The United States: An Economic Balance Sheet Analysis

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Introduction

Economists have in common a wish to understand what happened and what happens to the many aspects of an economy. The history of the name "economics" goes back to Ancient Greece, where "oikos" meant household or family estate and "nomos" meant any rule or law or rule of thumb which applied to a household.

In this context it has been somewhat surprising to note that current economic analysis seems to focus so strongly on what governments do and can do in their law making and policy setting activities. A great deal of thought has also gone into the production and consumption side, emphasizing, among others, market behaviour, price setting as well as measuring economic growth.

In my view a rebalancing act is required to conform to to-day's realities, especially in the developed world, which includes the western world plus the newly industrialising countries. In these countries, individual households own a multiple of GDP annual output value and an even higher multiple of government tax income in a single year. The accumulated savings deserve attention, not just in bank deposits, but in houses, in listed or non listed shares in companies and banks, in mutual funds and in pension fund reserves. Such attention should not only focus on the actual level of such savings -the balance sheet aspect- but also on the question of what kind of return has been achieved -the reward for savings-; the income perspective. Income is defined in this paper as the value increase/decrease on the stock of savings which was not used for spending in the reporting period.

The second element affecting individual households is the level of liabilities such households enter into -again the balance sheet aspect- complemented by the changes therein -the income aspects.

The analysis of the United States economy was chosen for particular reasons: Its economy is the largest in the world and secondly the level of its data provision is outstanding as compared to many other countries.

In the U.S. the Federal Reserve[1] publishes the Balance Sheet of Households and Nonprofit Organizations on a quarterly basis.

Per 30th June of this year, the net worth of individual households reached the level of $62.7 trillion, GDP level runs at around $15.1 trillion, the U.S. Federal tax income level was $2.4 trillion in the last tax year and the U.S government debt level stands at $15.9 trillion.

Even after the substantial losses made by individual households over the period 2008 till now, the collective current gearing ratio for all American households is still extremely low. Equity resources fund 82.3% of all assets and debt represents "only" 17.7% of funding of the asset base. Compare this to the situation of 1995: equity funded 84.9% of all assets and debt covered 15.1% of the funding needs of assets. This represents a relatively small shift over a long period of time.

In the period 1995 till 2006 the U.S. economy was able to create an increase in net worth of individual households of, on average, $3.2 trillion per annum. This study aims to discover why such trend line was broken -how come that it was not predicted-; what could have been done to avoid it and what are possible options to shorten the adjustment period.

[1] http://www.federalreserve.gov/releases/z1/current/z1r-5.pdf

1. Was the U.S financial crisis predictable?

At the end of June 2012, the assets of the Individual Households and Noncorporate Organizations were $76.1 trillion. The Households' real estate level constituted 22.1% of all assets; consumer durable goods 6.3%; short term bank deposits and money market fund shares 11.3%; credit market instruments 6.2%; corporate shares and mutual fund shares 18.7%; life insurance reserves 1.5%, pension fund reserves 17.9% and equity in noncorporate business 10.1%. Some small items bring the total to 100%.

On the liabilities side, which amounted to $13.4 trillion as per same date, 71.2% constituted home mortgages and 19.7% was represented by consumer credit. The Federal government debt level has been included in the assets under various items, in so far as American individual households have funded such debt. On the liabilities side it has not been included, not because it will not be an obligation for the individual households to ultimately pay this debt out of their future incomes, but because neither the timing of repayments nor the distribution over all taxpayers has been fixed.

For consumer credits -the short term borrowings- the main sources of repayments are the incomes of individual households. Doubtful debtor levels are usually covered by bank margins built into the lending process, like in the case of credit card lending. In the second main area of consumer credit -car financing- in case a consumer fails to repay an outstanding loan, the car can be repossessed and sold on the second hand car market. These methods of financing have rarely lead to serious problems until 2007. Since 1995, and every year until 2007, there was an increase in the volume of consumer loans of roughly $100 billion per annum. Since 2007 and till 30th June of this year the consumer credit volume has stagnated and has only recently shown some kind of growth. However after taking inflation levels into account, the consumer credit levels are seriously down as compared to the period 1995-2007. The turning point was 2007.

