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Introduction

For too long, economists have described the 2008 events in the U.S. and Europe as a financial crisis. Like on many occasions, economists were not wrong, but not right either. The real crisis did not happen in a single year, but was the result of years of benign neglect to what happened to the individual's household own equity level: the savings used to help acquire a home for one's own use. Few individual households can afford to buy a home outright out of their own savings. They use outside equity: borrowed funds. In 2008 in the U.S., 53 million households had a mortgage out of some 80 million home owners.

The relationship between outside and own equity is often not fully understood. Outside equity has the capacity to help increase the volume of new housing starts, but it has also the capacity to increase house prices over and above the general inflation level: the CPI level. If incomes keep pace with the CPI level -and after 2008 that has been a big if- than an increase in house prices above the CPI level leads to the situation that the value of an unchanged percentage of savings out of incomes becomes worth less in purchasing power to acquire a home. Own equity suffers, but bankers, who intermediate on behalf of outside home equity providers, recorded a positive gain for outside equity holders as asset prices increased. This contradiction is based on what incomes and savings out of incomes can buy and what asset prices reflect: outside equity allocated to both a volume and a price increase. Banks base their actions on their own customers, not on those who have not even entered the housing market, but wish to do so. They also base themselves on asset prices, sometimes forgetting the effects of house price increases over CPI levels, caused by their own collective behaviour. In 2005-2006 65.5% of all lending for home purposes in the U.S. ended up in price increases of homes. If one adds to this the Fed's reaction of increasing base interest rates from 1% in June 2004 till 5.25% by July 2006, than such action did not punish the bankers, but it punished the own equity providers and reduced their incomes flows, especially those on variable interest rates, like the 90% of sub-prime mortgage holders. It also reduced the number of prospective buyers. In the U.S. over the period 2008-2012 5.4 million home owners lost their homes and their equity in their home due to repossessions.

Europe got heavily involved in the American income and housing crisis as banks, pension funds and individuals from Europe provided the outside equity, by buying up U.S. mortgage backed securities.

The re-balancing period has taken well over 5 years with very heavy losses on savings, including a huge increase in government debt on both sides of the Atlantic. Individual households had to restore their own income and savings levels, which to some extent they have succeeded to do in the U.S., and to a lesser extent in the U.K. but in the Euro area such re-balancing is only in its very early stages.

This article focuses on the relationships between incomes and assets, on own and outside equity and on economic savings -those that help output and employment growth- and financial ones, which do not do so.

1. Individual household's incomes, savings and asset prices

1.1 The purchasing power of savings

Income developments of individual households are often compared to inflation levels: the changes in prices of goods and services as measured with the help of the CPI inflation index. In an equal measure, savings -the postponement of consumption till a future date- could be measured against price and volume changes. The latter changes are reflected in the price movements of homes; of shares and bonds after the initial listing dates and of the volume increases in government debt levels.

In a period when the CPI inflation level rises faster than the average income of individual households in an economy, it is widely accepted that the value of the income flow is depreciated against the values of the prices on offer in an economy. Such depreciation occurs both to the internal value of a currency as expressed in the local currency and to the purchasing power of the currency as expressed in foreign currency terms. Individual households lose the ability to buy the same package of goods and services as in previous years. The loss is particularly painful for those on low income levels, including the young and the unemployed as well as those households who have no savings. This depreciation of the values of incomes can be called the income depreciation factor.

The same depreciation effects apply to savings. Savings can also lose their purchasing power through events linked to the price developments in homes, shares and bonds and the volume effects of increased government debt. It specifically applies to:

- The increase in house prices over and above the CPI inflation levels, provided that incomes do keep up with the CPI inflation level;
- The increase in share and bond prices after the initial transfer of funds when companies list their shares or bonds on the stock exchanges;
- The increase in government debt outstanding after a year, if the use of government funds does not create its own cash-flow, but has to be recovered from the individual households' future income levels.

All these three factors can cause the savings depreciation factor.

1.2 The savings depreciation factor and home values.

In a paper recently published¹ called: "Financial crisis, economic crisis and individual households' income and savings crisis" I drew attention to the fact that 65.5% of all outside equity used to buy homes in the U.S. during 2005-2006 was not used to increase the volume of new housing starts but to increase the prices of existing homes. Every year from 1997 till 2006 house prices in the U.S. increased above the CPI inflation level, but the pace of such increase changed dramatically from 2002. The median income level in nominal terms moved up from \$41,186 in 2000 till \$47,262 in 2006, which was slightly below the CPI inflation level changes. From a house buying perspective, in order to have maintained the same purchasing power of the savings out of such income, one would have needed a median income level of \$63,246 in 2006. The savings depreciation factor was 33.8% over the whole period 2000-2006. The purchasing power capacity of the same level of savings out of increased incomes in order to buy a home had dropped by nearly 34% over this period. In 2006 the \$47.262 income level per household could no longer afford the same own equity

¹ <http://mpira.ub.uni-muenchen.de/53122/>

level to buy a home. One needed a 34% higher savings level than in 2000. Of course, income developments and savings requirements to provide the own equity for buying a home clashed. This situation was made worse by the Fed when it increased its base rate. This rate went up from 1% in June 2004 till 5.25% by July 2006. The base rate stayed at this level till August 2007. Such interest rate increase had a dissimilar effect on outside equity and own equity providers. Own equity providers, who had variable mortgage interest rates for their outside equity, had to pay substantially more out of their incomes to support the outside equity providers; a transfer of income they could ill afford. This was made worse as 90% of sub-prime mortgages (\$1.1 trillion out of the total \$10 trillion national home mortgage portfolio) had been started up during 2004-2006 with a low two year fixed interest rate and variable rates there after. Sub-prime mortgages were granted to individual households who least could afford a mortgage.

