 9:** As the repayment obligation is not linked with the repayment of past government expenditure, economic easing does not influence government debt levels. It is in effect a scheme to bring forward the use of a small part of the savings and have such savings replaced by all taxpayers as and when Country Profit levels start to rise.
- **Step 10:** Finally the beneficiaries of the pension dividend should be convinced that the amounts are for consumption purposes rather than for adding to the savings level.

The economic easing method can be started up and stopped very easily. It can also be maintained for longer than a year, if needed. Both groups of taxpayers and pension pot savers and retirees are United States citizens. A potential positive side effect of economic easing is that it will stimulate individual households to participate in funded pension scheme savings as only pension savers and retirees will receive a "pension dividend". Such participation will reduce the pressure on future government's budgets to provide for the basic state pension.

The country profit level between 1995 and 2006 used to be on average \$3.2 trillion. An injection of \$400 billion in demand in 2013 will create a multiplier effect as additional jobs will be created and investments will go up to increase output levels. Company and bank risks will come down. It may take a year or two to get the whole economy back to the average country profit level of \$3.2 trillion. However the higher level of economic growth will do wonders for the government's budget even at unchanged tax rates.

The Fiscal Cliff

If the economic easing method had been applied in 2008 and 2009, the enormous impact from the balance sheet crisis on jobs, economic growth and on the government's budget deficit would have been lessened dramatically. It was not, but it is still very useful to apply this method before major tax changes take place.

Perhaps an economic easing programme can be started soon. The effects of such a programme can be measured very quickly. Stock markets have a tendency to anticipate events. It might therefore be useful to fulfil the dream of economic growth first before adjustments are made to the tax regime. Anyway tax incomes will rise with higher economic growth rates. Spending cuts can always be implemented if it means that the U.S government can do the same with the use of less money.

4.5 Long Term U.S Government Bond Yield

Historically, from 1912 until 2012, the U.S Government 10 year Bond yield averaged 6.5% reaching an all time high of 15.8% in September of 1981 and a record low of 1.4% in July of 2012. What it means is that currently savers funding the U.S government bond issues receive a below inflation level compensation for holding U.S. 10 year government bonds. The balance sheet aspect is that U.S government debt levels increase less rapidly, but the income aspect is that in times of economic slow down the government takes away an income element from individual households which could have been used to stimulate spending, especially if the economic easing method is applied. The Fed, the Bank of Japan and the Bank of England have shown in using Quantitative Easing practices that central banks can print money to buy government debt and bring interest rates down, with the side effect of higher inflation. Quantitative easing does not change the level of government debt; only its temporary owner. What it does change is that the risks for individual households stay the same but the reward for these households is reduced. In lean economic times it is more important to maintain incomes rather than reducing future cash flows. Issuing 10 year government bonds with a positive margin over inflation levels will do the trick, for instance at 2% over inflation levels for such bonds. An interesting fact is that the Bank of England's own pension fund has invested nearly all of its reserves in such inflation based government bonds. It is one of the very few pension funds in the U.K., which have maintained a very high pension reserve ratio and not suffered from quantitative easing practices. In the U.S the average 10 year government bond yield of 6.5% over the last 100 years did not stop economic growth. A policy to maintain long term government bond rates over and above inflation levels will help the recovery rather than hinder it.

4.6 Some European Considerations

4.6.1 The European Government Bond Yield Programme

The 17 Eurozone countries share one currency, but each country has a different inflation rate, a different rate of economic growth, a different level of unemployment, a different level of outstanding government debt and a different state of its banking sectors. Taxation levels differ and so do the savings levels for pension provisions. Managing the gap risks between short and long term savings intentions needs positive government actions, not necessarily at European Union level, but collectively at individual country level.

This could be done as follows: Countries such as Austria, Germany, Belgium, the Netherlands, Luxembourg, France and Finland could attract 10 year funds from the financial markets not for government spending but for financial risk management purposes by depositing these funds as reserves at the ECB. As both assets and liabilities rise simultaneously, such action does not increase a government's debt level. As an example, Germany could use these powers until its borrowing yield reaches 3.35%; 2% over its current bond yield level. These savings remain German savings at the ECB. For the other six funding countries their inflation rate plus 1.35% would also be the yard stick. The ECB could with these funds, subsequently buy up long term government debt of the 10 countries, provided that they follow the fiscal pact. In these 10 countries the yield has overshoot the level of inflation plus 1.35%. In the case of Spain, which always had a very prudent central government, its inflation rate is, like Germany's, 2%, but its current yield is 5.88%. In this example the ECB would buy 10 year Spanish bonds currently at 5.88% and subsequently at lower yields till the Spanish yield also stands at 3.35%.

