The Collective Individual Households or Coin economic theory

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Introduction

The collective individual households or coin economic theory aims to study how savings have been and are being allocated to the various asset classes and how they are being used.

The main conclusion from this study is that some savings can be held in the financial sector and stay there while other savings are transferred to the real or business sector in order to increase output and create employment. An analysis of the Balance Sheet of Households and Nonprofit Organizations as produced on a quarterly and annual basis by the Federal Reserve Bank in the U.S. helps to underpin this theory. For instance the net financial assets of individual households in 1985 were 1.93 the nominal GDP level in that year. In 2013 as per end of June it had reached the level of 2.90 times the forecasted GDP for 2013.

The main reasons are that financial assets allocated to share equities do not represent the volume amounts of savings transferred to the company sector. Greed and fear may influence the financial assets allocated to shares rather than expected future profits. The second reason is that U.S. government debt is a type of consumer debt; once used it rapidly loses its GDP value. Government debt also does not create a cash flow, like the company sector does. Savings can only be allocated once and if they stay in the financial sector, they do not help the business sector to develop.

The 1929 Great Depression started off with a boom-bust stock market, followed by a run on the banks. So, on a smaller scale did the dot.com bubble burst in 2000-2001.The current financial crisis was a home mortgage crisis, which not only affected property prices, but also the collective individual households income earnings and allocation of incomes. Over the period 2008-2012 5.4 million households lost their homes through repossession or 1 in 10 households with a mortgage. More than 20 million households or 1 in 6 households were involved in foreclosure proceedings during the same period.

The collective individual households changed their spending habits from 2008 onwards. They repaid $1.15 trillion of the national home mortgage portfolio and funded the construction of over 4 million new homes out of incomes and savings. Of course, the demand for goods and services dropped with all the unemployment and income effects, the latter increasing at below inflation levels.

The U.S. government's reaction was funding an accumulated deficit of $ 7 trillion since 2008; on top of this the Federal Reserve spent another $2 trillion on buying up government and other securities. This amounts to $57,000 per individual household.

The main reason that the use of these funds has been so ineffective is that it did not address the core cause of the fall in demand: the wish and the need by individual households to restore their individual balance sheet.

The coin economic theory may help to show that financial sector (equals savings) growth does not equate to GDP growth. In this article the theory explores the allocation of savings, the role of interest rates, the causes of financial crises, the savers and borrowers' philosophies, the difference between financial sector companies as savings distributors and real businesses as users of savings for production purposes and the possible correction mechanisms including economic easing. The latter method implies no additional borrowings for individual households but a temporary transfer from their own financial assets to the income side of individual households.

1 A brief summary of the historical development of economic theories.

The founder of the study of economics was Adam Smith. In 1776 he published his book: “The Wealth of Nations”. In this book Adam Smith came to the conclusion, based on many business observations, that individual households acting collectively, but equally acting in their own self-interest, do manage to produce and purchase the goods and services that they as a society require. Adam Smith calls this mechanism of combined collective and individual households’ actions: the “invisible hand”. Adam Smith used a number of practical experiences to illustrate this mechanism, but as the hand is “invisible” it cannot be proven to exist. Smith theory is referred to as classical economics. Its key doctrine is the “laissez faire” attitude by government towards the marketplace. This will, according to classical and neo-classical economists, allow the invisible hand to generate economic growth.

In 1803 J.B. Say reformulated Adam Smith’s doctrine.

In Say's language, "products are paid for with products" or "a glut can take place only when there are too many means of production applied to one kind of product and not enough to another" or "the supply creates its own demand" Explaining his point at length, he wrote that:

It is worthwhile to remark that a product is no sooner created than it, from that instant, affords a market for other products to the full extent of its own value. When the producer has put the finishing hand to his product, he is most anxious to sell it immediately, lest its value should diminish in his hands. Nor is he less anxious to dispose of the money he may get for it; for the value of money is also perishable. But the only way of getting rid of money is in the purchase of some product or other. Thus the mere circumstance of creation of one product immediately opens a vent for other products.

He also wrote, that it is not the abundance of money but the abundance of other products in general that facilitates sales.

Money performs but a momentary function in this double exchange; and when the transaction is finally closed, it will always be found, that one kind of commodity has been exchanged for another.

The Scottish economist James Mill restated Say's law in 1808, writing that "production of commodities creates, and is the one and universal cause which creates a market for the commodities produced.

Say himself never used many of the later short definitions of Say's law and thus Say's law actually developed due to the work of many of his contemporaries and those who came after him. The work of James Mill, David Ricardo, John Stuart Mill, and others evolved Say's law into what is sometimes called "law of markets" which was the framework of macroeconomics from the mid-19th century until the 1930s.

Alfred Marshall was the dominant figure in British economics (itself dominant in world economics) from about 1890 until his death in 1924. His specialty was micro-economics -the study of individual markets and industries, as opposed to the study of the whole economy-. In his most important book:” Principals of Economics”, Marshall emphasized that the price and output of a good are determined by both supply and demand: the two curves are like scissor blades that intersect at equilibrium. Modern economists, trying to understand why the price of a good change, still start by looking for factors that may have shifted demand or supply, an approach they owes to Marshall.

Another influential economist was Karl Marx. Adam Smith saw harmony and growth, Marx saw instability, struggle and decline. His vision was that the capitalist exploits labourers, not withstanding that according to Marx all value is created by the labourers. Capitalists undervalue labourers to create their own profits. Marx could not accept the concept of a profit oriented organisation. Marx predicted the fall of capitalism as he foresaw society moving to a two class system of a few wealthy capitalists and a mass of underpaid under privileged workers.

The socialist centrally planned economies have proven to be less efficient in producing and delivering goods and services than capitalist systems. Secondly workers' incomes have actually risen over time, which defuses the theory that labour is exploited in the name of profits. If workers' incomes are rising, they are clearly sharing in the growth in an economy.

One of the greatest economists of all times was John Maynard Keynes. In 1936 he published his: "General Theory of Employment, Interest and Money". Previous to Keynes, mainstream economic thought was that the economy existed in the state of general equilibrium. The underlying assumption of the classical economists was that if a surplus of goods and services exists, they would naturally drop in price to the point where they would be consumed.

Keynes argued that because there was no guarantee that the goods individuals produce would be met with demand, unemployment was a natural consequence. Keynes advocated using under-utilised savings through increased government spending. His analysis was based on the premise that if companies collectively did not invest enough savings in goods and services, this could lead to an economy operating below its potential output and growth rate. Additional government spending could be used to increase aggregate demand to increase economic activity, reduce unemployment and avoid deflation. Keynes argued that the solution to the Great Depression was to stimulate the economy through some combination of two approaches:

- A reduction in interest rates (monetary policy), and
- Government investment in infrastructure (fiscal policy).

By reducing the interest rate at which the central bank lends money to commercial banks, the government sends a signal to commercial banks that they should do the same to their customers. The infrastructure projects could be funded from additional government borrowings through issuing government bonds. This action involves creating a fiscal deficit. Keynes concluded that, in some situations, no strong automatic mechanism moves output and employment towards full employment levels. His view differs from the neo-classical economists who see price adjustments to create the general equilibrium.

Keynes views on wages were more complex. He argued that it is not real but nominal wages that are the result of negotiations between employers and workers. Secondly nominal wage cuts would be difficult to put into effect because of laws and collective labour agreements. Keynes rejected wage cuts as he did not see such action cure recessions, rather the opposite.

To Keynes, excessive saving, i.e. saving beyond planned investment, was a serious problem, encouraging recession or even depression. He did not agree with the laissez-faire attitude of classical economists. His conclusion was that savings do not fall much as interest rates fall, since the income and substitution effects of falling rates go in conflicting directions. Second, since planned fixed investment in plant and equipment is based mostly on long term expectations of future profitability, spending does not raise much as interest rates fall. Third, Keynes argued that

saving and investment are not the main determinant of interest rates, especially in the short run. Instead, the supply and demand for the stock of money determine the interest rates in the short run. Neither changes quickly in response to excessive saving to allow fast interest-rate adjustments. Keynes also noted that the pile-up of unsold goods and materials encourages business to decrease production and employment. This in turn lowers people's incomes - and savings. For Keynes, the fall in income did most of the job by ending excessive saving and allowing the loanable funds market to retain equilibrium. Instead of interest-rate adjustment solving the problem, a recession does so. For Keynes rather than prices adjusting to attain equilibrium, the main message is one of quantity adjustment.