Outside equity providers initially benefitted from the increased base rate, as did the banks. The latter profited even more as they sold off a substantial share of their credit risks to other outside equity providers as mortgage backed securities, including a major quantity to European savers.

The savings depreciation factor was not incorporated into banks' credit judgments and neither was it reflected in their annual profit and loss statements. Mark-to-market valuations of homes were wide off the mark as they did take no account of the increased risks to the income level of individual households, due from both the savings depreciation factor and the raised interest charges.

The bubble started to burst when on August 9, 2007 BNP Paribas suspended three investment funds in mortgage backed securities as: "a complete evaporation of liquidity" had occurred. Savings losses to outside equity providers started to accumulate.

It has been a striking fact that about 5.4 million home owners lost their home over the period 2008-2012 out of the around 50 million home owners who had a mortgage. This reflects nearly 11% of all home owners who had a mortgage and is close to the 12% of sub-prime mortgages granted as a percentage of the total national home mortgage portfolio. Over the period 2006-2011 it should be noted that house prices dropped by 28.9% in value and \$6.6 trillion in actual amounts. Only in 2012 did the tide turn in the U.S., once individual households had had the chance to pay down the outstanding principal amount of home loans by \$1.2 trillion. They did this over the period 2008-2012. Over the period 2007-2013 8.714 million homes were built less as compared to the 2005 level of new housing starts. Not only was the savings depreciation factor not taken into account in the build up to the individual income and savings crisis, it also led to savings losses far higher (more than five times higher to be precise) than the outside equity amounts provided to the sub-prime mortgage participants.

Some further observations. Banks did not properly account for the savings depreciation factor as they only considered their own client base. They did not take into account the effects of the collective actions of all banks providing the outside equity element responsible for the increase in house prices. They also transferred risks to other outside equity providers, so that, narrowly speaking, an individual bank had lowered the risks on its own books. Of course, the increased risks to the income levels of individual households continued unabatedly, the higher the savings depreciation factor had become.

Another observation is that those on low income levels, below the median income level, suffer the most when the savings depreciation factor goes up and subsequently comes down again. Their incomes are proportionally more affected than those incomes above the median income levels. Hence it is so essential that the savings depreciation factor is acted upon when it occurs and that the

low income earners have a chance to reduce their risks over their income by having a 30 year fixed rate mortgage granted: the very reason that Fannie Mae and Freddy Mac were set up in the past.

Finally the policy of benign neglect accepted by both the U.S. Congress and the Fed has not worked well for the U.S., but also not for Europe as the contagion spread through the international capital flows.

1.3 The savings depreciation factor and shares and company bonds

Savings -households' equity- are not only allocated to purchase a home. They are also used to finance companies. The transfer of financial resources to a company takes place when a company lists their shares or bonds. From the moment that a company share or bond is listed, new savings are allocated to increase the share or bond price. Savings are lost when an individual household actually sells the share or bond below the issue price or below the market price for which the shares or bonds were bought.

The savings transferred to the company sector do represent real asset values. They represent bricks and mortar, equipment, but also the human skills to create new products and services, to sell more, to improve operations and to compete effectively against other companies, both domestically and abroad. What the savings transfer does not guarantee is that there is a sufficient level of demand for the goods and services of all companies: the macro state of an economy.

The link between an individual household's income and savings level and the company sector is more complex than in the case of owning one's own property. Many individual households together own a company. Ownership is quite often exercised indirectly through pension funds and mutual funds. Therefore the effects of the volumes of savings on the price of shares and bonds are somewhat more uncertain. Does the price of a share go up because the company is expected to create more income or does the price go down because of a lack of demand in an economy? There are individual but also collective reasons for share price movements. Irrational exuberance is a well known factor in the share markets.

If one uses the Balance Sheet of Households and Nonprofit Organizations as published by the Fed² over the period 2000-2006 and one adds up the values of corporate equities, mutual fund shares, life insurance reserves and pension fund reserves in the year 2000 and 2006, one will see that the values increased from \$20.84 trillion at year end 2000 till \$27.64 trillion per end 2006. This reflects a nominal increase of 32.49%. Median incomes moved up by 14.75% over the same period. The Dow Jones Industrial index moved up from 10,788 per end December 2000 till 12,510 per end December 2006 an increase of 15.96%. One cannot draw a very specific conclusion out of these data because a number of elements cannot easily be assessed. They are the distribution of the savings over equities and bonds. This allocation can change on a daily basis. Secondly there are payments received from dividends and interest over the share and bond portfolios over the whole period 2000-2006 and thirdly the pension and life insurance companies pay out benefits to retirees or other beneficiaries.

