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U.S. Households' Balance Sheet and the link to economic policies

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Introduction

In the financial accounts as collected by the U.S. Federal Reserve, one Balance Sheet item stands out: "The Household Balance Sheet over the period 2000-2020". In Q4 2005, the market value of households' real estate assets was $14.416 trillion. By Q4 2011 the market value had dropped to $8.319 trillion: a loss of $6.1 trillion over five years or a loss of 42.2% over the same period. For all households it took to Q2 2016 before the loss had been recovered when the market value reached $14.488 trillion. This reflects an adjustment period of over 10 years!

The U.S. Federal government tax receipts over the three-year period 2009, 2010 and 2011 totaled $6.573 trillion. Even the government borrowings over these three years together amounted to a smaller sum of $4.169 trillion. The loss on households' real estate between Q4 2005 and Q4 2011 was equal to 93% of all U.S. government tax receipts, not just for one year, but over three years!

Whilst the Great Recession of 2008-2012 wreaked havoc with U.S. government budgets, but more important was the damage inflicted on households' economies over these years and beyond.

To counter the 2008 recession, two of the instruments used were the Quantitative Easing ("Q.E.") program by the Federal Reserve and the deficit financing by the U.S. Federal Government. The Q.E. program focused on buying up U.S. government debt and mortgage-backed securities paper issued by the state sponsored financial institutions, such as Fannie Mae and Freddy Mac. Interest rates were kept at historical lows. The U.S. government debt to GDP level did rise from 62% in 2007 to 135.6% of GDP as per Q2 2020.The four Q.E. programs have pumped in just over $6 trillion into the U.S. economy as per the latest figures.

The current coronavirus crisis can be expected to bring with it a substantial rise in unemployment levels, significant company failures and a greater reluctance by banks to lend to those most in need.

Further increasing U.S. government debt levels might not be an attractive option. More Q.E. directed to funding existing debt levels also has its limits. One solution that has not been tried is to use Q.E. to help households directly in releasing some home equity on a temporary basis. Funding savings rather than debts could be more effective.

A new type of Q.E. will be set out in this paper.

1. The downward slope

Over the years 2006-2020, the U.S. government has seen its debt levels grow from 62% of GDP in 2007 to 135.6% of GDP as per Q2 2020.[1] The main acceleration came in 2020 due to the coronavirus crisis. The U.S. government's current starting point to help out households to overcome the drop in incomes and in jobs is, at best, a very difficult one. More government debt can always be incurred; however will it be extensive and timely enough? More Q.E. might be another option, but will it be able to help those who most need it: those on lower incomes, the unemployed youth and the people struggling to pay their bills on time?

The Federal Reserve has also taken major steps with its four Q.E. programs that in total have increased its exposure from $905.3 billion on September 1, 2008 to $7.157 trillion on November 9 2020.[2] With this latest increase, what is the future for further Q.E. action?

The current coronavirus crisis has affected many households in the U.S. as well as in other countries. The testing stage of new vaccines seems to have been successful, but the immediate negative effects of the corona crisis will, most likely, continue for another six to twelve months. What this means is that employment levels will only slowly increase; more household bankruptcies will occur and more companies will go under. Under these circumstances the banking sector will be reducing its lending levels, including for mortgage loans.

The one aspect that often seems to be taken for granted is the savings level accumulated by individual households, both in home equity and in pension savings. By 2019, U.S. citizens had collectively accumulated $32.3 trillion in pension savings plus a further net $19.656 trillion in home equity. On top of this there are bank deposits and individual shareholdings that will increase this level even further.

The corona crisis has had and will have a major financial impact on many U.S. households that can least afford it: the bottom 50% of households. To show how long the financial crisis previously impacted this group, one may refer to the Federal Reserve's statistics[3], which indicate that these households had an accumulated net worth of $1.453 trillion in Q1 2007. They experienced a drop to $180.7 billion in Q2 2011: a loss of 85%! The bottom 50% finally saw their wealth level restored to the Q1 2007 level by Q1 2018 when for the first time since 2007 it reached a level of $1.571 trillion; just above the Q1 2007 level. This represents an adjustment period of 11 years; only to reach the level achieved by Q1 2007.

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[1] https://fred.stlouisfed.org/series/GFDEGDQ188S

[2] https://www.federalreserve.gov/monetarypolicy/bst_recenttrends.htm

[3] https://fred.stlouisfed.org/series/WFRBLB50107

One may describe this as a very disappointing adjustment period and a disastrous one for the bottom 50% of U.S. households.