2. Changes in saving patterns

2.1 Savings by individual households

In the United States the Federal Reserve Bank has long published[1] quarterly and annual overviews of the assets and liabilities of the collective of individual households: the Balance Sheet of Households and Nonprofit Organizations. These statistics show that the financial assets grew from $10.7 trillion in 1985 till $61.8 trillion as per 30 June 2013. The liabilities grew from $2.37 trillion in 1985 till $13.55 trillion also per end of June 2013. The financial assets minus liabilities grew over the same period from $8.33 trillion till $48.25 trillion. The ratio: net financial assets to nominal GDP, was 1.93 as per the end of 1985 and rose to 2.90 as per the end of the second quarter of 2013. This trend line movement is of great importance as will be explained in section 3.

There is another method of measuring the growing importance of the financial sector over the real sector. In 2012 in the U.S., personal income was running at $13.75 trillion. The net worth of individual households was $64.185 trillion in the same year, which means that savings represented more than 4.5 years of personal income in the U.S. If one deducts the net worth of individual households invested in homes and consumer durable goods of respectively $8.26 trillion for homes and $2.12 trillion for durable consumer goods, than the value of the financial assets of U.S. individual households was $53.8 trillion. This implies that the financial assets were just under 4 times the personal income level in 2012. The financial savings were around 80% of financial savings plus personal incomes, the latter only representing the 20% category.

2.2 Categories of savings by individual households

Of the $61.8 trillion in financial assets individual households have accumulated as per 30th June 2013, $9.0 trillion was invested in deposits made up from foreign deposits, checkable deposits and currency, time and savings deposits and money market fund shares. A further $5.5 trillion was invested in capital market instruments, consisting mainly of treasury securities, municipal securities and corporate and foreign bonds. Other financial assets held were: corporate equities $11.5 trillion, mutual fund shares $5.9 trillion, life insurance reserves $1.2 trillion, pension entitlements $18.8 trillion and equity in noncorporate business $8.4 trillion. The remainder is made up by a few miscellaneous items.

[1] http://www.federalreserve.gov/releases/z1/current/accessible/b100.htm

2.3 Relative growth of some individual savings categories.

The following table indicates the relative position of each major savings category in the years 1985, 1995, 2005 and 2013, the latter the situation as per 30th June.

Table: 1 Relative growth rates of various financial asset classes in the U.S. from 1985-2013

Year/	**1985**	**1995**	**2005**	**2013 End June**
Total Financial assets	**$10.75 trillion 100%**	**$22.73 trillion 100%**	**$46.36 trillion 100%**	**$61.85trillion 100%**
Of which:				
Deposits	**23.72%**	**14.96%**	**13.41%**	**14.59%**
Treasury and Municipal Securities	**6.30%**	**6.0 %**	**5.54%**	**5.92%**
Corporate and Foreign bonds	**0.01%**	**2.71%**	**2.91%**	**3.99%**
Corporate Equities	**11.4%**	**19.51%**	**17.58%**	**18.53%**
Mutual Fund Shares	**2.0%**	**5.51%**	**7.82%**	**9.48%**
Equity in Non-Corporate Business	**23.2%**	**15.49%**	**18.69%**	**13.54%**
Pension fund and	**26.48%**	**29.55%**	**28.54%**	**30.29%**
Life insurance reserves	**2.45%**	**2.49%**	**2.33%**	**1.94%**

One can draw a few conclusions from the above table:

- Deposits dropped in importance in the period 1985-1995, but have been relatively stable since then,
- Treasury and Municipal Securities showed a dip in 2005, but were back to the level of 1995 as per the latest statistics
- Corporate and foreign bonds showed a very substantial growth over the period 1985-2013
- Corporate equities grew strongly in the period 1985-1995, but their relative importance tapered off after that period

- Equity in Non-Corporate Business showed the greatest volatility, but ultimately the greatest decline over the period 1985-2013
- Mutual funds shares showed the highest rate of growth of all savings categories over the last 18 years
- Pension fund savings constitute the lions' share of individual households' savings and these pension funds managed to grow faster than the total volume of savings
- On the other hand savings through life insurance companies declined over the last eight years.

In countries, other than the United States, the lack of comparable data makes observations about the development of their individual households' saving levels more difficult. However as financial markets in the major countries seem to show a great level of interdependence, there may be some similarities between the U.S. case and the case of other countries.

3 The Collective Individual Households or Coin economic theory

3.1 Introduction

During Adam Smith's period the importance of financial savings was negligible. If individual households had savings, such savings were invested in land and buildings rather than in financial instruments. Therefore his focus on the real sector was logical. He was the first economist to draw attention to individual households acting collectively but also in their own self interest.

Keynes, against the background of the Great Depression period, saw that economies did not have a natural tendency to go back to equilibrium. The price mechanism did not lead to such equilibrium. The stock market crash of 1929 was the first time that the financial sector forced the real economy into a decline. The time line of the Great Depression[2] showed that what started on October 24th 1929 led to losses to savings of over $30 billion, which was about 40% of stock market values and 10 times the U.S. government budget for 1929. Brokers had lent funds to individual households to acquire stocks and of course in the declining stock market environment, they wanted their loans back. What made matters worth is that individual households en masse withdrew funds from the banking sector as they no longer trusted their banks as there was no deposit guarantee scheme in place. On top of this the Federal Reserve increased interest rates, which made it harder for companies to produce output and make profits. The subsequent effect was high unemployment levels, which lasted till the Second World War.

3.2 The tenets of the Coin economic theory

For any new economic theory to make sense, it has to show how it differs from existing theories and what type of evidence there is to support its tenets.

The Coin theory is based on the above mentioned observation that the net financial assets in the U.S. are currently 2.9 times its GDP as compared to 1.93 in 1985. The net financial savings were nearly 4 times personal income levels in 2012 as compared to 3.26 times in 1990. In 2012 the savings-income distribution was 80% savings and 20% personal income. This dramatic shift towards savings did not exist at the times of Keynes, let alone Adam Smith. There are many implications of this shift and they will be discussed in the following sections.

[2] http://www.pbs.org/wgbh/americanexperience/features/timeline/rails-timeline/

The first tenet is linked to the change in the distribution between savings and incomes and between savings and GDP levels

The second tenet is linked to the use of savings. There are three main user groups of savings in an economy: the collective of individual households; a government and the business (or real) sector.

The third tenet is that each user group has a different savings and borrowings philosophy.

The fourth tenet is that the collective borrowings of individual households or governments on their behalf may cause the recession periods. One should stress that the lenders carry the full responsibility for their lending decisions.

The fifth tenet is that the 2008 financial crisis was caused by excessive lending growth in home mortgages, excessive as compared to the income growth of individual households.

The sixth tenet is that interest rates are not the predominant factor for individual households to decide on their various savings decisions.

The seventh tenet is that the funding of government debt is best achieved by raising market funds on an index-linked basis.

The eighth tenet is that correction of the financial crisis should be aimed at the income side of the balance sheet of individual households, rather than be done in an indirect manner as a public works programme or through quantitative easing.

The ninth tenet is that the financial sector works under very different costs-benefit structures than the real sector. Laissez-faire policies should not apply to the financial sector.

In each of the following eight sections each of the tenets will be tested.

3.2.1 Savings and the GDP level and savings and the collective individual households' income level (first tenet)

The financial assets allocation and the changes therein over the years 1985 -2013 show that assets do not only show a volume change, but equally a price change. This may be a somewhat confusing statement as all monies in the U.S. are expressed in U.S. dollars. One has to look into the individual asset allocation categories to investigate how volume and price can be separated. The first category is corporate equities. The money allocated out of savings into this category does not represent the monies that listed companies have received to invest in company assets. If this transfer of financial assets to companies in the real sector is called the volume transfer, than the remainder of the savings which stay behind in the financial sector can be called the price factor. Even listed companies can undo the volume factor by holding substantial cash reserves, which add to the price factor. They also undo the volume factor by returning dividends to the accumulated financial savings.

The current level of individual households' financial assets to GDP ratio of 2.9 as per end of June 2013 as compared to 1.93 in 1985 shows that over the period 1985-2013 the financial sector has absorbed additional savings of $16.2 trillion. This figure is based on an expected nominal GDP level for 2013 of $16.7 trillion. The $16.2 trillion figure represents the price factor over the years

1985-2013. It is the amount of savings over the period 1985-2013, which has stayed within the financial sector and has not been converted into real sector activities.