Notwithstanding such inaccuracies it seems that the price effect of the share portfolio did not deviate very far from the income growth over the same period. For the bond portfolio the 10 year government bond rate at the end of 2000 did not deviate very much from the same 10 year bond rate at the end of 2006, which would more or less apply to company bonds also. If anything bond prices would have shown a very slight increase in value over these six years. All in all the share prices and the bond prices developments over the six year period did not show any substantial deviation from

² <http://www.federalreserve.gov/releases/z1/current/z1r-5.pdf>

the income growth over this period. This implies that the savings depreciation factor was likely to be very small as compared to the house price developments.

Again a final uncertain factor is how much bank credit was involved to fund an increase in share prices. This factor is mitigated as banks generally keep a close eye on asset prices of shares and bonds and on outstanding margins. If margins are exceeded, a cash call follows quickly and while such margin trading can add to the volatility in the share markets, it normally is soon corrected by cash calls or sales of shares.

1.4 The savings depreciation factor and outstanding government debt levels

Recently the U.S. government published its balance sheet for fiscal 2012³ which was reported by the American Enterprise Institute: assets \$2.748 trillion and liabilities \$18.849 trillion. Of the assets about \$1 trillion were loans outstanding and \$855 billion property, plant and equipment. The difference of \$16.1 trillion is a massive consumer loan to be repaid by individual households. It will affect own equity and incomes values for all U.S. citizens over a very long period of time.

Governments generally, but also in the particular case of the U.S., do not accumulate many assets. In the U.S. the loans granted imply that future incomes of the involved individual households will be reduced by the level of repayments of such loans. For a government they are a financial asset and could be offset against their own liabilities, were it not that the doubtful debtor level of such loans is uncertain, but the government's own debt level is not.

Other than in the case of homes, the price effect of government assets is not very relevant. This brings one to the future income effects on individual household's incomes from an increased level of government debt. This will affect all households in the U.S. and beyond.

In the U.S. over the period 2000-2006 the government's outstanding debt level went up from \$5.674 trillion in fiscal year 2000 till \$8.506 trillion in fiscal year 2006, an increase of 49.9%. The median income level over the same period went up by only 14.75% over the same period. The funding of U.S. government debt has been partly funded by foreign buyers of U.S. government debt, but the repayment of these debts is clearly the responsibility of individual households in the U.S. If one takes into account the increase of the number of households in the U.S. from 104.705 million in 2000 till 114.384 million in 2006 than the government debt per individual household moved up from \$54,190 in 2000 till \$74,363 in 2006 an increase of 37.2%.

U.S. government debt is all funded by outside equity, some of it originating from abroad. It means that future savings of U.S. individual households are mortgaged for a period much longer than the usual repayment period of a home mortgage loan. Government debt outstanding for longer than a year has no economic value unless a cash flow is created from a specific government investment which, based on an outside contract, pays for the government expenditure. Government debt has a financial value as will be explained later. Its economic impact arises when individual households' savings and incomes are affected through increased taxation levels. Even before the financial crisis of 2008, if in 2006 the U.S. government would have chosen a 70 year equal instalment repayment period, the repayment element alone would have lowered the value of the median income level by \$1062 per household. This would mean a permanent lowering of the value of income per household over their life time by 2.25% and this reflects the principal amount of the debt only.

³ <http://www.aei-ideas.org/2013/01/usa-inc-s-balance-sheet-assets-2-7-trillion-liabilities-18-8-trillion/>

The U.S. government debt situation has worsened considerably since 2006. In 2012 the nominal median income level in the U.S. was \$51,017 or a 7.94% increase over the 2006 level, while the U.S. government debt level practically doubled over the same period from \$8.506 trillion in 2006 till \$16.066 trillion in 2012 or an 88.9% increase. According to the U.S. Debt Clock⁴ government debt per capita now stands at \$54,169 and per taxpayer at \$150,525. What this all means is that the value of future savings and of incomes is severely affected by the rapid increase in U.S. government debt; already very seriously between 2000 and 2006, but even more since 2006. The savings and income depreciation factor is substantial. The cash flow to service this debt has to come totally out the income levels of individual households, directly or indirectly, reducing the future purchasing power of savings and incomes of individual households.

2 The accumulation of macro-economic errors

The period of benign neglect of U.S house price increases started from 1997 and lasted well into 2006. The neglect was that neither the U.S. government nor the Fed seemed to realise and to act upon the fact that house prices were rising faster than the CPI inflation index and also faster than the median level incomes. The individual households' savings depreciation factor was not measured; it was not incorporated in the lending decisions by the banks as banks focussed only on their own client base rather than on what all banks did together. The latter was to create the situation that in 2005 and 2006 65.5% of all new home mortgage lending was used to raise house prices above the CPI inflation index. U.S. banks were very pleased with the fact that they could sell about half of their total national home mortgage portfolio -about \$5 trillion out of a total \$10 trillion- to outside equity providers through the mortgage backed securitisation process. A substantial share of this was taken up by European savers. As risks were -in a narrow sense- transferred to others, U.S. banks reported inflated profit levels. They based such profit assessments on two elements: the increased home values as compared to outstanding loans and the transferred risks.

Collectively U.S. banks were themselves responsible for the increased home values over CPI inflation levels. Collectively the risks to the world's individual households as the providers of the outside equity could not be laid off. Ultimately the financial crisis occurred because the Fed and others regarded the housing market as a supply and demand market. They should have considered that the housing market is an income and savings affordability market. After all the housing stock does not need replacement all at once; new homes are to last at least about 100 years and what is needed is a steady flow of new homes; in the case of the U.S. about 1.6 million new housing starts per annum. To keep new homes within reach for all those who aspire to become home owners made and still makes great economic sense.