It has been a different picture for the long term individual household debt levels -the home mortgage markets-. In the period 1995-2005 the mortgage debt increased in absolute levels from $3.3 trillion to $8.9 trillion, an annual average increase of $560 billion. In the five year period of end 1999 till end 2005 this average increased to $900 billion annually. In October 2005 the level of housing starts was 2.01 million. This monthly figure represents the seasonally adjusted annualised level of housing starts. The housing stock of owner occupied dwellings stood at 74.2 million at the time, which implies that with the speed of new housing starts the replacement of the total owner occupier housing stock would take place in 37 years. One does not know the specific average life time of the housing stock, but it is highly unlikely to be anywhere below 60 years and probably a bit longer, especially in urban conurbations. The American National Association of Home Builders expects newly built homes to last over 100 years. In October 2005 the 30 year fixed rate mortgage loan interest level did increase from 5.77% till 6.36%. With an excessive level of new housing starts plus an increase in the costs of mortgages, one may well conclude that the turning point in the U.S economic cycle was reached in October 2005. The alarm bells should have started ringing with the authorities.

The strong selling pressures by mortgage providers by selling inadequate products, such as 100% of home value mortgages, low interest start up mortgages followed by steep interest hikes, no income verification and interest only mortgages did push the mortgage lending figures up in 2006 by about $1 trillion, but this was no longer followed by home value appreciations to the same extent. In effect home values increased by some $700 billion, which of course made the owners equity as a percentage of household real estate drops from 59.6% in 2005 till 56.5%. Even stronger alarm bells should have gone off as in the whole period from 1995 till 2005 this percentage was always maintained at between 58 and 60%.

In 2006, the income reward of $700 billion over the savings built up in the homes was no longer enough to cover the expenditure level of $1 trillion. This resulted in a loss to households of $300 billion in the same year. The negative change in housing prices in 2006 was well illustrated in the S&P Case Shiller home price index[2], which reflected the fact that foreclosure levels were up by about 50% in 2006 over 2005 levels. Excessive mortgage selling pressures continued to show up in 2006 but no action was taken to stop these pressures.

One possible reason why no action was taken is that policy makers generally discuss economic progress by watching economic growth figures, which reflect the volume growth in output. In 2006 the economic growth statistics did show an excellent performance of 3.2% growth.

What economic growth figures do not show is whether savings have been used effectively in an economy. Companies -excluding banks- are the only type of households which strive for profits. Their price setting reflects market guidance as to what, how, how much and for which market segment to produce. If unsuccessful they are either taken over or liquidated. The three other major types of households -individual households, the government and the banks- are all different. Liquidation is not an option for individual households, nor for a government and certainly not for the whole banking sector.

The U.S government's role is reflected in its expenditure pattern. In fiscal year 2011 24% of its costs were for Health and Human Services, 21% for Social Security purposes, 21% for Defense, 5% for Veteran Affairs, 7% for interest payments over government securities held by the public and 23% for all other costs. All these purposes carry a cost, but none of them were incurred with a profit motive in mind.

The second main type of households is the collective of individual households. Their main drive is to earn an income -have a job during their working life-. Their income depends on the level of job opportunities, on the return over their savings levels, on the prices they have to pay out of their incomes for goods and services, on the prices of financial borrowings and on the governments' tax regime. Individual households do not control any of these factors, they may hope for good results, but they do not control the process as companies do.

Finally the banks: banks are risk intermediaries between funding and lending. They basically strive to maximise the intermediation fees between the funding and lending cash flows -and derivatives there off-. Banks' intermediation can be a force for good like in the period 1995-2004, but it can also collectively lead to excesses. Sometimes such excesses are forced upon companies when takeovers take place and companies are forced to accept much higher gearing ratios. Often it involves the individual households especially through long tem lending for home mortgages and share introductions to a stock exchange. Finally it can lead to excesses in lending to governments to fund their expenditure levels.