One business sector, which turns nearly all of the available cash into output and jobs, is the non-corporate business sector: the self employed and the small and medium sized companies of say with less than 1000 employees. If one looks at the decline in the relative position of the equity in non-corporate business compared to the total financial assets accumulated by the collective of individual households, warning bells should have started ringing. Non-corporate businesses are the family owned businesses, which grow their businesses from retained earnings. If one takes the data of 2008 from the U.S. National Census Bureau[3] than the total number of self employed and the businesses employing less than 1000 employees represented 87.6 million out of the total number employed of 142.6 million in 2008. For job creation and income generation for individual households, 61.5% of all jobs depend on companies which nearly all have no access to the equity capital markets in the U.S. These companies rely primarily on internal savings accumulation for their output and jobs growth levels.

Another factor which influences the accumulated amounts of savings held by the collective of individual households is the amount of accumulated government debt. Keynes was right in pointing out that additional government spending over tax receipts improves the level of economic activity in a particular year. However the debt needs to be financed in the subsequent years, until it has been repaid. Government spending is rarely directed at creating future cash flows out of current expenditure in ways that companies use. The implication of this is that savings which could have been used for building up assets in the real sector businesses have been reallocated to fund the accumulated government deficit funding. The implication is also that in future years the collective of individual households will have to allocate a growing percentage of their earned incomes to service interest and redemption costs of government debt.

The two major factors contributing to the growth of the financial asset base of individual households, without making a direct contribution to economic growth, are the amounts accumulated through share price movements and through a government's debt accumulation. The third factor, which improves the net worth of individual households, is increasing house prices. However, when such price increases are based on increased borrowing levels at a speed far above income growth figures than the subsequent effect may be a recession.

The conclusion out of the above is that price changes: i.e. the amounts of monies left in the financial sector, limit the volume changes which represent the monies transferred to the real sector for creating output and jobs. This has to be seen against the background that currently savings represent eighty percent of the savings plus income levels of the collective of individual households.

3.2.2 The use and the users of savings (second tenet)

The 1929 crash happened initially as a consequence of stockbrokers providing margin call loans to individual households. The use of savings was to speculate on the outcome of something similar to a "black tulip mania", which happened in Holland in the 17th century. Tulip prices rose to levels ten times the annual income of a skilled worker. Funding higher and higher share prices breaks the link between future earnings of a company and its stock market value. Prof. Shiller, the most recent economist to receive the Nobel Prize for economics, has developed the Shiller PE/10 measurement method to measure the so called: Irrational Exuberance in the stock markets. Irrational because at

[3] http://www.census.gov/econ/smallbus.html

different times the market sentiment may be guided by greed or fear, neither of which leads to sound valuations of future profit levels of the company sector.

Table 1 gave an overview of the financial asset allocation over the various asset classes and their relative growth rate as compared to the total increase in the savings volume. There are clearly some winners and losers in the asset allocation process. In the next sections a more in-depth treatment of each asset category will be discussed, but in this section the various user groups will be set out. The most important user group is not the company sector nor the government, but the collective of individual households.

Individual households are collectively the owners of all financial assets in a country. They own the deposit base, either directly or through their shareholding in companies or their participation in mutual funds and pension funds. They own the government, state and municipal debt in as far as it has been financed domestically, again directly or indirectly. In the latter case they are also responsible for paying back such debts in future years, whether or not it was financed from abroad. Individual households, again directly or indirectly, own all the corporate equities, again apart from the shares owned by foreign individuals or entities. They own the mutual fund shares and all pension fund monies and the equity of non corporate business. Of course, not all households have an equal stake in the total financial asset base, but mutual funds and pension funds' savings have very much widened the group of haves over the have-nots.

The second institution which uses savings is a government. In the U.S. and in many other countries the debt clock keeps ticking, to an extent that outstanding government debt in quite a few countries has grown to 100% or more than the annual GDP level. The U.S., Japan, Italy, Portugal, Ireland, Iceland and Greece are in this position. Countries which have a level of over 80% are the U.K., Germany, France, Spain, Belgium and Canada. The character of government debt is quite similar to a consumer's debt. Money has been borrowed and spent to maintain an excess of government expenditure over government revenues. The country figures are based on IMF data. The obligations to repay such debt, even if such debt has been funded from abroad, remains the obligation of the individual households in future years. It reflects the "price" to be paid out of incomes for past government expenditure, which was not funded by tax revenues at the time.

The third type of institutions which use savings is the company sector. They may be companies which have their shares listed on the stock exchanges, or those which are owned by individuals and families. Companies are substantial users of savings as all their funding is provided by the collective of individual households. In the Coin economic theory, financial sector intermediaries are excluded from this category as their line of business is the allocation of financial assets rather than the use of such assets for output creation purposes.

3.2.3 User groups and their savings and borrowings philosophy (third tenet)

The collective asset allocation of individual households is strongly influenced by the fact that most households have neither the skills nor the inclination to spend their daily hours to manage their own financial assets. As per 30th June 2013, from the total financial asset base of the collective U.S. individual households', just over 60% or $37.25 trillion has been invested in corporate equities, mutual fund shares, pension funds and life insurance reserves. Generally speaking the task of managing these and other financial assets has been transferred to financial sector companies: banks, asset management companies, stockbrokers, mutual fund managers, hedge funds and life insurance

companies. This is a non-exhaustive list of all companies involved in financial asset management activities.

In a previous paper: "The world's dream: economic growth revisited"[4], I explained that financial sector companies are totally different from real sector companies.

In the real sector a price stands for the remuneration for a good or service delivered to the public. The price represents the value attached to a product or the compensation for a service delivered. Companies can deduct their costs from the sales price and the difference between revenues and costs constitutes the profit level per item and for all sold items together the income level of the company. Company management can subsequently decide whether it is worthwhile to expand or reduce production. In the real sector price levels are often referred to as the guiding hand and correctly so.

A price in the financial sector is a very different price from one in the real sector. In the financial sector a price: share price, bond price, interest rate, exchange rate especially in the latter cases a forward, future and options price does not represent the costs of production. The financial sector does not produce savings; those savings are owned by the general public. The only item which the financial sector really produces is: Considered Opinions (CO's). These opinions are judgements about the rate of return on funds borrowed from the public, whether it is on home mortgage loans, on loans to companies or to a government, or on the future developments of share, bonds, exchange rates and commodity prices. If the predictions of the financial sector managers in foreseeing how such prices will develop do not materialise, the results will not appear in their own profit and loss accounts, but in the changes in the individual households' net worth levels. It is slightly different with loans as loans stay mainly with the lending institutions. If loan losses are not foreseen, such loan losses will find their way into the balance sheets of banks and other financial institutions. However as all funds that banks use are ultimately owned by the individual households, the losses are all borne by the latter households. Some bankers may lose their bonuses or even their jobs, but the value loss on savings ends up with the individual households.

Considered opinions are provided about expected future developments. The price set for a financial product reflects an opinion about the risks to be incurred over the savings provided by the individual households. Such prices could be right, but they could equally be totally wrong. The real "costs of production" will only show up in future years, which may be five, ten, thirty or even more years away. In the real sector the price in the markets is a price for an end product or service, reflecting the reward at the end of the production period. In the financial sector the reward is an uncertain future cash flow, which often stretches out over many years. Hence the price set cannot possibly reflect the "true costs" as such costs are simply unknown. Only in hindsight can such "costs" be assessed. The financial sector cannot and does not work with a "guiding hand". However as the financial sector rules over 80% of individual households' savings and incomes, perhaps the time has come for those, who consider financial sector institutions equal to real sector companies, to review their opinions.

Over the period 1985-2013 the collective of U.S. individual households have been conservative in their financial affairs as is evidenced from the growth in the financial asset base as compared to their income levels. Only on three occasions: the savings and loan crisis in 1990-1991, whereby specialist savings and loans mortgage banks lend excessively for real estate investment, which went sour; the dot.com bubble in share prices in 2000-2001 and the subprime mortgage bubble over the period 2005-2008 where individual households were enticed to enter into house price but also bond

[4] http://ideas.repec.org/p/pra/mprapa/50190.html

price speculation. During all other times, the collective of individual households acted very conservatively. Over the period 1995-2005 the owners' equity as a percentage of household real estate was maintained at around 59%. The major change started in 2006 with a drop of 3.2% reaching the bottom level of 39.5% in 2009. The latest level as per end of June 2013 is 49.8% and well on the way to the more conservative levels of the past.

In the financial asset category of deposits, the collective of individual households do no longer have to work out the risks of a bank failing as the deposit insurance guarantee (FDIC) equalizes all banks on deposits' risks. The maximum guaranteed amounts of $250,000 per person make that most individual households are fully covered for bank risks.

As to the other financial asset classes with the exception of equity in non-corporate business, individual households generally leave the asset allocation decisions to the financial sector companies.