1.1 Is there a way to turn the downward slope into an upward one?

In hindsight, the Great Recession experience of 2006-2012 did show that allowing the property markets sorts itself out did not work. In a highly interesting set of statistics by the Federal Reserve,[4] it shows the real estate wealth by percentage group based on income levels. Some of the data are as follows:

	2006 Q4 **$ Trillion**	**2012 Q1** **$ Trillion**	**2020 Q2** **$ Trillion**
Bottom 50%	3.43	2.63 (change -23.3%)	3.62 (+37.6%)
50-90%	10.69	7.34 (change -31.3%)	13.34 (+81.7%)
90-100%	10.03	7.96 (change -20.6%)	13.89 (+74.5%)

It is easy to notice that the recovery rate for the bottom 50% of income earners was much lower than for the top 50% of other households.

One main reason was, and is, linked to households' income and savings levels.

The Great Recession was preceded by the practice of putting all different qualities of mortgages together into mortgage-backed securities. This led to failures to understand the real risk levels in such securities. The second failure was that the split and slice practice of home mortgages broke the link between the households and the funding providers. U.S. banks sold their mortgage risks to third parties, but the ultimate fund providers relied on the competence of U.S. banks to distinguish between acceptable and unacceptable risks. Quite a few banks jumped onto the bandwagon, only to show later on that they had misjudged the risks.

In 2007, this securitization process came to an end when BNP Paribas decided that liquidity in its U.S. mortgage backed security funds had evaporated.

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[4] https://www.federalreserve.gov/releases/z1/dataviz/dfa/distribute/chart/#qu:123;series:Real%20estate;demographic:networth;population:1,3,5,7;units:levels;quarter:123

What happened from 2007, can best be shown in the next table. If 2006 is used as a base year and the 1,215,304 Foreclosure Filings in that year are equivalent to 100 then the subsequent years rank as follows:

Year	Foreclosure filings:
2006	100.0
2007	181.3
2008	248.5
2009	284.5
2010	316.3
2011	322.6
2012	189.9
2013	112.7

In 2007, short term teaser interest rates -mostly used by the lower income groups- came to an end and hefty increases in home mortgage payments needed to be made. Lower income families were classified with an income from $15.286 per annum for the bottom 20%; $ 40.652 for the 20-40% group and $68.938 for 40-60% group according to the U.S. Census Bureau.

Many of the lower income families got into serious financial trouble during the period 2007-2013 as the above foreclosure filings clearly illustrate. The top 50% of income earners usually had other savings to fall back on to stave off repossession of their properties.

With a high degree of certainty, one may conclude that the bottom 50% of the U.S. households were hardest hit during the Great Recession, even those who were renting rather than being homeowners. How uneven the home ownership was among the three income groups can be seen by the percentage of wealth by each group. The bottom 50% of households owned 14.2% of home equity. The 50-90% of households owned 44.3% of home equity and the top 10% owned 41.5% of such equity.

2. The limits to funding debt levels.

The current coronavirus pandemic is a clear example that government debts can and do increase rapidly. It is like a repeat of the Great Recession period; with the difference that at the start or the Great Recession in 2007, the Government debt to GDP level was 63% of GDP. It did reach 135.6% as per Q2 2020. As a consequence of this debt increase, the annual interest costs have also grown substantially notwithstanding the lowering of interest rates.

What are the choices?

Never during the 20th or 21rd century have U.S. government debt levels exceeded the 136% of GDP that was reached by Q2 2020. Government debt represents expenditure that was not funded by taxes. Any government of any political leaning can use borrowings to expand its activities in a current year over and above its tax revenues. Such borrowings have two aspects: the first one is that it is an additional expense that usually creates economic activities: a gain for households. However the gain turns into a loss to households when in future years a government tries to reduce its outstanding debt by increasing tax levels.

The same reasoning applies to Q.E. activities. Q.E. buys up debt based on creating the money needed. In the U.S. this method did not exist till 2009 when the Federal Reserve started it. Q.E. has now been used for an amount of about $6 trillion. Again the way back would be to sell off such holdings to the open market, if demand would be there.

One could argue that the limits to U.S. government borrowings are approaching, not because financial markets are unwilling to lend more, but because the reverse action of lowering government debt levels will need to be too draconian on households. For QE there is a different reason. Q.E. does not necessarily need to stop, but there can be a different type of Q.E. that focuses on savings rather than on debts.

3. A new use of Q.E.?

It is obvious that both U.S. government borrowing and the current method of Q.E. did use debts as the key ingredient to help stimulate the U.S. economy.

Is, in the current circumstances, a further increase in government debt levels and an additional QE expansion really the best way to overcome a financial crisis?