2.1 From boom to bust

Individual households can not be blamed for taking out home mortgages. They do not control the collective actions of banks of increasing the volume of outside equity to the extent that 65.5% of the new mortgage amounts were used to inflate house prices over the CPI inflation level. However individual households suffered the consequences. The most immediate effect was that 21.4 million households were put under immense financial pressure as foreclosure proceedings were started against them over the period 2004-2012. This represented more than 4 out of every 10 mortgage holders in the U.S. Secondly 5.4 million individual households or more than 1 out of every 10 lost their home through repossession. The reaction of individual households was to repay \$1.2 trillion

⁴ <http://www.usdebtclock.org/>

from the peak of outstanding home mortgages in 2007 of \$10.549 trillion till \$9.373 as per the end of the third quarter 2013.

The banks also changed their position. Of course the securitisation process was stopped. Lehman Brothers went bankrupt. Other banks around the world went bankrupt. Banks did no longer stimulate individual households to take out home mortgages. The substantial drop in house prices since 2008 also caused banks to lose out. Their equity bases needed replenishments.

Outside equity savers were also punished. Both in Europe and in the U.S. savers lost substantial amounts as a consequence of the lack of management over the collective of banks. The guidance of the credit rating agencies did not help either as their credit judgement skills were just as poor as those of the bankers. The bankers were the ones who paid these agencies for their credit judgments.

The savings which remained in the system after the losses: deposits, share values and the outside equity provided to fund outstanding government debt were hit by another income shock: quantitative easing. The latest balance sheet of the Fed (23rd January 2014) showed that it had on its books: \$2.122 trillion in U.S. government securities and \$1.532 trillion in mortgage backed securities. The Fed is the only institution in the U.S. which can pay in U.S. dollars with dollars which have not been saved out of incomes. The effect on savers has been substantial. Incomes from all outstanding U.S. treasuries were substantially lowered. The indication of a tapering of additional tranches of quantitative easing has already caused large cash withdrawals from emerging market economies. The total values of shares held by U.S individual households have increased by 61.9% between 2009 and the end of the third quarter 2013. The nominal GDP value has gone up from \$14.418 trillion in 2009 till an estimated \$16.773 trillion for 2013, an increase of 16.3%. It seems that the next bubble is appearing in share prices as they are racing ahead of incomes and savings. QE could well be responsible for this re-allocation of savings.

2.2 The real economy

If the world was a simple place, financial sector transactions would remain separate from real sector activities. However in the real world whatever happens in the financial world has substantial repercussions in the real world. In 2008 and following years house prices dropped, share prices took a battering and individual households tightened their purse strings in order to protect their own equity positions in their homes. All this led to companies getting more careful due to reduced demand levels. Large companies started to accumulate large sums of cash holdings and small companies had more difficulties in obtaining credits. Unemployment levels went up dramatically and the income growth of those still in work fell below CPI inflation levels. Government deficits multiplied. Consumption, investments and government expenditure over tax receipts all went in one direction, south.

Based on all these facts, how can economic growth be restored without having to go through the very lengthy process of adjustments by individual households only. The remarkable element in the adjustment process has been that banks have been helped, that governments have benefitted from quantitative easing through a sharply reduced costs of funds, the wealthy have generally benefitted as they could move their savings into hedge funds and other vehicles and to other countries. The man in the street has lost out, often through joblessness or through income growth below inflation levels and of course on the value of his home as house prices have come down. People entering into retirement have suffered as their savings levels were worth much less in annuity terms as QE had lowered the interest rates by a substantial margin.

My conclusion is that the problem started with the individual household's income and savings crisis -the equity crisis- and that the solutions should be found for individual households. If done, the problems for banks and for governments would be less severe and lower unemployment levels will help many underprivileged to get back to earn an income.

3. Possible solutions

3.1. Introduction

In a paper: "Do savings promote or hamper economic growth? The Euro area example"⁵ I made a distinction between savings which helped economic growth -the growth in output and employment- and savings that did not. I called the first category of savings: economic savings and the latter type: financial savings. In the case as illustrated above about the U.S. home market, it was made clear that outside equity could help to increase the volume of new home starts -an economic use of savings-, but it could also help to increase the price of existing homes to go up -a financial use of savings-. In this article I have set out the relationship between income and savings levels together with the asset (house) price developments and introduced the concept of the savings depreciation factor.

Prices of assets are closely related to the use and allocation of savings, but they are equally related to income growth patterns. The savings depreciation factor showed that, in the case of the U.S. housing markets, the income growth over the period 2000-2006 did not keep pace and thereby the savings level did not keep pace with the increased level of house price rises over the CPI inflation levels. Income and savings levels were at odds with the allocation of savings: the economic and financial use of such savings. The imbalance which occurred had all to do with the shift in savings from an economic use to a financial one. The solutions have all to do with measures which prevent such an imbalance occurring in the first place: addressing the benign neglect. It also has all to do with restoring the individual household's own income flows: through output growth and a higher level of employment. One of the solutions proposed in the above paper is economic easing. Other solutions have to do how banks, pension funds and others play their role in the allocation process of savings. As the Euro area needs the most re-adjustments yet, the proposed solutions have been worked out for the Euro area.