Governments with some exceptions do not save. The exceptions are Norway, a number of Middle Eastern countries and China and Singapore. What is striking is how different governments make different decisions over their borrowing interest rates. Some governments, including the U.S., Canada and the U.K. have small or larger part of the total debt financed by index-linked bonds. The Bank of England's own pension fund has over 94% of its assets allocated to such bonds[5].

What seems amazing is that the U.S. government debt level can lead to very heated debates in the Houses of Congress, but that the allocation over index-linked debt and fixed rate debt and over the various maturities is left to the Bureau of the Public Debt, which is part of the U.S. Treasury. In the article: World's dream: economic growth revisited, a proposal was set out not just for the U.S. but for other countries which have a relatively high level of government debt, to use index-linked bonds for a much larger share of national debt. The argument is that it can be proven to be much cheaper than fixed rate debt over longer periods and U.S. government debt cannot be repaid in anything less than say 70 years. Secondly it avoids the mark-to-markets write ups and downs in asset values as a consequence of changing interest rates. Such changes in asset values are based on artificial accounting methods anyway as they are based on short term liquidity rather than on long term holdings of the debt. As mentioned the final maturity of the total U.S. government debt level may well be over 70 years, so current debt paper needs to be replaced by new debt paper. Thirdly quantitative easing has bought up U.S. government debt paper to an extent of well over $2 trillion. Individual households' savings were not used for this purpose, neither foreign savings, but the Fed just printed the money. This led to a substantial lowering of interest rates while simultaneously the volume of government debt issued reached all time high levels. The reverse process will bring about substantial interest rate increases. Issuing a high level of index-linked government bonds will lower the losses to individual households and to the financial managers acting on their behalf; the losses will be lower than those that the existing fixed rate government bonds portfolio will encounter.

One does not have to spend many words on how companies finance themselves, apart that the drop in relative position for the equity in non-corporate business needs redressing as those businesses are vital for jobs and incomes for the collective of individual households.

[5] http://www.bankofengland.co.uk/about/Documents/humanresources/pensionreport.pdf

3.2.4 Asset allocation and recession periods (fourth and fifth tenets)

One simple assessment is that the allocation of a financial asset can only be done to one asset at the exclusion of all other financial assets. One dollar in savings cannot be used twice. This truth applies to assets allocated to fund the government debt levels, it also applies to funding excessive amounts to buy listed company shares on the stock markets and it applies to funding excessive price rises in home values. Any of these three allocations can cause recession periods.

Financial assets are different from company assets in that the products that financial sector managements offer make it possible to speculate on many aspects of the financial price setting without having to provide 100% funding for such actions. The derivatives markets make it possible to taken open positions on share and bond prices and on interest rates, exchange rates and a whole host of other financial sector prices. The margin calls are small as compared to the total financial gain or loss which can be made from entering into such contracts. Banks and other financial institutions make a substantial share of their earnings from trading and assisting in trading of the underlying financial assets as well as trading in derivatives.

In hindsight the 1929 recession was caused by the wrong allocation of savings, away from the real sector in order to speculate on share prices, followed by bank runs.

The dotcom bubble showed similar characteristics, but individual household's incomes were not much affected, nor were there bank runs. The dot.com bubble did not last very long.

The 2008 financial crisis was much more serious.

Making money available to individual households, especially of the long term variety of home mortgages, requires a judgment on the future repayment capabilities of each individual household. There are three aspects to such lending: the first one is that the judgment represents a risk assessment. A risk assessment is different from a price in that the applied price includes the risk premium over costs of funds over a long period. Only future developments will show whether the accepted price was the correct one. The 2008 financial crisis showed that in many cases the price was wrong or even more importantly that based on the income levels of some borrowers no price would have ever matched their ability to repay their home loans. For some 5.4 million U.S. borrowers, representing 10% of those having a mortgage, there was no equilibrium price. Their homes were repossessed. 40% of all American households having a mortgage were faced with foreclosure proceedings over the period 2004-2012.

The second aspect is that the demand for homes is a finite one based on population growth and on the changes in the average household.

The third aspect is that making money available for home mortgages can have two effects: the first one is that money enables families to acquire a home, but the second one is that if supply is not forthcoming in the short run in the places where families want to live, it drives up house prices. To lend money which is converted into increased house prices has less impact on economic growth than new construction; not only that, but one may question the economic value of rapid rises in house prices. The latter savings allocation resembles the greed and fear factor of share price rises, with the difference that borrowed funds need to be repaid out of the collective of individual households' incomes.

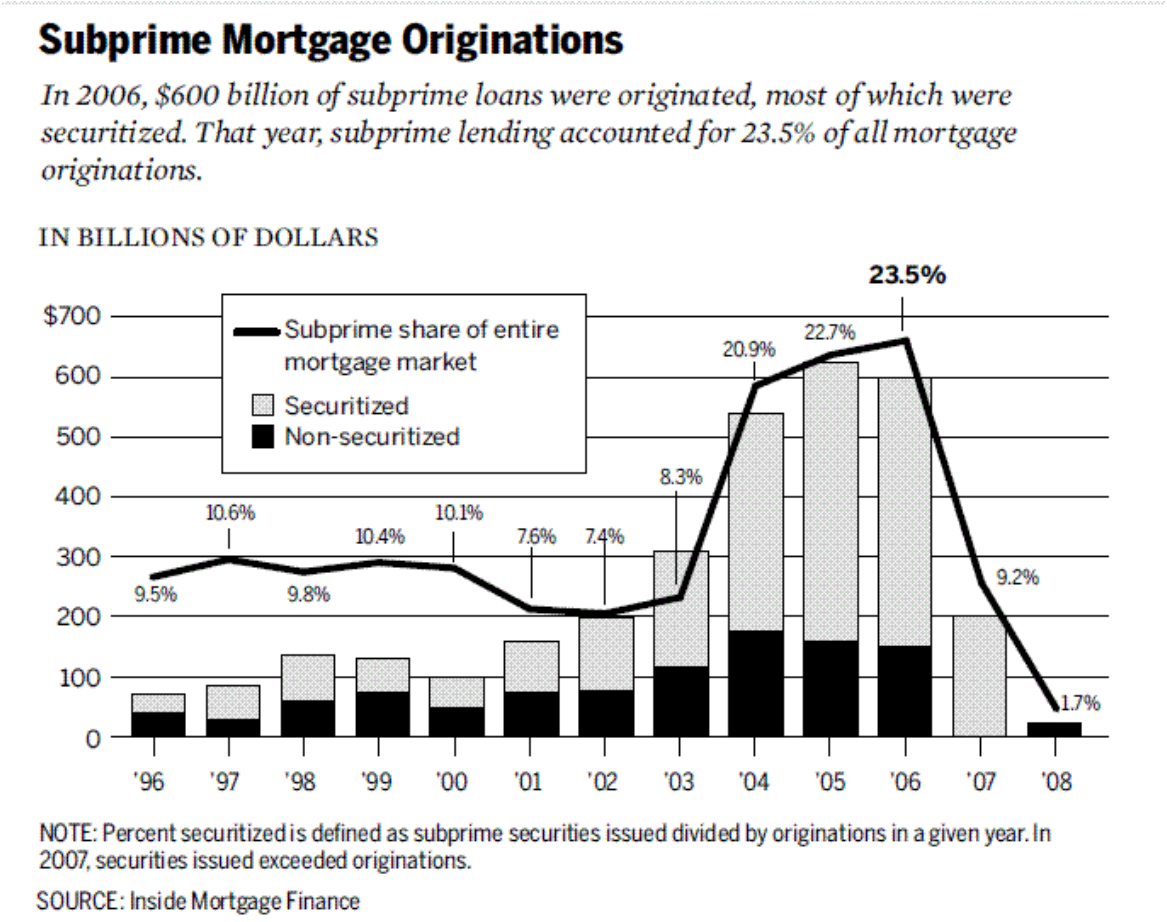
3.2.4.1 The U.S. experience

Over the period 2000-2006 in the United States the combined mortgage debt of individual households increased from $4.814 trillion as per the year-end 2000 till $9.874 trillion as per the end of 2006, an increase of 105.1%. Over the same period the median income level of individual households moved up in nominal terms from $41,186 in 2000 till $47,262 in 2006, an increase of 14.75%. If one takes into account the increase in the number of individual households from 104.705 million in the year 2000 till 114.384 million in 2006 than the average amount of outstanding mortgage debt moved up from $45,977 in 2000 till $86,323 in 2006; an increase of 87.75%. The conclusion can be drawn that mortgage debt expanded by a factor practically six times faster than median income levels. This excessive speed of lending for home buying purposes plus the packaging of such home loans into daily tradable mortgage backed securities lies at the heart of the causes for the 2008 financial crisis.