The conclusion is that GDP output is a result of the interactions between different types of households rather than the cause. The causes of economic cycles are to be found in the use of funds and their efficient or inefficient applications. The profit motive only applies to the corporate sector but not to a government or individual households. The banking sector constitutes a separate type of

[2] http://en.wikipedia.org/wiki/File:Case-Shiller_index.png

household as its only "product" is money. Current economic difficulties around the world can be attributed to the use of funds for individual households and/or for funding government deficits.

The U.S government did not go on a spending spree in 2005 or 2006; it did not cause the crisis. The collective U.S banking sector did this in relation to individual households. Some banks behaved prudently and others very imprudently. To reach total lending levels to one type of households is - perhaps regretfully- a collective activity. Collectively speaking, bank' risk management activities over the period 2005 till to-day leaves much to be desired.

The lending excesses were further encouraged through the securitisation process of home mortgages. Such a securitisation process broke up the bank-client relationship and also introduced the impression that long term mortgage debt could be liquidated on a daily basis. American investment banks, helped by the credit rating agencies, promised to maintain a market in the Collateralised Mortgage Obligations (CDO's) markets. This was a banker's promise they did not keep and in 2008 the CDO markets collapsed. A liquidity crisis occurred affecting not only the U.S but also all international banks that had either bought CDO's or themselves had issued CDO's such as Northern Rock in the U.K. What started as an individual borrower's cash crisis, the securitisation process turned it into a full blown liquidity crisis. The borrower's cash crisis in itself affected all home owners; the subsequent liquidity crisis affected all home owners plus all investors in CDO's. Such investors included many foreign banks. The derivatives markets spread their tentacles even further and as a consequence no bank was sure what other banking organisations were holding in doubtful risk products. They stopped funding each other. This led to a full blown banking crisis followed by an economic crisis and a government debt crisis.

The investors in CDO's may have been naïve in putting their trust in U.S investment banks; but one should emphasize that for many years the banking business was build on "trust" and "trust" alone plus common sense in knowing one's client base. Depositors trust the banks, so do bondholders and shareholders. If "trust" can no longer be relied upon than the very existence of the banking sector needs to be revisited. The government authorities, whose job it is to supervise the banks, failed to predict that a liquidity crisis could be created by issuing CDO's on a large scale.

The conclusion out of the above is that the starting points of the economic turn around happened in October 2005; it became subsequently clear in 2006 that the additional funds pumped into the home mortgage market did not cause the value of the housing stock to increase with the same amount or more. The use of borrowed funds to the individual households became less efficient, home owners had gotten funds they could not afford to repay - an economic waste.

The warning signs were there and the crisis could have been predicted. The excessive focus on GDP output figures was probably to blame.

2 Was the financial crisis avoidable?

The financial crisis led to five types of actions and one reaction, which all six together have slowed down the period of adjustments. They are:

- Individual households reacted to the financial crisis by paying down their mortgage levels over the period end of 2007 to end of 2011 by an annual amount of $200 billion. This effect plus the fact that in "normal" years about $700 billion would have been taken up in additional mortgage loans, reduced disposable incomes for other purposes with some $900 billion for each year from 2008 to the current. An annual negative growth effect of 5.6%.

- The "softening" of mortgage conditions has been clearly spelled out in a Deutsche Bank study[3]. 37% of the "subprime" mortgages were interest only mortgages without any obligation to repay principal amounts; 38% were 100% mortgages requiring no down payment; in 43% of the mortgages no income check was made and in 80% of the mortgages a low start up interest rate was included for a period of two years after which period a steep hike in interest rates was applied. These mortgage conditions shift the risks away from an income related lending programme to an asset -home- financing, whereby the expectation was for a strongly increasing average home price.