3.2 Economic easing

Individual households do not save with the purpose of seeing their savings destroyed by negative returns. Their aim is to see the economy grow so that savings benefit from the increased economic activity both by increased output and increased income levels.

In the above it has been explained that, at times, there are large volumes of savings allocated to uses which do not help economies grow.

If one studies the saving rate of the collective of individual households in the Euro area it has varied somewhat around 13.5% of individual households' income over the period since 2002. In the U.S. the accumulated net worth of individual households is about 4.5 times annual GDP. In the Euro area there are no recent precise data on this but with a savings rate of 13.5% over a longer period of time, the total net worth of Euro area individual households is likely to be below the U.S. level but highly likely to be a low multiple of the Euro area's GDP.

⁵ <http://ideas.repec.org/p/pramprapa/52533.html>

Economic easing can be defined as the process of channelling savings away from the financial use and to its economic one.

In countries like The Netherlands the pension reserves stand at 156% of GDP and in other Euro area countries like France and Germany the insurance technical reserves are all very substantial. The richer countries do not lack savings, but they do lack mechanisms to channel such savings to an economic use.

An economic easing scheme can be applied domestically as well as cross border between countries in the Euro area.

3.2.1 Example of a domestic scheme: The Netherlands

In the Netherlands the pension funds have accumulated funds to the extent of 156% of GDP in 2012 according to the Towers Watson Global Pensions asset study⁶ 2013. This amounts to Euro 935 billion. The OECD in their Better Life statistics⁷ noted that in the Netherlands the average disposable income per household in 2012 was Euro 33,200 with the top 20% receiving Euro 62,648 and the bottom 20% Euro 14,563 on average. With slightly over 7.5 million households in the Netherlands the total disposable income is close to Euro 250 billion.

To achieve the objective of transferring some savings from a financial use to its economic one, the collective of pension funds could be asked to spend Euro 7.5 billion a year, which is less than 1% of their savings, as an economic use injection for the benefit of its savers. The Euro 7.5 billion translates in about Euro 1,000 per pension saver and beneficiary. If this amount is paid out equally to all pension savers and beneficiaries, it will benefit the lowest 20% income group with a 6.87% income injection, the average income group with a 3% income injection and the highest income group with a 1.6% income injection. If the Dutch government agrees to allow this payment to be made tax free, it will create the maximum economic impact.

If the Dutch pension savers are requested to use these funds for consumption spending rather than turning them back into financial savings, a boost to domestic demand will be created which will have multiplier effects for the manufacturing and service sector industry. If such injection is followed up in subsequent years (probably for no longer than two or three years) and entrepreneurs know that such stimulus will be continued till the Dutch economy is back to its long term growth potential, then the multiplier effects will be the strongest. With increasing output and more job opportunities the Dutch government's tax revenues will increase without any change in tax rates. The Dutch government will also need fewer savings to fund its deficit, leaving more savings available for economic purposes. Banks will experience a lower level of doubtful debtors among its customer base and the outlook for the housing market becomes more positive as more households will be in full employment.

Why would the Dutch pension funds wish to participate in such action? Firstly pension funds benefit if companies do better as share prices will increase. This is a financial gain, but one based on real output growth rather than being based on speculation only. Secondly more people will want to save with the pension funds as such economic easing exercise can be repeated whenever the savings allocation pattern gets out of balance again. Finally the Dutch government could issue a short-fall guarantee in case the share price increases would not cover the paid-out amounts, based

⁶ <http://www.towerswatson.com/en-GB/Insights/IC-Types/Survey-Research-Results/2013/01/Global-Pensions-Asset-Study-2013>

⁷ <http://www.oecdbetterlifeindex.org/countries/netherlands/>

on the 10 year government bond yield developments. Such settlement could be made three years after the start of the economic easing exercise. It is unlikely that pension funds will have cash-flow problems as a result of these pay-outs as their dividend and interest received will certainly be more than 1% of their portfolio. However to ease the cash-flow considerations, the pay-out could be staggered into two semi-annual payments of Euro 500 each. Furthermore the ECB could via the Dutch Central Bank (DNB) make short term funds available to those pension funds, which experience temporary cash-flow problems. The aim is to avoid having to sell financial assets for supporting economic easing.

3.2.2 A cross-border scheme in the Euro area.

The European central bank (ECB) has as one of its main tasks to protect the value of its currency: the Euro. Cross-border economic easing would be one of the best ways to do so for Euro area countries. What the ECB has currently done is exchanging government bonds of various Euro countries into Euro loans for liquidity support. Such support has the same draw back as quantitative easing: it creates liquidity in the financial savings markets, but does nothing for individual households.

A better alternative would be to create a transfer mechanism to get some financial savings back to an economic use. This could be achieved as follows: the ECB borrows in the international financial markets by issuing ECB bonds. Such activity does not create money, but transfers money from one type of savings to another. As an example take the case of Spain: the proceeds of such bonds are transferred from the ECB to the Bank of Spain, Spain's central bank. The concept is that Spain's central bank will organise a distribution of the proceeds over all 17.4 million Spanish households. Again the principle of an equal amount of cash for each household could be applied. This will help the lower income level households more than the more affluent ones. It makes economic sense.