- The national home mortgage portfolio

The amounts of $4.8 trillion in 2000 and $9.9 trillion in 2006 represent the national home mortgage portfolio of the U.S. in these years. The quality of the national home mortgage portfolio is strongly influenced by the quality of the borrowers. The graph below shows the rapid growth of the subprime share in new mortgage originations in the years 2004-2006.

Table 2: Sub prime mortgage originations[6]



[6] https://en.wikipedia.org/wiki/Subprime_mortgage_crisis

In table 3 the annual outstanding mortgage amounts are provided over the period 1996-2008 as well as the annual increase in outstanding mortgage amounts. Also included in the table are the house price inflation levels on a year over year base and the consumer price inflation levels[7] over same period. Finally the excess of house price inflation over CPI has been displayed.

Table 3: U.S. Mortgages outstanding 1996-2008, annual increments in mortgage amounts, house price changes and consumer price inflation levels.

Year	'96	'97	'98	'99	2000	'01	'02	'03	'04	'05	'06	07	'08
Mortgage amounts x US $ trillion	3.54	3.75	4.05	4.43	4.81	5.30	5.98	6.83	7.81	8.91	9.90	10.58	10.5
Year on Year increase x US$ billion	218	216	301	377	383	507	680	850	944	1099	990	683	-57
House Price Inflation % y.o.y	2.24	5.10	4.61	5.81	7.67	6.04	6.48	7.29	11.08	10.44	3.33	-1.95	-13.3
CPI Inflation % y.o.y	2.95	2.29	1.53	2.16	3.25	2.77	1.56	2.23	2.59	3.28	3.12	2.77	3.70
Excess HPI over CPI %	-0.7	2.81	3.08	3.65	4.42	3.27	4.92	5.06	8.49	7.16	0.21	-4.72	-17

- Credit judgment errors.

When individual households get into payment difficulties on their home mortgages, the first action by the lenders is foreclosure, followed by a foreclosure filing and subsequently home repossessions. U.S. statistics on all three can be found on the website of Statistic Brain[8]. The credit judgment problems took off in 2005 with the level of foreclosures increasing by 25% over 2004. In 2006 they

[7] http://www.bls.gov/data/inflation_calculator.htm
[8] http://www.statisticbrain.com/home-foreclosure-statistics/

were 90% higher than 2004 and in 2007 nearly 3.5 times the 640 000 level of 2004.The peak was reached in 2011 at 3,920,418 which stood at over 6 times the 2004 level. All this led to home repossessions which numbered 269,000 in 2006, 489,000 in 2007, 679,000 in 2008, 945,000 in 2009, 1,125,000 in 2010, 1,147,000 in 2011 and over 700,000 in 2012. All in all nearly 5.4 million credit judgement errors led to the ultimate repossession of homes. The number of households who had to deal with foreclosure proceedings amounted to 21.4 million households over the period 2004-2012. The Milken Institute[9] estimated that in June 2008 there were 53 million households having a mortgage and 27 million were outright owners without any mortgage. Of the 53 million just over 40% had to deal with foreclosure proceedings during the 2004-2012 period; a staggering percentage, which really showed the extent of the financial crisis for individual households.

The credit judgment errors were compounded by the securitization process, which, as table 2 showed, really took off in 2003 when nearly two thirds of new home mortgage originations were farmed out to the financial markets. This meant that American financial institutions were able to generate mortgage sales, but did not need the financial reserves as the transactions were packaged and sold off to, among others, overseas banks and pension funds. It is noteworthy in this respect to note that the Bank of Spain, Spain's central bank, did not allow Spanish banks to buy such U.S. mortgage backed bonds. Regretfully, it did not stop its own country's real estate funding disaster. The securitization method also made it very difficult to deal with individual clients as whole portfolios of clients were simultaneously declared insolvent; hence the enormous numbers of foreclosure procedures compared to the number of households having a mortgage.

- Demand for homes

The key determinant in the demand for homes is not the price but the growth in the number of individual households. In the period 2000-2010 the number of households grew in the U.S. from 105.5 million to 116.7 million according to the Census Bureau[10]. On average the U.S. increased the number of individual households by 1.12 million per annum over the period 2000-2010. Of the around 80 million homes used all year around in the U.S., the average lifespan can only be estimated but is probably around 130 years, which means that the total finite demand for homes is somewhere around 1.7 million new housing starts per annum. Table 4 gives an overview of realised annual new housing starts, seasonally adjusted for the period 2000-2013

Table 4: U.S. annual new housing starts[11] per 1 July, seasonally adjusted over the period 2000-2013

Year	Housing starts x 1,000	Year	Housing starts x 1,000
2000	**1463**	**2007**	**1354**
2001	**1670**	**2008**	**923**
2002	**1655**	**2009**	**594**
2003	**1897**	**2010**	**546**
2004	**2002**	**2011**	**623**
2005	**2054**	**2012**	**741**
2006	**1737**	**2013 (1 September)**	**891 (annualised)**

[9] http://www.milkeninstitute.org/pdf/riseandfallexcerpt.pdf
[10] http://www.census.gov/prod/cen2010/briefs/c2010br-14.pdf
[11] http://research.stlouisfed.org/fred2/data/HOUST.txt

Elements, which "helped" individual households to acquire homes, were the applicable interest rates and other loan conditions attached to the mortgages. Low starts up interest rates were used to entice individual households to sign up to mortgages. Such mortgages had their rates steeply increased after a two year period. 100% mortgages were also used with no repayment obligations. In many cases short term funding rates were applied rather than a 30 year fixed rate. All these elements shifted the credit risks to the individual households. The latter only hoped that house price increases and incomes would grow faster than their payment obligations. When the lending excess came to the boil in 2008, such hopes were shattered and not only did house prices drop rapidly, also income growth stayed behind CPI inflation levels and, of course, the outstanding payment obligations remained the same as before the crisis. Individual households reacted in a way they could. They reduced the total volume of the outstanding national home mortgage portfolio from $10.5 trillion in 2008 till $ 9.35 trillion as per the end of the second quarter of 2013. During the latter period an increased share of households' incomes was diverted to paying off home mortgages as compared to the allocations before the 2008 crisis. This change in income allocation through paying off mortgage debt and acquiring new homes from own income or savings reduced the spending power available for buying other goods and services. This had the effect that demand levels were reduced. The company sector reacted in slowing down employment growth and investments as well as generally following a wages and salary policy of keeping wage increases below price rises. Reduced growth rates in companies' turnover levels and a slower growth in households' incomes led to a rapidly increasing government debt level in the U.S.

3.2.5 Asset allocation and interest rates (sixth tenet)

One notion that prevails in the thinking of many economists is that the price of money: its interest rate works in the same manner as supply and demand in the real sector. Both Marshall for micro economic studies and Keynes for the macro approach advocated the supply and demand theories. Keynes particularly stressed the importance of using monetary policy (interest rate adjustments) to influence the behaviour of the business sector and of the individual households.

Based on the long term data provided by the Fed on the individual households' balance sheet plus some other data, the Coin theory comes to the conclusion that for the collective of individual households interest rates are irrelevant in case the need and wish exists to restore the individual households' balance sheets first. Individual households weigh the decision to borrow more against the income level available to support such borrowings. After the excessive home mortgage lending period 2003-2007 as organised by the U.S. banking sector, individual households did everything possible not to lose their homes; they repaid $1.15 trillion from the national home mortgage portfolio notwithstanding the substantially lower mortgage rates. They also funded 4 million new homes, not by borrowing more but by funding such acquisitions from incomes and savings. The latter implies a re-allocation of incomes and savings. Even in 2013 circumstantial evidence exists that individual households remain reluctant to increase their home mortgage levels as several U.S. banks have announced lay-offs in their home mortgage departments.

For the U.S. corporate sector, it has been a well documented phenomenon that from 2008 onwards they, until recently, did not want to borrow more either. Since 2006 non-financial companies have increased their cash balances from $624 billion to $1.45 trillion as per the end of 2012 according to Moody Investor Services[12], an increase of 77%. The $1.45 trillion was 10% more than the amount per end of 2011. Over the period 2006-2011 the company cash to assets ratio increased from 8.8% in 2006 till 11% in 2011 for the non-financial companies. The top 50 companies in the U.S owned

[12] https://www.moodys.com/research/Moodys-US-companies-cash-pile-grows-10-in-2012-to--PR_268757

over 50% of all cash balances. This fact implies that the cash distribution over the many smaller companies was much more limited.