- The mortgage lenders ultimately had to rely on the asset values once CDO holders collectively wanted to get out of the mortgage risks. This set in motion a second hand house sale program, the U.S had never experienced before. In the period 2007 to and including 2011 about 4.4 million "second hand" homes were dumped on the market, on average 880000 per year. Such an extra supply puts tremendous pressure on prevailing house prices. On average each American home owner lost about $ 84 000 from the average house price of $ 289 000 per end 2006; a 29% loss. Selling individual homes - the asset base of individuals- distorted not only the home prices for the 5.5% doubtful debtors, but for all 78.6 million home owners. Also new home starts felt the effects. In January 2009 new housing starts dropped to 490 000. The replacement ratio of new building versus housing stock dropped to 167 years. House prices were totally driven by "irrational" financial markets rather than by real markets supply and demand.

- The whole system of mortgage lending was undermined by these effects. Fanny Mae and Freddy Mac's important roles in the mortgage lending markets totally stalled as their Mortgage Backed securities holders expected payments and some mortgagees were not paying off their obligations. The U.S Government had to come to the rescue in 2008. However Fannie Mae and Freddy Mac's current involvement with new mortgages has risen to 95% of all new mortgages granted.

- The negative and low economic growth levels also had other side effects. The value of the individual household's balance sheet item of shares in listed and noncorporate businesses dropped by 13.9% over the period December 2007 to December 2011. Interest income levels over government bonds also dropped from 4.8% to 1.7% this year. This was partly caused by "quantitative easing" activities of the Fed, which bought up such securities. The risks for the individual households over the outstanding government debt did change as the level of debt increased rapidly over the last five years -for reasons beyond the government's control-, but both the interest rate and the interest amounts paid to such households dropped as an important share of the debt was taken out of the market. Such effect created another negative income element for individual households at a time when all income increases would have been welcome.

- As a consequence of these financial and economic factors the unemployment rates rose sharply. The latest figures of October 2012 showed that 7.9% of the labour force is unemployed. This represents 12.3 million Americans. Youth (16-24) unemployment levels are much higher. Their percentage is 16.4% or in number terms 3.25 million young people.

[3] http://www.globalsecuritisation.com/08_gbp/gbp_gssf08_022_031_db_us_subprm.pdf

If individuals cannot find a job, they can also not contribute to economic growth. Young people spend a high percentage of their incomes on consumption; therefore their unemployment status reduces the overall level of consumption power. Of course the income generation from the other 9 million Americans is also sorely missed.

3. How can the adjustment period be shortened? Possible Balance Sheet solutions

Over the period 1995 to 2006 the net worth of the American individual households increased annually with on average $3.2 trillion per annum. Such an amount represents the Annual Profit or one could also call it the Country's Profit level. To return to such income earning situation a few changes may be needed in the American economic system - the "econ"system. Such a system reflects the interactions of the various types of households in a society.

Apart from some changes in the way that the home mortgage markets operate, it may also be appropriate to investigate whether a balance sheet item could be found which allows a quick conversion of a small part of it into cash in order to create purchasing power until economic growth levels have reached their optimum level ensuring as high an employment level as possible. Once such cash injection has done its work it could be reconverted back into savings out a small part of future tax receipts -such receipts increase with the level of economic growth-. Another gain should be expected on shares as economic growth rates pick up; some of these income gains can also be used to offset the pension dividend,

These suggestions have extensively been dealt with in a recent article[4]. A short summary hereby:

- The mortgage products need to be revised with an emphasis on shared risks between the lenders and the borrowers. The shared risk taking should include a down payment and a savings element by the borrower; it should avoid transferring interest rate risks to the borrowers; it should be based on an active income assessment process and not rely on self-certification of income level. Interest only mortgages rely too strongly on positive house price movements and should therefore be banned. The main priority should be that home mortgages need to be met out of incomes rather than out of liquidating the asset.

- Fannie Mae and Freddy Mac have outstanding capabilities in funding mortgages as their organisations are government related. They could attract long term fixed rate funds at the lowest costs. Fannie Mae and Freddy Mac do not have the same capacity as commercial banks in judging income risks on individual borrowers. This function is best left to the commercial banks. The distribution of functions could be that commercial banks take on the credit risks on the borrowers and provide a guarantee for the funding as provided by Fannie Mae and Freddy Mac.