In Spain the current average net household income level runs at Euro 23,123 in 2012 according to INE, Spain's national statistical office⁸. This is practically 10% less than the 2005 level. To kick start the economy a cash injection of 4% in year one over the average net household income, followed by a lower percentage a year later, would probably be the best approach. Again one fixed amount of Euro 925 per households would best be paid to all households, which helps the lowest 20% of the households the most and the top 20% the least. Total costs Euro 16.1 billion in year 1. Again the best approach would be to allow this amount to be paid tax free. The Euro 16 billion is a fraction of Spain's government deficit of Euro 109 billion over 2012, but such deficit has had no lasting impact on unemployment levels as it did not deal and could not deal with the substantial deterioration in individual households' average income developments. Cross-border economic easing can make the difference.

The pay back could be arranged out of general tax receipts over a ten year period including a two year grace one. The outstanding loan could be paid back in equal instalments over the remainder eight years. Of course, the expectation is that with the multiplier effects tax revenues will increase, without having to change the tax rates. For Spain it does not count as government debt as the Spanish government has not incurred a government deficit to fund this transaction. It is in effect a collective individual households' debt to be repaid out of the tax income generated out of the increased economic activities of the working population.

The ECB could issue 10 year index-linked bonds. Such bonds could be linked to the average inflation rate in the 17 Euro area countries. Such bonds have two advantages over fixed rate bonds.

⁸ <http://globaleconomicanalysis.blogspot.co.uk/2013/11/spain-household-income-drops-10-to-2005.html>

Firstly the ECB makes use of a combined inflation rate from the 17 countries sharing the Euro as their currency. Secondly the ECB reduces the risks to all type of investors -institutional or private- to see the values of the bonds fluctuate strongly in case the Euro interest rate based on the average inflation rate has to be increased. Especially institutional investors will benefit from this as their mark-to-market accounting method will not show substantial losses when interest rates rise. For both institutional and private investors the positive yield over inflation will bring in a cash flow which is more likely to be used in an economic use rather than being kept as a financial saving.

The ECB could repeat the transfer of savings from a financial use to an economic one for other Euro area countries, if needed. This could be done especially for those Euro area countries which lack the financial resources accumulated in pension funds and life insurance companies.

As a method it will bring home the message to all Euro area citizens, that the ECB is not only there to maintain the value of the Euro, but also to stabilise Euro area economies as and when a re-balancing of an allocation of savings is needed. The Euro as a currency will be strengthened, but not unimportantly, Euro area citizens will experience a direct benefit from being a citizen in one of the Euro area countries.

3.3 Banking reform

Accounting practises

When savers and equity holders can no longer trust the profit and loss accounts of banks, both banks but also their savings providers: the individual households are in trouble. The key error in the accounting practises was the lack of accounting recognition of the savings depreciation factor. This applied to the financial use of savings to acquire homes: the price increases of the assets over the CPI inflation levels as well as the increased use of savings for funding government debt levels: another financial use of savings. It sometimes applies to exuberant share price increases.

What it means in accounting practises is that factors outside the narrow focus of an individual bank's position are taken into account when assessing the true and fair position of the risks which have been created by the collective of banks and by a government through its deficit funding activities. Such risks should be taken into account.

The current narrow focus of bank supervisors to penalise individual banks which have helped to create the current economic impasse misses the point somewhat as none of the banks were warned when they did what they did collectively. Now retrospectively, they are punished for lending for the financial use of savings, which certainly was not a crime in legal terms at the time of undertaking such activities. It also means that ultimately not the management of the banks, but the shareholders -the individual households- pay the fines. One has to decide whether such action is fair or not.

Solidity of the banking system: stress tests

In the U.S. stress tests on all banks have been carried out and many banks had to strengthen their equity base. The new Volcker rules will mean that the chances of banks dealing for own account will be severely curtailed. The real beneficiaries will be the risk stakeholders as under the old

system the risk division between the collective individual households who provided the funds and the dealers who put these funds out at risk was usually: a gain the dealer wins; a loss the savings providers lose.

In Europe such steps are intended but have not yet been implemented. Many steps have already been taken to make the ECB have more influence over the solidity of the banking sector in the 17 Euro area countries. An ECB based regulatory authority is to be established in 2014. The chairperson has already been appointed. A bank-bailout fund will be established with bank contributions stretching over a period of ten years.

Solidity of the banking system: risk partners

The question can be raised why pension funds have a different legal structure than banks and life insurance companies.

The U.K. Pension Regulator formulates the role and responsibility of a trustee as: “It is the trustees Board’s legal duty to make sure that the right processes, systems, people and procedures are in place to manage the (pension) scheme, its investments and the risks that can arise.”

Is it not striking that the Board of a bank has the same responsibilities as those just described for the trustee Board of a pension fund. Why is it then, that a Board of a bank has only to report to its shareholders meeting rather than to all fund providers?

In the discussions about banking reform it has already been agreed and even practised like in the case of Cyprus, that other groups rather than the shareholders should feel the pain if the Board of a bank has made serious mistakes. For instance it has been agreed that subordinated debt holders as well as large depositors should pay for the mistakes of bank managements. This all with the aim to avoid another series of government (or rather more precisely the collective of individual households’) supported bail-outs. It is illogical to share losses without having any say and responsibility over the decisions taken. Losses made by banks are as serious as losses made by pension funds.