Home equity represents savings levels. The recovery of mortgage debts by a banking system that was itself responsible for its own lending practices, showed that this adjustment was -economically speaking- highly inefficient. It caused the recovery period to take 11 years in order to get back to the home equity savings levels of 2007.

What was and is now again needed is to restart the economy in order to create a higher level of disposable incomes. Rather than borrowings, the focus could be on home equity savings levels. The U.S. Treasury did expand its activities with the help of government debt increases. However the U.S. Treasury was fighting a losing battle, as the savings losses were equivalent to nearly three years of Federal government tax revenues. The revenues flow was outflanked by the savings losses in a major way. Keynesian methods did no longer work.

The allocation of Q.E. by the Federal Reserve was aimed at funding outstanding debts by the U.S. government and by debts issued by the State sponsored mortgage institutions. Both were debt related.

There can be a different approach, especially for Q.E. The aim of it is exactly the same as in all economic interventions: Stimulate economic growth levels when market forces pull an economy in the opposite direction.

The main economic experience of the Great Recession was that the combined powers of the U.S. government and that of the Federal Reserve were insufficient to offset the savings losses in home equity suffered by nearly all homeowners.

The banking sector did not help as it was in their interests to avoid losses. Banks reduced lending levels and as the foreclosure statistics showed, they used foreclosure methods extensively over the period 2007-2013. The banking sector added to the household losses by generally pursuing those who could no longer afford the mortgage payments. It also caused new housing starts to drop from the near highest level in 2005, when 2.068 million new homes were started in that year. In 2009 the bottom was reached with only 554 thousand new housing starts. Even by 2019 "only" 1.290 million new homes were started[5].

The key to understand what could have been done is to consider what home equity stands for. Home equity is basically a savings product built up over many years. In this manner it is more or less like pension savings.

Every household needs a place to live in, either owned by the household or rented from other households.

Very few households are lucky enough to have inherited enough wealth to buy a property outright. Nearly all have to save over a period, often lasting 30 years. What happened during the Great Recession was that such savings flow was interrupted by the banking sector. Debts drove out equity stakes! The bottom 50% of households suffered the most for the simple reason that they did not have enough spare cash in savings to continue the mortgage payments. As the data in footnote 3 show, the net worth of all households in the bottom 50% of incomes stood at $1.454 trillion in Q1 2007 and by Q2 2011 it had dropped to $189.7 billion; a loss of 87.6% or $1.26 trillion. According to these statistics lower income households did try anything in their power to keep up with their mortgage payments, but the rising unemployment levels prevented them from continuing their savings pattern. The inability to pay did not stop at homeowners alone; renter households also built up an overdue rent arrears debt of

[5] https://www.census.gov/construction/nrc/historical_data/index.html

$21.5 billion affecting 17.3 million households out of a total of 44 million according to Reuters.[6]

Having shown how long it took for the bottom 50% of the U.S. population to recover, policy makers may prefer a more effective instrument.

3.1 The How Question

Savings can manifest themselves in different forms. The simple one is cash on hand. Other forms are current accounts, savings accounts, time deposits, but also share and bond holdings and different types of pension savings. Other savings are locked up in homes or in collective instruments like pension funds. Finally some lucky households may have an art collection. For many households the main source of savings is in a home and in their pension pots. It is not recommended to use the pension pot as a possible temporary liquidity supplier.

The easiest conversion can be to convert a small share of home equity into cash. Like most things in life, this is not and cannot be a straightforward transaction. For one thing no system exists yet to cash in such savings other than to sell a property or take a new or additional mortgage. Selling a home is expensive and taking an additional mortgage turns the savings into cash but with the drawback that debt obligations are created. Creating more debt for the simple reason of wanting to use one's own savings is an economically inefficient manner.

The option that could be considered is to use Quantitative Easing from the Federal Reserve. This will be a different type of Q.E., as the Fed will not be financing existing debt obligations, be it from the U.S. government or from outstanding home mortgage obligations from the state sponsored mortgage lending companies such as Fannie May and Freddy Mac. The Fed would -as opposed to fund borrowings- fund savings at 0% costs. It could do so on a temporary basis by converting part home equity into cash. It could make such funds available via the banking sector to individuals by having banks create households' Tessa accounts. Tessa stands for Temporary (equity) Spend and Save Again system.

[6] https://www.reuters.com/article/us-usa-housing-evictions-idUSKCN24U394

This could be done using the follow guidelines:

1. The request for such conversion might have to come from an owner-occupier in a home. It is a freedom of choice method.

2. Such request can also come from homeowners who rent out properties. However there need to be limits of such equity conversion. It is probably wise to limit such cash withdrawal to less than 30% of the net equity position in a home.