All these facts point to the conclusion that, since 2006, larger companies did not react to lower interest rates by borrowing more but by holding more cash as compared to assets as an insurance against adverse economic conditions. Lower interest rates do help all companies in that short term existing borrowing levels will costs less when interest rates decline. From a corporate cash flow point of view, this is good news, but from a volume of savings point of view this is bad news as savings were and are kept in the financial sphere rather than being converted into real assets. The conclusion for the corporate sector is that lower interest rates improve cash flows, but that the subsequent step of converting such cash into real sector assets was not taken. Lowering the interest rates did not help to create a conversion boom over the period 2006-2012.

If the lowering of interest rates was irrelevant for all individual households, due to the debt overhang and it equally did not lead to a conversion of savings into more real sector activities, why was so much weight (over $2 trillion to be precise) given to quantitative easing?

The links between interest rates and the users can be expanded by studying the links between the various asset classes and the lowering of interest rates.

To start with the deposits base: In 1985 the discount rate varied between 9 and 6% and the CPI inflation rate was 3.8% over the year. In other words a strongly positive real yield for deposits prevailed with corporate bonds and foreign bonds at a practically negligible level. Just coming out of a recession in 1985, corporate equities were an important savings element, but much less important than in later years. The assumption is that deposits had an attraction as a savings class as the other alternatives were less attractive. The facts for 1995, 2005 and 2013 change all this. In 1995 the discount rate moved from 6-5.5%, inflation was at 2.5% and the percentage of deposits as compared to total savings was 14.96%. In 2005 the discount rate was raised from 2.25-4.25% during the year and inflation was running at 3.4%. Still the deposits grew practically at the same rate as in 1995. In 2013 the discount rate is 0.25% and inflation is running at 2.3% for this year and the deposits grew slightly faster than the total savings amounts over the period 2005-2013. Out of these data one can only conclude that savings allocated to deposits have been interest rate insensitive at least for the last 18 years.

With regards to corporate equities, neither the lowering of the discount rate to the historically low level of 0.25% since December 2008 nor the activity of quantitative easing has had much of an effect on the relative percentage of savings invested in corporate equities. The latter activity of quantitative easing basically moves more money into the financial savings side as compared to the use of savings for business purposes. If savings amounts in corporate equities only stay in the financial sphere, than the impact on economic growth is very low to negligible. The afore-mentioned price effect is enhanced by quantitative easing. However it is the volume effect -the actual transfer of funds to the real sector- which helps economies to grow. There has been no sign that the volume effects have taken place, rather the opposite as many large companies did hoard cash since the crisis of 2008. Only very recently have large businesses started to reduce such cash accumulations. None of these actions indicate that the lowering of interest rates had a sustained impact on economic growth.

For small and medium sized companies the picture is different. Borrowing rates matter. However the substantial drop in equity in non-corporate businesses, relative to the growth of the total

individual household's savings portfolio, implies that SME's have and have had a problem of equity generation out of retained earnings, which in itself causes banks to be more reluctant to lend.

For pension funds the savings side is linked to tax relief and company support and such savings go on irrespective of the prevailing interest rate level. Such savings are based on very long term savings objectives and individual households do not often stop and start the build up of a pension pot. The benefit side is strongly affected by the returns earned over the savings. Especially important is the question if a return over inflation can be achieved. Low interest rates, especially long term government bond rates below inflation levels as happened in 2011 and 2012, show that the cost-benefit equation of saving has been artificially distorted with negative real interest rates. Pension funds and all other long term savers lose out, while the level of economic activities did not benefit. For pension funds, and thereby for all individual households saving for a pension, the notion that negative real interest rates are good for economic growth has not been proven and based on above facts such notion can not be supported by the evidence available.

3.2.6 Funding government debt (seventh tenet)

In section 3.2.3 surprise was already expressed over the very heated deliberations in the U.S. Houses of Congress over the government debt ceiling. This subject seems to get all the attention, while the breakdown of such debt over different maturities, the pricing of such debt at a fixed rate or at an index-linked rate and the action of the Fed to print money to buy such debt gets so little attention. The U.S. parliament is not alone in this respect. It seems to happen in various other countries as well.

There are three reasons to change the borrowing behaviour of the U.S. government and other governments for that matter.

1. Index-linked government bonds are cheaper; the U.S. already issues some TIPS or Treasury Inflation Protected Securities.

2. Index-linked bonds avoid the marked-to-market gains and losses for banks and other institutional holders of U.S. government bonds.

3. At some stage in the future the funding provided by the Fed through its quantitative easing exercises will have to be unwound. The possibility of the tapering off process has already sent shivers down the financial markets and has already affected the costs of funds for some emerging markets economies.

Why would index-linked government bonds be cheaper than fixed rate bonds? The answer to this question is that uncertainty over interest rate developments nearly always costs more money than the certainty that the main reason for moving interest rates: inflation levels is covered in the price investors in U.S. government bonds receive. In table 5 a historical comparison was made on the basis that CPI inflation level plus 1% constitutes the costs of funds for index-linked bonds and these costs were compared with the 10 year yield on fixed rate bonds.

Table 5: The U.S. experience

Year	10 year Average Bond yield %	C.P.I	Effective Yield %	30 Year Tips yield %	Year	10 year Average Bond yield %	C.P.I.	Effective Yield %	30 year Tips yield %
1993	6.26	2.99	3.27	3.99	2004	4.30	2.59	1.77	3.59
1994	6.90	2.56	4.34	3.56	2005	4.13	3.28	0.85	4.28
1995	6.74	2.83	3.91	3.83	2006	4.52	3.12	1.40	4.12
1996	6.07	2.95	3.12	3.95	2007	4.30	2.77	1.53	3.77
1997	6.10	2.29	3.81	3.29	2008	3.18	3.70	-0.52	4.70
1998	5.18	1.53	3.65	2.53	2009	3.16	-0.36	3.52	0.64
1999	5.64	2.16	3.48	3.16	2010	3.60	1.61	1.99	2.61
2000	5.75	3.25	2.50	4.25	2011	2.67	3.06	- 0.39	4.06
2001	5.06	2.77	2.29	3.77	2012	1.92	2.03	-0.11	3.03
2002	4.64	1.56	3.08	2.56	2013 1 July	2.50	1.67	0.83	2.67
2003	4.23	2.23	2.00	3.23					

For the years 1993-2010 the Tips yield would have been substantially cheaper than the fixed rate bond yield, with the exception of 2005 and 2008. The 2005 margin difference is small. The 2008 situation can easily be explained as the drop in the 10 year bond yield from 4.30% in 2007 till 3.18% was caused by a flight to safety out of other financial assets to government bonds. If sufficient quantities of index-linked bonds would have been available, they would also have benefitted from this movement of savings. The situation of 2011 and 2012 can be fully explained as a consequence of quantitative easing.

The second reason for issuing more Tips: the valuation changes in fixed rate bonds due to the marked-to-market accounting practice, is linked to the maturity profile of the U.S. government debt. Anyone will probably agree with the statement that the U.S. and other government debt cannot be reduced at a speed which substantially harms the individual households in their income earning activities. To repay all U.S. government debt would probably need 70 or more years. To value government debt on a daily trading basis, just to suit the traders rather than the long term holders of such debt, while such debt needs to be rolled over anyway, does not make much sense. Tips can be issued for 10, 20 or more years and the marked-to-market will remain the same over the whole investment period: CPI inflation rate plus 1%.

The third reason is linked to the practice of quantitative easing. Of course the Fed's objective was to influence the availability and cost of money and credit when it undertook to buy some $2 trillion of government and other securities. The cost of money was duly affected as the 10 year yield on U.S fixed rate treasuries dropped from 4.3% in 2007 till 1.92% in 2012. This happened during the same period that the U.S government increased its debt level from $9 trillion in 2007 to $16 trillion in 2012. Once the Fed decides to reduce its interventions or even reverse its past purchases, interest rates over fixed rate bonds will go up. To avoid huge losses on existing portfolios for all kind of bond holders, i.e. banks, pension funds, life insurance companies and others, the issuance of all new and replacement bonds could be made in Tips. One might even consider swapping the whole portfolio of U.S. treasuries held by the Fed into Tips. As and when market circumstances permit such Tips could be released back to the financial markets.