- It is unclear why bank supervisors attach such great importance to the balance sheet of banks rather than to the profit and loss levels. After all banking risks are based on receiving a higher risk premium for the risks taken than for paying out for the funds attracted. Risk taking is an income based business. Banks do not need large capital bases as their businesses do not require sizeable amounts for capital goods investment. Bank offices and computers can be leased. If shareholders were paid a fixed reward for providing funds to a bank, thereby turning share capital into perpetual notes, than the

[4] http://mpra.ub.uni-muenchen.de/42580/

quality of bank risk taking would improve for the simple reason that managements' risk taking capabilities would be reflected in the perpetual note price at stock exchanges. The way bank shares are currently used mixes up the income and the balance sheet role. In good times shareholders get an income plus an appreciation of share values. Such appreciation of shares is not reflected in bank balance sheets but only in the shareholders balance sheets. In bad times shareholders do not get an income and see a depreciation of their shares. This time it is reflected in the balance sheet of banks by writing down the bank share values for loan losses made. If the income and the balance sheet objectives were separated and incomes were paid at a fixed rate to "shareholders equal perpetual note holders" than the best managed banks would see their perpetual notes values remain at 100% - in other words poor risks were foreseen and provided for out of reserves- (see also next point). Poor managements should be forced to attract more perpetual notes at a higher interest rate. Excellent managements do not need to increase the level of perpetual notes. It is not the size of the assets of a bank, neither the size of the share capital buffer which matters, but the ability of banks to manage its risks. Splitting up the income from the balance sheet side will show which banks do better or worse than others.

- Bank risk taking should also be better reflected in their Balance Sheets and P/L accounts. Taking into account that each risk taken can lead to a potential loss, an economic balance sheet and p/l account could be established for all types of banks. From the moment a risk enters the books of a bank a percentage of the income should be reserved for future losses. If, with the right kind of products, such reserve pots would have been established for the commercial banks, the losses on doubtful debtors in the mortgage markets would have been much lower and could have been met out of reserves rather than liquidating the assets. Only in extreme cases repossession of the property should have been the final threat. For investment banks, such reserve pots would have needed to be substantially higher as they were selling long term risks with the chance of creating a liquidity crisis. They also would have needed to pay their perpetual bond holders a higher annual interest rate than commercial banks.

- Bank supervisors could be given the role of appointing independent auditors, to be paid for by the banks, but reporting to the Fed and other regulatory authorities, For home mortgages it is worthwhile to consider whether Fannie Mae and Freddy Mac could be jointly given authority to regulate the collective level of mortgage lending as this was the key issue which went wrong in the last crisis.

- The last suggestion is related to shortening the period of adjustment. This crisis has now lasted five years. The U.S economy does not lack savings, what it currently lacks is purchasing power. The U.S government has not got such savings, but the individual households do. The suggestion is to temporarily turn a small part of such savings into cash. Such method can be called "economic easing". The most logical category of funds is the pension fund reserves. A pension fund dividend could be paid out to all pension savers and pension beneficiaries. If an equal amount would be paid out for all pension fund members, such pay out would achieve two goals. The first one is that many young people saving for a pension would get a cash injection on top of their income; they are the most likely group to spend it, but they are simultaneously the group which is faced with the longest period of investment risks. The second one is that such a system would support the philosophy of saving for a funded pension plan. Of course all pension dividend beneficiaries should be encouraged to spend rather than save the amount. Such exercise could be repeated till economic growth has reached its optimal level. Pension funds benefit from the share price increases; employment levels benefit as increased capacity will be set up; the government will benefit through higher tax receipts and banks will benefit from lower levels of risks on both the corporate as well as the individual households. Once the growth rate is up, the transfer back from cash into pension savings can be accommodated partly from increased government revenues and partly from increased share prices.

If the will is there, there is always a way to achieve one's goals.

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