My suggestion is to gradually convert banks to something more similar to pension funds. This can be done by turning banks more into saving entities with an economic purpose. If one introduces three different risk categories: shares, subordinated bond and large deposits then it should be logical that the rewards warrant a different level of remuneration for each category, but there should be no difference in the date of payment. Bank profits should not be assessed before profit distribution, but after all risk categories have been paid, including shareholders. Assume shareholders receive a fixed interest rate over their shares, payable annually: then such shares are in effect turned into perpetual bonds of the highest risk category. The principal amount of the bonds may be lost but as long as the bank exists it has to pay out such income flows before declaring its profit levels. Subordinated bonds are the second risk taking category, but of a lower risk category. Therefore the interest applied should be slightly lower than for “shareholders”. Thirdly large depositors should be made aware that their money is also at risk and therefore their interest compensation needs to reflect this. Banks should be forced to publish these interest rates on their websites for all to see. For small depositors most countries already offer a protection scheme in case a bank fails.

Banks should no longer have “shareholder” meetings, but “risk” holder meetings where all risk holders are represented. The need for additional buffer funds will show up in the “price” of shares and subordinated bonds on the stock markets as and when they start trading below par.

3.4 Government funding structures.

This section is more generally applicable than just for Euro area countries. All governments which borrow in the capital markets do so to fund expenditure that exceeds their government revenues. Such deficit funding rarely creates a cash-flow for a government in subsequent years. It should be highlighted that governments generally do not behave as ordinary borrowers. They continually roll-over debt on basis of a maturity mismatch. No ordinary household -either as an individual or as a company- could arrange such type of borrowing.

For the fund providers -the savers- there are a number of risks involved. The first risk is the accounting risk. The regulators have decided that government bond values can only be assessed on a day by day value base which is the mark-to-market method. For individual holders of government bonds such accounting method makes no difference: one may decide to keep the bonds to maturity, accepts the interest rate paid over such bonds and does not worry that there may be other bonds in the market which pay a higher interest rate. On the other hand for personal cash flow reasons one may sell the bonds. For banks and pension funds however, such accounting methods are supposed to be essential in reflecting fair values of assets and liabilities and of future cash outflows and inflows.

The second risk is the risk of inflation. What matters for individual households and thereby for companies supporting Defined Benefit schemes as well as for pension funds and life insurance companies is whether the interest rate covers the depreciation/appreciation risks to the value of a bond as a consequence of the effects of CPI inflation rates?

What government bonds should reflect but currently do not reflect is that the collective of savers have no option but to stay invested in government bonds for at least 70 or 80 years as any shorter period would imply collective economic suicide. The income and savings depreciation factor should be applied to the valuation of government bonds rather than a daily assessment of a 70 year obligation. The higher the level of government debt, the higher the value of the income and savings depreciation factor on individual households' savings and incomes.

On top of this the practice of quantitative easing created the situation that savers had to compete against central banks. The latter created money at no cost to these central banks. Each government, which depends on savers to provide it with the cash to cover their debts, would know that the higher the debt level, the longer it will take to pay off such debt and the longer the commitment of the savers need to be to help out governments. Also the longer the income and savings depreciation factors will be at work.

Governments require all other financial institutions, such as banks and pension funds to have clear cash in and outflow analyses over the total period of their commitments, however governments fail to practise for themselves what they preach for others.

How can a one day sales price of a ten year bond reflect a fair value for an uncertain 70 or 80 year obligation? How can quantitative easing by central banks be called "fair" as the zero costs of money to the issuer does not compare with the economic act of giving up consumption in order to save for a future expense? Why do governments not recognise that their use of savings is to a very large extent a financial use and does not add to income or output growth after the initial year of spending such savings? Why is it that governments' have difficulties in accepting that economic risks to the

individual households: the risks to their real -after inflation- income levels, affect the economic performance of a country? Why do governments not issue all their debt in index-linked bonds? Such action would prevent that incomes out of individual households' savings will be negatively affected over the whole period of funding i.e. 70 or 80 years. It would do away with the question of fair value as a fixed reward over the prevailing inflation rate is always fair. It may create some difficulty for actuaries as future incomes and expenses for pension funds cannot be discounted at a fixed rate, as there will be no fixed rate: the rewards for savings will be a continuously floating rate based on the CPI inflation levels plus a fixed margin.

Perhaps Parliaments will have some time to discuss such questions as they are vital to an economy.

3.5 Pension funds contributions to economic growth

Pension funds, acting as savings institutions, have grown in importance in many countries, but especially in the U.S., the U.K., Switzerland, the Netherlands, Australia and Canada, where apart from Canada, they have all reached a savings level equal or over annual GDP levels of their respective country.

Such mass accumulation of savings does require serious thoughts about the impact of such savings on output and employment growth.

Pension regulators seem more worried that each fund has the reserves to pay the committed amounts to each fund's future pensioners, rather than encouraging these pension funds to act collectively in the interest of an economy. In the previous sections it has been spelled out that imbalances can arise in which financial savings grow rapidly, but the economic use of such savings is negligible. Hopefully pension regulators do not only focus on fair value accounting, based on the wrong values of bank shares, based on the wrong maturity of government debt, based on savings allocations to shares which may reflect excessive financial savings allocations which have no relation to the funds received by companies and based on the notion that individual households need to save more otherwise their wish to live relatively happily in retirement cannot be fulfilled.