3. For homeowners-occupiers the request might not be approved if it lowers the equity level in a home to less than 10% of its value. Any value above 10% can potentially be considered, but the combined households collective requests have to fall in line with the government's assessed need for economic stimulus. Any home value assessment should be based on February 2020 data. Any later date would not reflect normal supply and demand levels as house prices might be "affected" by the occurrence of the coronavirus; a non economical influence.

4. Many young persons and low-income earners face the greatest hardship as a consequence of the coronavirus. Parents' help should be encouraged as the latter have had the longest time period to build up their home equity level. Zero tax on such transfers between generations would be an obvious method.

5. The person or family withdrawing the equity from their home will also be responsible for "re-saving" the amount withdrawn. A contract between the Fed and the individual household will stipulate such obligation.

6. To enable households to re-save in line with the economic situation, a grace period for such re-saving needs to be set. The Federal Reserve may also decide to make Q.E. funds available at 0% interest rate for the homeowner as the home equity conversion is done in the national macro-economic interest.

7. The re-saving needs to be based on a household's income level. It is suggested to set aside 28% of a household's annual net income for the purpose of re-saving.

8. If, like in many cases, the household still has a mortgage to service, it is suggested that the re-saving gets priority, so as to strengthen the equity base in the home again. It would imply that mortgage lenders (about 50% are funded by state sponsored enterprises anyway) could be temporarily paid the interest margin on the mortgage loan only. The principal amount of re-saving could be executed on basis of income levels.

9. Linking the re-saving level with the income level will imply that the re-saving will be done at a slower pace, when the economy is still in a recession period. Only when the U.S economy is booming again, will the speed of re-saving be accelerated until the full amount of home equity that was provided has been

replaced. At that moment the outstanding mortgage facility is reinstated to the agreed interest plus principal payment facility.

10. The U.S. government might need to decide about the eligibility of households to participate in the Tessa System. Should the maximum income level eligible for the Tessa system be set at the median income level of $65,000 or at twice this amount at $130,000? Should there be regional variations?

11.The U.S. government may also need to decide to what extent it wants the Tessa System to contribute to the U.S. economy; in other words how large a share of home equity is required to help improve the current situation. If enough money is converted into demand levels, the facility may be closed to newcomers until a new economic crisis occurs.

12. The Tessa system allows the U.S. government to turn the tap off when releasing home equity is no longer needed and turn the tap back on when it judges the economic circumstances require it to do so.

13. The Tessa account could be an account to be setup by the household's principal bank on the request of the homeowner. The costs of maintaining such accounts –over which the banking system does not run a credit risk only an operational one- could be at the costs of the Government as the scheme is in the macroeconomic national interest.

14.The Tessa account might be abused by some homeowners. Therefore if a homeowner does not fulfil its contractual obligations in "re-saving" the principal amount when due, he or she may be penalized by turning the facility into an ordinary mortgage with penalty interest rates.

15. In line with previous arrangements, the Government could give a guarantee to the Fed for potential losses made on the scheme for 10% of the outstanding amount.

4. Some conclusions

The key conclusion from the above is that a different economic adjustment method can be used to stimulate economic growth and employment levels. All U.S. households suffered huge home equity losses since 2007, but especially the lower income group of 50% of all these households. The latter group came off worst. Their home equity loss and the recovery back to the starting point of the cycle lasted 11 years.

This recovery period could have been much shorter for all households, but such method would have been especially beneficial for the lower income groups. To

continue to make home equity savings is difficult enough for these groups. To see their savings evaporate altogether is an economic systems failure. There was and is no need for such losses if Q.E. would have been directed in a different manner.

The combined U.S. financial institutions cannot undertake such task. They need to reward their own savers, who have put their surplus cash on deposit with them. Therefore any additional funds provided to households can only be in the form of a loan with interest added to it.

What households needed in 2007, especially the lower income groups, was a temporary access to their savings levels. Just because such savings were tied up in a home, they still represented actual savings made.

The only U.S. institution capable of delivering such temporary access to savings was and is the Federal Reserve. It can fund such savings at no cost to them and thereby no costs to the households. Recessions are periods when demand for goods and services decline and unemployment levels increase. In 2007 the decline set in and had this method been available then, the demand levels would have been stimulated by temporarily using existing savings levels.

It was not considered then, but also not yet now. However the benefits to the U.S. economy are clear. Increased consumption will lead to higher employment levels. Higher employment levels will lead to higher company profits and more investments. It will also lead to a higher tax income level and lower U.S. government deficits, without having to change the tax rates. Banks will see a reduced level of doubtful debtors. This system will also protect the accumulated savings made in the past in an economically more efficient manner.

Perhaps the time has come to consider such a system for the benefit of all.

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