The ECB's interest income from Spanish bonds exceeds the borrowing costs of the seven countries. Such interest income will be fully distributed over the funders pro rata of their funding contributions. In this way the costs of issuing more government debt than needed for own government expenditure of the seven countries is more than met by the income from bonds of the 10 countries held by the ECB. Governments of the seven countries could ensure that the Profit made out of the funding and loan transaction by the ECB is returned to individual households. Individual households will see that the cross country risk taking is rewarded with a pay out. At the same time fiscal prudence stays intact. The action is aimed at maintaining financial stability across the Eurozone, rather than increasing government expenditure levels in any participating Eurozone country. It is a balance sheet method, by expanding the balance sheet on both sides at the same time. It will have a positive income effect for the risk takers, but also a positive impact on the government budgets of the beneficiary countries, which helps all individual households in these countries. The interest costs will be met by the real borrowers, the 10 nations. The fund suppliers –the seven nations- get an extra income, while the taxpayers in the 10 countries benefit from the balancing act of the ECB. The ECB's mandate may need to be adjusted for executing this type of financial transaction. The great advantage is that the ECB does not need to rely on money printing, but can rely on moving real private savings within the Eurozone countries. The other major advantage is that the risk guarantors -the individual households in the seven countries- get paid for such risk taking. The risks involved are minimal as the 10 countries can fund their government bond obligations, not on short term financial market speculation but on long term taxpayer's obligations to solve their own government debt problems. By lowering the overall risk level in the Eurozone countries all countries -including all households- benefit. Of course, the criterion for assisting the 10 countries is that they apply the fiscal pact requirements. Executing such a balancing act has to be done on a daily basis; only the ECB is up to this task. The European Financial Stability Fund cannot operate in the required manner. The financial markets will relish this type of market stabilisation by the ECB and private sector fund flows will soon return directly to the higher paying Eurozone countries, making intervention unnecessary.

4.6.2 The Spanish Housing Problem

Apart from economic growth, Spain needs a solution to its overhang of 800 000 unsold homes. By solving this problem the banking problem will be much less acute. A possible solution is described below.

In Spain, the cause of its current crisis has very little to do with the Euro as a currency or with the Spanish government acting imprudently, but all to do with some banks turning savings into 800 000 homes which could not be sold to potential buyers. What other European governments might have done to help manage these collective risks from spreading to the Spanish economy and Spanish government is set up a second home acquisition scheme for their own nationals rather than lend Euro100 billion to the Spanish government, or directly to the Spanish banks. The latter injection equates to Euro125 000 for each unsold home. The unsold home problem could have been solved much more effectively by supporting foreigners in buying homes in Spain from the Spanish banks or population. This could be done with the help of a subsidy. Instead of providing Euro125 000 per home, give foreigners a subsidy of 20% of the amount i.e. Euro25 000 per home. If the lending is also executed by German, British, French, Dutch, Swiss, Austrian and Scandinavian banks than the inward capital movement into Spain will help solve the real estate crisis, part of the banking

crisis and a substantial part of the government debt crisis. The homes should be of a minimal value of Euro150 000, which equates to properties of 120 sq meters in the Spanish Mediterranean Coastal provinces. Such potential buyers should themselves put in an amount minimally equal to the governments' injection. The remainder amount should be up to the foreign bank's credit judgment. The buyers should also agree not to sell the properties for a minimum of five years. The Bank of Spain could supervise the scheme. Of course the scheme would be stopped as and when the supply of homes comes nearer to the full utilisation levels.

The consequences: The Spanish property markets will turn around pretty quickly; a place in the sun is still a dream for many Northern Europeans. The Spanish banks will be relieved from their property overhang on which no cash flow is received while their borrowings still carry interest costs. The Spanish people who sell and move to other properties will usually have more cash available as 50% of homes are owned in Spain without a mortgage. European governments usually operate either capital gains taxes or income taxes on second properties, so they will get their money back in due course. Last but not least the capital inflows into Spain and the strengthening of the banking sector plus the additional tourist incomes will help the Spanish economy to turn around as well. This comes all at a fraction of the costs of the Euro100 billion. Spanish government bond yields will come down as well. The example is just one of the ways in which understanding the causes of the risks to savers can help devise sound solutions. The "perceived risk" outlook for Spain will fundamentally change by implementing this scheme.

5 Conclusions

The analysis of what went wrong in economic terms in the U.S. since 2007 is best described by utilising the two instruments which help companies to show their results but are equally applicable to all households: The balance sheet and the profit and loss accounts. The Federal Reserve has been publishing the balance sheet data for individual households for a long time already. Out of these data the P/L accounts can be deduced.

The first conclusion, which can be drawn from above study, is that it is necessary to study the time series rather than the data from a specific year alone. In our case the pre-2008 series were studied in order to see what the U.S. population was capable of in terms of producing increasing levels of wealth. In US dollar terms on average for the period 1995-2006 the net worth incremental value was \$3.2 trillion, which can be called "Country Profit"- and which consisted of two factors: the return over the savings from previous periods and the additional savings from the current periods. With a net worth level of \$62.7 trillion as per end of June 2012, it is easy to conclude that the savings element out of current incomes can only represent a minor fraction of the accumulated savings level.