Perhaps, pension funds themselves individually and collectively through their pension federations and in concert with the pension regulators could study the savings flows and see when a re-balancing of such flows is required.

3.6 The path back from quantitative easing

Quantitative easing has taken place in the U.S., the U.K. and in a more indirect way in the Euro area. Central banks are now owners or in the case of the ECB stake holders of a substantial share of outstanding government debt. Central banks were never created to print money to fund government expenditure. They, more than any other organisation, were entrusted with the task to maintain the values of their respective currencies and to supervise the financial system with the aim to encourage economic growth and full employment. The current situation does not call for recriminations, but for positive actions.

To arrange for the portfolio of government bonds to be released back to the private markets a few principles may be taken into account.

The cause of the recent financial crisis in 2008 was the extensive financial use of savings in the home mortgage lending process to individual households in the U.S. and the subsequent selling method through mortgage backed securities for which the sellers did not maintain a market.

In 2001 the cause of the crisis was mainly the dot.com bubble which was to blame for the short recession.

The latest financial crisis seriously affected individual households' incomes and savings. Therefore a main role for central banks is to take measures which avoid the excessive home mortgage growth. The national home mortgage portfolios were not created by a single bank, though some banks were more aggressive than others. The portfolio was created by the collective of banks in the U.S., and in Spain for instance. Therefore a warning system could have been put in place when more than 65% of the increase in mortgage lending went into house price rises rather than in new construction. Such warning system could work not by raising interest rates, but by making mortgage lenders pay for the excess lending. Such system can be quite simple: it can be a traffic light system to the mortgage providers. Green is the light for: keep lending; amber for slow down or you will face speeding fines and red for speeding fines, which will be assessed per lending institution on basis of their incremental home mortgage activities. The same warning system should be applied to investment banks, which refuse to maintain a market in their financial products sold.

The traffic light system avoids individual households overstretching themselves in their borrowings. It helps avoid the savings depreciation factor to occur. It also avoids a contagion effect to all market participants including real sector companies and individual households who are the ones who to have to pay more as a consequence of the higher interest rates for their borrowings. Thirdly it avoids banks to have to write off a sizeable portion of their loan portfolios in future years. The latter hinder their lending capacity for economic purpose activities.

A system of making banks increase their reserve requirements percentage for home loans when house prices rise too fast, has been introduced in Switzerland and is being considered by the Bank of England. The draw back is that it reduces the available capital base for other lending opportunities, which have nothing to do with house prices. A traffic light system affects the income base rather than the equity one of those banks most aggressive in pushing up house prices, but it does not affect the more conservative banks. Additional reserve requirements affect all banks.

It is generally accepted that prevention works better than a cure.

The cure chosen by central banks was quantitative easing. The consequence was a serious lowering of interest rates, which worked well for those who had financial assets, like hedge funds, but much less well for pension funds and life insurance companies and indirectly for companies which supported and still support Defined Benefit pension schemes. Pension funds and life insurance companies not only have financial assets, but also future liabilities. When a promise of an inflation proof pension pay-out has been promised -a promise which governments widely practice for their own civil servants and members of parliaments- than the liabilities require an above inflation revenues flow over the assets. The only way to ensure such above inflation rewards is to change the rewards over the debt portfolio of the largest borrower in a country with the longest maturity schedule: government debt. In the U.S. and in the U.K. both governments have issued index-linked (also called inflation-linked) government bonds. In the Euro area France, Germany and Italy have done so.

To avoid the mark-to-market losses, which are inevitable for existing fixed rate government bond portfolios as soon as interest rates have been raised, the central banks can make a debt swap with the government debt issuer in order to turn the currently held fixed rate portfolios into inflation-linked government bonds. The latter bonds are much more in character with the long term funding needs of governments and reduce the risks to the long term bond holders such as pension funds and life insurance companies. If one takes a 1% over CPI inflation as a benchmark for a 70-80 year government debt obligation than for the U.S., the U.K. and for the Netherlands than the evidence suggests⁹ that for nearly every year over the last 25 years, such inflation-linked bonds would have been cheaper for the respective government and thereby for the collective of individual households.

4 Conclusions

The use of the savings depreciation factor will improve both the true and fair value of the accounts of banks and pension funds, but it will also be an excellent guide for policy makers to realise when the benign neglect factor starts to affect the economic performance of a country. The distinction of economic savings and financial ones will help in this process.

There are ways out of the current economic impasse when one focuses on the real victims of an economic crisis, the young, the unemployed and those individuals with a low savings or no savings level. These groups suffer more than most as they have to rely more on outside equity than other groups and usually have lower income levels to support such outside equity.

Rather than relying on central banks to print money, a key solution is to use the savings which are in the system already, but re-direct such savings from a financial use to an economic use: economic easing. The negative aspects of quantitative easing can thereby be avoided. A fixed amount of cash allocated to each pension saver in countries which have substantial savings in their pension funds, helps the lower income classes and the unemployed more than the richer ones, but make perfect economic sense. In countries without a sizeable pension system, the ECB could undertake such a role for the Euro area countries, by borrowing in the capital markets, making this available in the countries most in need, and recuperating these funds from the increase in future tax payments from the country concerned.

The might of the financial use of savings can be tamed and turned to the economic advantage of all if collectively governments and central banks take actions as and when required.

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⁹ <http://ideas.repec.org/p/pram/prapa/48889.html>

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