3.2.7 Corrective measures (eighth tenet)

The reason that corrective measures were and are necessary after the 2008 financial crisis is that the adjustment period has taken the longest time -apart from the Great Depression period- in nearly 100 years. The key element of the Coin economic theory is that the changes in the financial savings of the collective of individual households are unequal to the funds received by the real business sector. Such assessment could not have been made at the time of Adam Smith; the financial markets as we know them now, did not exist. At the times of Keynes, there were financial markets, especially the stock market, but not as developed with all the bells and whistles as there are currently. The trading and the gambling elements have multiplied over the years and making money in the financial sector out of financial transactions has become a habit of the rich, sometimes to the detriment of the masses. Also the institutionalisation of savings through pension funds, mutual funds and the equity and government bond markets and the substantial growth in the derivatives markets were elements that did not exist at the times of Keynes. Last but not least, the evidence as provided through the exceptionally well documented statistics, as the Fed has been providing in the form of the Balance Sheet of Households and Nonprofit Organizations, did not exist during Keynes times. It would not have been possible to state that the financial multiplier: the amount of savings which were used to enhance production was different from the savings level which stayed behind in the financial sector. Currently one can work out quite accurately the amount of savings which stayed behind in the financial sector.

The 2008 financial crisis was caused by the U.S. banking sector originating home mortgages with a speed that far exceeded the income growth of individual households. It was also caused by changing the U.S. national home mortgage portfolio with adding a substantial number of individual borrowers to the national mortgage portfolio who had poor outlooks for repaying the out standing mortgage - the sub-prime segment. Thirdly the crisis was spread around the world through the mortgage backed securities markets and the credit derivatives based upon them.

The collective of individual households reacted by aiming to restore their own balance sheets. They repaid $1.15 trillion on the national home mortgage portfolio over the period 2008-30 June 2013 or nearly 11% of the 2008 outstanding amount. They also paid for the construction of over 4 million new homes over the period 2008 till to-day out of their own incomes and savings. Both actions reduced the amounts available for other consumption.

The reduced demand for goods and services produced by the real sector led to higher unemployment rates; higher company failures levels, especially of the SME type; lower labour force participation rates; income growth below inflation levels and more part-time new jobs. It also led to an increase in U.S. government debt from $9 trillion in 2007 till $16 trillion to-day, a 78% increase over 5 1/2 years. If Keynes would have been alive to-day, he would have been most impressed with this kind of fiscal stimulus. Keynes would probably also have approved of the lowering of interest rates through quantitative easing.

What Keynes did not consider was that increased funding of government debt levels uses savings to stay in the financial sector, rather than being used by the real business sector. What he also did not consider was that the evidence of lowering interest rates to stimulate investments by the real sector has been sketchy to say the least. Companies, large and small, do not produce more, just for the sake of production. They do produce if they see a chance to sell their products. The general equilibrium can be restored, but only if individual households get some help in restoring their personal balance sheets.

Over the last 5 years, the U.S. government has spent $7 trillion in additional spending over tax receipts and another $2 trillion to lower the interest rates or about $ 57,000 per every household. Such action would all be in line with Keynes theories, but the effects of it have been painfully slow. The main reason is that none of these measures were aimed to improve the personal balance sheets of individual households. A possible alternative, which only partially involves the government, is economic easing. This alternative allows individual households to access a small part of their own savings from their pension pots for a short period of time. Such a transfer from the financial sector to the real sector creates a demand pull incentive from the individual households without affecting their level of indebtedness. In section 4, economic easing will be fully explained.

Other measures, which may be taken, are a "traffic light system" to the banking system, when mortgage lending exceeds the average income growth of households. Another possible measure is to make bankers stick to their considered opinions from the day of lending.

Still another possible measure is to give Small and Medium sized companies a chance to build up their equity base, through retained earnings. Such retained earnings could be taxed at a zero or low corporate tax rate, until full employment has been reached: a so-called "flexi-tax". This will make SME's more creditworthy with lower risks for the banking sector.

All these possible measure will be set out in section 4.

3.2.8. Costs benefits structures for the financial sector companies (ninth tenet)

The current drive to make banks safer companies is not based on what bankers do, but on avoiding another government bail-out for banks which are too big to fail. Higher equity ratios for banks expose the collective of individual households to higher risks, just in the same way as individual households have ultimately to pay for bank bail-outs by governments.

It is a mistake to think that bankers individually cause all the mishaps in an economy. Just as in the case of the collective of individual households, the collective of individual banks make the wrong decisions at times. There are discussions going on about establishing macro-prudential rules and hopefully these discussions lead to rules that affect the collective of individual banks, rather than just one or a few banks.

Banks plus all the other financial sector companies are different from the business sector. The financial sector companies combined allocate the financial savings of the collective of individual households over the various asset classes. Their "profits" are based on totally different principles than those for the business sector. As all the fines for miss-selling financial products show and as all the losses on mortgage backed securities show, mistakes from the past have come to haunt the banks years after their products were sold. The declared profits in the past were misleading to say the least.

It is for this reason that a "light touch" or laissez faire attitude to financial sector companies is inappropriate. Competition between financial sector companies does not mean the same as in the business sector. The "prices" charged by the financial sector bear no resemblance to the price setting and competition in the business sector. The collective of individual households is not well protected against the failures of banks and other financial sector companies. Of course deposit insurance helps, but if one really thinks about it, it takes away the risks for placing deposits with any particular bank, but in case of bank failures the losses are still losses to the financial savings of the collective of individual households. Risks have only been moved around.

It is for this very reason that, in the past, I proposed a different method to fund banks: a cash flow based method combined with a bankers' decision method which does not allow for "changed opinions". Such a method will be explained in section 4. Such a method would serve the collective of individual households -the ultimate fund providers- best rather than the bankers

4. Possible adjustment measures

In this section the following possible adjustment measures will be suggested:

- Economic easing
- Flexi-tax for SME's
- A "traffic light" system for home mortgages
- A "traffic light" system for margin lending for share purchases
- A financial sector restructuring plan based on the interests of the collective of individual households.

4.1 Economic easing

Towers Watson in their global pension assets study[13] have identified the following five countries, excluding Japan, with the highest level of pension assets in 2012. The U.S. has $16.8 trillion in pension assets, the U.K. has the equivalent of $2.7 trillion; Australia has U.S. $1.56 trillion; Canada has U.S. $1.48 trillion and The Netherlands has $1.2 trillion. The pension assets of these five countries combined represent about 80% of the world's pension assets in 2012.

These pension assets are a major part of the financial assets of the individual households in their respective countries.

Pension savings are influenced by the same characteristics as all financial assets. Economic uncertainties play the key role in assessing the future values of the assets. Life expectancy changes play the most important role on the liabilities side. If bankers and the credit rating agencies cannot predict loan or bond losses as the past experience has shown, than pension funds have an equally difficult task to predict the future values of their asset base. All attempts to do so are bound to fail. The result is a Considered Opinion, just as valid as those of bankers, asset managers and others in the financial sector.

Economic easing has as aim to focus on the individual household's income position in a direct manner. Its objective is to support individual households in overcoming their income shortfall when no home mortgage volume controls are in place and the country is in a recession or slow growth phase. U.S. individual households have accumulated nearly $17 trillion in savings for the purpose of having an income stream available during their retirement years. The future asset values of such savings are strongly influenced by current economic performance. Current economic performance is strongly influenced by individual households having the means to consume real sector goods and

[13] http://www.towerswatson.com/en/Insights/IC-Types/Survey-Research-Results/2013/01/Global-Pensions-Asset-Study-2013

services, rather than having to service home mortgage loans at an excessively fast pace out of reduced income levels as compared to CPI inflation levels. For this reason economic easing can act as an economic stabiliser.

The U.S. pension funds could collectively be requested to pay out, say 2% of their asset value. This would mean an income cash injection for individual households of about $330 billion per annum till the economy has fully recovered. Such request needs to be accompanied by a shortfall guarantee from the U.S. government so that pension funds after the pay out would be in no worse position than before the pay out. The increase in households' incomes will bring about an increased demand for goods and services, especially when Americans will be asked to spend the additional income rather than save the amounts in a "Help the Economy" campaign.

Such cash transfer to individual households would represent a 2.4% increase in their annual personal income levels. If such payments are made tax free, made in equal amounts to all pension savers and retired pension beneficiaries and spread over four quarterly instalments, the maximum impact on economic growth would be achieved.

Companies will benefit, job creation will benefit, government tax incomes will benefit, individual households will benefit without increasing their outstanding loan volumes and finally the financial sector savings will benefit with higher share prices based on a better outlook for company performance and lower home mortgage loan losses as more individual households are able to repay outstanding loans according to the agreed maturity schedules. House prices will also avoid the dramatic dips in home values.

To make economic easing a success only a full co-operation between a government and the collective of all pension fund companies will suffice. The shortfall guarantee could be exercised after a period of say three years and the amounts would only cover the paid out amounts to individual households plus the yields over these amounts based on the prevailing 10 year government bond rates. It is suggested that the potential government pay-outs will be reduced by the gains the pension funds have made over their shares investments from the date of the first pay-out.