The second conclusion which can be drawn is that returns over the accumulated savings -the "interest" returns- are available, but have to be deduced from the changes in asset values. For instance in the case of house prices, the average home price and the change therein reflects the reward for the savings embedded in the homes. For equity provided to companies, both for listed as for noncorporate businesses, the reward over the assets invested is not the income transferred in the current year, either to shareholders or company owners, to employees or to the government -irrespective of how important such elements are to economic growth- but the annual changes in the individual household balance sheet for savings values invested in equities. For government bonds it is the government debt level and its annual increase which represents the change in the financial position of individual households. The current set up of the balance sheet of households and nonprofit organizations does reflect the asset values of U.S government bonds well, but fails to include the liability side. The funding for U.S government debt is ultimately provided or guaranteed by all American individual households. This is an asset item for individual households. One also knows that out of future income such debt has to be repaid and serviced. This liability out of future income has not been included in the current set up of the individual household balance sheet as the latter relates to future cash flows. The Citizens' Guide to the 2011 Financial Report of the U.S Government does work out the implications for deficit funding over the next 75 years. The future taxpayers' obligations do need to include interest payments due and it is likely that the average interest rate applied will be closer to the average U.S government bond yield over the last 100 years, which was 6.5%, rather than the current yield of 1.62%

The third conclusion which can be drawn is that the current crisis was caused by the lending policies applied to the home mortgage markets; by the securitisation of the home mortgage risks; by the distribution of these risks around the world and by the subsequent debtor workout schemes by changing from an income based recovery of outstanding loans to asset based liquidations. The banking crisis followed; followed by the equity markets crisis and the government budget crisis. In this whole process many jobs were lost, and still as of to-date 12.3 million Americans are out of work. Also Country Profits were lost to an extent of \$17.8 trillion over the period January 2008 till June 2012. The latter was calculated as if trends would have continued uninterruptedly.

The fourth conclusion is that the causes of this economic crisis were found in the economic set-up of American society -the econsystem-. If this was the case, than possible solutions need to be found in changing the flaws in the system. Flaws in the banking system, in the mortgage lending system, in the speed of the adjustment process and in the government long term bond yield assessment were discussed. Finally the timing issue of changing government budget measures was raised.

For the banking system it was recommended to consider setting up economic balance sheets and P/L accounts. It was argued that banks need proper provisioning for risks taken from the very moment that these risks enter the books of the bank -hence the need for an economic balance sheet, a balance sheet which reflects risks and rewards-. It was also argued that if proper provisioning takes place, banks do not need shareholder equity as the role of the banks is only in risk intermediation between funds attracted and funds lend out as well as providing payment, foreign exchange and securities services. The suggestion was made -in order to reflect bank risks properly- that shareholders' risks are split into an income related and a balance sheet related risk. The income risks can be fixed at a fixed price say 5% over a principal value to be set, or as a price related to inflation, say 3% over inflation. For this price shareholders accept that the banks can write down or up the value of the asset in their balance sheet. Such income method shows the bank's managerial skills rather than the shareholders having both income and balance sheet risks. This solution does not require that the size of the equity buffer is measured in relation to the size of a bank's assets. If the proposed capital adequacy ratios were to be implemented, economic growth prospects will be harmed as the process depends on the willingness of investors to put additional financial resources into bank equity levels, a very unlikely prospect.

For the mortgage lending system it was recommended to concentrate the balance sheet aspect of home funding with Fannie Mae and Freddy Mac as they -based on the government's positive equity guarantee for these institutions- can fund themselves the cheapest and for the longest periods at fixed interest rates. It was also recommended to leave the home mortgage credit risks -the income risks- with the banks or other home mortgage providers. The conclusion was also drawn that mortgage products should rely much more on the income side and on the individual' savings side than on the value development of the home.

For speeding up the economic recovery it was suggested to use the "economic easing" scheme converting on a temporary basis individual households' balance sheet items from accumulated pension reserves to cash and when economic growth has reached the desired level return the cash back to savings.

Quantitative easing has both a balance sheet effect and an income effect. The balance sheet effect is that government debt moves from the individual households to the Federal Reserve, however the risks for repaying U.S government debt stay with the individual households. The income effect is that the yield over long term bonds were brought down and that the acquired portfolio of government bonds by the Fed no longer yields any income any longer for the individual households -two income lowering effects at a time that the general income level is already under severe pressure.

For the U.S the final conclusion is that perhaps it is better to implement the assets into cash strategy first -the economic growth boost- before altering the tax rates. Lowering government expenditure levels, if the desired services can be delivered at lower costs, is always a good thing.

For Europe the current strategy to turn countries around seems strongly based on government budgets and government borrowings rather than on home prices, equity prices, pension reserves and last but not least on unemployment levels. If adjustment strategies only mean that the holders of government debt are swapped from the private sector to the IMF, the ECB and other country government sources without due regard for Country Profits of the countries concerned than the period of adjustments will take for a very long time accompanied by tremendous economic waste. Economic growth is needed for these countries. For Spain a solution to its excessive supply of homes is also needed. Economic easing methodology is needed, even if the funds have to be resourced from other European countries. After all such a methodology is a self help scheme as the effect will be that international trade levels will pick up again.

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