The reason to pay all pension savers and retirees an equal amount is that the younger generation will have to save for a much longer period -with all the investment risks attached to it- than those closer to retirement or already in retirement.

Economic easing avoids the sharp increase in government budget deficits; it avoids the need for quantitative easing; it avoids the very costly adjustments to the capacity utilisation rate of the real sector and it avoids the dramatic increases in unemployment rates. It does not save poorly performing banks, but it counteracts the effects of the explosive growth in home mortgages far in excess of the income growth speed. Economic easing will also result in companies having to spend less on maintaining their contributions to their defined benefit schemes. It will also mean that individuals will be incentivised to join DB or DC pension schemes as only those saving for a future pension will benefit from the temporary pay-outs.

If one compares the potential costs of economic easing with the amounts of fiscal stimulus plus quantitative easing of $9 trillion, which the U.S. government has already spent, it is striking how small the costs are: $330 billion in year one, minus the appreciation values of the share portfolios. It should come as no surprise as economic easing is a policy method directly aimed to correct the imbalance in individual households' balance sheets. The reason for it is that it addresses the

problems of the income shortfalls of the collective of individual households in a direct manner, rather than indirectly. On top of this, both the use of government deficits and of quantitative easing creates financial assets rather than income. It is the extra income which the collective of individual households need in order to restore demand levels.

4.2 The flexi-tax

Small and medium sized enterprises are at a disadvantaged position as compared to the largest companies in the U.S. and in other countries. They usually have no access to the equity capital markets because of their size. However as stated above, such SME's are main providers of job opportunities. During recession periods such SME companies suffer more in that cost cutting for them is less effective with the smaller numbers employed as compared to the larger companies. SME's also do not have the option to ask the equity capital markets for more funds. It is therefore advisable to introduce the flexi-tax. The flexi-tax is the corporate tax rate levied on SME's. If the tax rate for SME's is lowered as compared to the big companies, than SME's have a better chance to grow through retaining their corporate profits. Such flexi-tax rate should only be applied when a country needs job creation and economic growth. Once both are back to satisfactory levels, the advantage of the flexi-tax could be withdrawn and standard corporate tax rates will, once again become the norm.

4.3 A "traffic light system" for home mortgages

It matters whether a standard variable rate interest rate structure is sold compared to a 30 year fixed rate structure. It matters whether there is a repayment plan or an interest only plan. It matters whether the income of the borrower is checked by outside sources or provided by the borrower himself. It matters whether there is a 100% financing of the home, or even more, or whether the mortgagee has to take an equity share in the property himself. It matters whether the interest rate structure is skewed towards higher future interest payments rather than starting up with the long term rate. The quality of the national home mortgage portfolio changes through each of these products. What is important is not to try to micro manage each and every decision by banks in their mortgage offers, but to have the powers to intervene if such mortgage offers substantially undermine the overall quality of the national home mortgage portfolio. This could be part of a new management structure for the national home mortgage portfolio.

In case the sales efforts of home mortgages are too "successful", or in other words exceed the income growth capacity of individual households, a traffic light system could be introduced by the Fed. Green should stand for please continue, amber for slow down and red for a cash penalty system for all banks and intermediaries, including investment banks, which continue to sell mortgage risks either to individual households or to the financial markets. If the penalties are set high enough, it will force through the message that the national home mortgage portfolio needs managing and restraint is needed. The interest rate applied to home mortgage borrowers does not change; it is the charge to the sellers of such mortgages which changes.

4.4 A "traffic light system" for margin trading and short selling practices

Irrational exuberance is a common phenomenon in the equity markets in the U.S. but also in other countries. It has already led to several economic recessions. The most dangerous practice from an economic growth point of view is that the financial sector takes risks on equities through margin trading or short selling which expose the whole stock market to a possible down turn. Margin trading was the initial cause of the 1929 Great Depression. What it means is that there is no level

playing field between those market participants, who pay for their shares in full and for those who bet with a small percentage of the sum on the equity price developments.

Again, just as in the case of home mortgages, the aim should not be to micro-manage the financial markets intermediaries, but to have a "traffic light system" installed to slow down or even temporarily stop the practice if there are dangers to the whole economic fabric of the U.S. The potential penalties should not be levied on the gamblers, but on the financial intermediaries that facilitate the gambling. The same could be applied to short selling practices. Again the fines system should not be applied to the short sellers, but to the financial institutions that make short selling possible.

4.5 A financial sector restructuring plan which puts individual households first.

In the U.S., banks have already undergone rigorous tests to ensure that they have the capacity to absorb any foreseeable future event. However the question may be raised if the current bank equity based structure is the most efficient method for sharing risks and income between the bank management and staff, the owners and the other fund providers.

Banks are different from any other company in that their assets and liabilities are monies only. Their activities are all related to money products, such as lending, trading currencies, trading in interest rates and providing other money services.

The art of risk taking implies that banks are able to predict a future outcome for their loans, for their currency and interest rate positions and for their stock and bond markets listings, mergers and acquisitions actions and corporate or government advisory activities and finally for their trading for own account.

Two elements set banks apart from ordinary companies. Firstly banks are the originators of debt for businesses and individual households. The decision to lend is solely a decision taken by the banks. In lending to businesses, banks try to protect themselves from other banks adding more debt to the same business. In lending to individual households the market is a free for all. Secondly banks assume from the outset that they have made the right decisions, in other words there will be no loan losses or losses to other market participants from their lending, M&A and stock market listings, for instance.

Banks and the regulators use the Value at Risk (VaR) approach, which is supposed to predict the outcome of the decisions by the bankers with some degree of certainty. Volatility, worst case scenarios, maximum loss assessments are based on time periods, confidence level and potential loss amounts. To give some scant confidence to the markets, one of the VaR assessment methods, which is used, is called the Monte Carlo simulation, hence the term casino banking.

"True" risk taking is based on foresight, rather than on adjustable versions which can be changed on a daily basis depending on how economic and political factors change. In hindsight it has been clear that the collective of banks in a number of countries created a lending boom to individual households which was far in excess of the average income growth of these households. VaR assessments are made by individual banks, not by the collective of banks jointly. However the current economic problems were caused by the collective of banks, including the investment banks.

A way to solve this dilemma between individual and collective actions is to force individual banks to set their "foresight" in stone. This can be done by allowing banks to deduct from their profit levels an amount of "loss provision" for every loan or other activity at the moment the loan or other agreement is signed. In effect the VaR is assessed at the moment of taking the risk and cannot be changed later. No excuses for wrong assessments.

If such VaR assessments are made tax deductible also from the day the loan or other agreement is entered into and cannot be changed over the lifetime of the loan or contract, the skills of individual banks and their bankers in predicting future outcomes will be reflected in the profit levels made. If banks make mistakes by underestimating VaR requirements, than such mistakes would no longer be tax deductable; they would have to be funded from the accumulated level of deferred staff bonuses and from a write down in the value of shareholders equity. If banks had been too conservative, a freefall of the excess VaR amounts would not be taxed and could be paid to shareholders and to the bankers who took the decisions in the past.

This leads to the concept of "shareholders" in a bank. Banks are income and expense based institutions, whereby incomes and expenses have all to come from financial assets and liabilities. Such liabilities include the "risk" taking category of shareholders. Banks are cash-flow based institutions and the individual households -or their representatives in the form of pension funds and mutual funds- should get priority over bankers' pay. Their value at risk is the amount of money provided to a bank in order to take the risks banks take. The best way to achieve such priority is to turn share capital into non-redeemable perpetual notes which pay out an annual fixed rate of return. Such notes could be stock market listed and the price of such notes would reflect the market perception of the skills of the bankers. Around par or slightly above indicates a well-managed bank. A steep discount to par reflects poor bankers' judgments. More perpetual notes will be needed to overcome the unforeseen losses and the price for getting such risk capital will need to go up. All regulators need to do is to ensure that banks cannot expand unless their latest perpetual notes issues are quoted at around par. Investment banks should be forced to make the same VaR arrangements for their stock market introductions and mergers and acquisition activities. They make risk assessments that can affect the money put out at risk by individual households. They -just like commercial bankers- should be held responsible for their advice to the markets, in that they guarantee -over a declining time scale- that their judgments are correct. If not they will need to buy back part of the issued stock for instance.

Individually banks make judgments which often affect all banks, but also all fund providers, the individual households. A reform of the banking system which recognises the fact that all funds banks have at their disposal originate from the collective of individual households, will lead to a different bank reform programme than is currently under consideration through the Basel III agreements.

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