A different economic growth strategy for the U.S.

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By

Kees De Koning

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**Introduction**

The corona virus pandemic has dramatically changed the economic outlook for the United States and many other countries.

In June this year, the Federal Reserve published its unemployment predictions. From a July 2020 level of 10.2%, it expects the year-end ratio to drop to 9.3%; by the end of 2022 to reach 5.5% and ultimately to return to the pre-corona crisis level of 4.1% at a later date.

The adjustment period during the previous financial crisis took from December 2006, when the U.S unemployment level reached a low of 4.4%, to April 2017 when it, for the first time since December 2006, reached a level of 4.4% again: more than 10 years of adjustments. In October 2009, it reached 10.0% as the highest level during the previous financial crisis. Households also lost $6 trillion in home equity between Q2 2006 and Q1 2012.

If the past can be any guidance for the future, the current unemployment projections may seem somewhat optimistic.

Higher unemployment levels go hand in hand with reduced incomes; dropping house prices as foreclosures and evictions become the standard practice to affect households.

Governments -the U.S. government included- have a tendency to (have to) spend more in recession periods when tax incomes drop and borrowings rise. The last year a surplus was recorded on the U.S. Federal government account was in 2000. Since then the cumulative deficit has grown into a debt to GDP level of 107% of GDP. The expected deficit for this fiscal year 2020 is $3.7 trillion. Any debt in excess of over 85% of GDP lowers future growth patterns.

U.S. Government debt levels are based on the premise of borrowing first and repaying later. No savings are set-aside in good years to spend in recession years. Therefore interest and principal repayments need to take place in later years, reducing the government’s disposable income for other purposes. Households mostly save first and spend at a later date. In 2019, U.S. households pension savings reached $32.3 trillion and home equity net worth in privately owned homes was $ 19.565 trillion. The U.S. nominal GDP in the same year was $21.43 trillion.

The key to turn an economy around in the fastest possible manner is to use household’s existing savings first, before resorting to borrowings: A Temporary (home) Equity Spend and Save Again system (Tessa) will be set out in this paper.
1. The U.S. programs already in place to fight the economic effects of the Corona Virus Pandemic.

The most recent GDP level for the U.S is $21.4 trillion for 2019, of which 70% was driven by personal consumption expenditure.

The U.S. Bureau of Economic Analysis (BEA) stated in its preliminary report¹ for the second quarter of 2020 that real GDP dropped by 32.9% after a drop of 5% in the first quarter. The New York Times commented² that the 9.5% decline in the second quarter –equivalent to the annualized decline of 32.9% - was caused by reduced consumer spending, pared business investments and a global trade level that all but dried up. This drop would have been even more severe were it not for the trillions of dollars in aid for households and businesses.

The OECD in its most recent Economic Outlook³ expects a GDP downturn for the U.S. in 2020 of -7.3% in case of a single outbreak of the corona virus and a -8.5% in case of a double outbreak.

The main support for households was a U.S. government sponsored temporary unemployment benefit of $600 per week. This benefit did end as per 31 July 2020. Discussions about its replacement are ongoing, but at the time of writing no decision has been made.

The Federal Reserve has actively increased its support to sectors outside the financial and government sectors. It has started up actions to support employers and communities.

The Fed is strengthening the effectiveness of the Small Business Administration’ Paycheck Protection Program (PPP) by supplying liquidity to participating financial institutions through term financing backed by PPP loans to small businesses. The PPP provides loans to small businesses so that they can keep their workers on the payroll.

The Paycheck Protection Program Liquidity Facility (PPPLF) will extend credit to eligible financial institutions that originate PPP loans, taking the loans as collateral at face value. This ensures that credit flows to small and mid-sized businesses continue. Up to $600 billion in loans through the Main Street Lending Program will be executed.

The Department of the Treasury, using funding from the Coronavirus Aid, Relief, and Economic Security Act (CARES Act) will provide $75 billion in equity to the PPP facility. This will increase the flow of credit to households and businesses.

¹ https://www.bea.gov/data/gdp/gross-domestic-product
³ https://read.oecd-ilibrary.org/economics/oecd-economic-outlook/volume-2020/issue-1_0d1d1e2e-en#page1
through capital markets, by expanding the size and scope of the Primary and Secondary Market Corporate Credit Facilities (PMCCF and SMCCF) as well as the Term Asset-Backed Securities Loan Facility (TALF). These three programs will now support up to $850 billion in credits; backed up by $85 billion in credit protection provided by the Treasury.

The Federal Reserve is also helping state and local governments to manage cash flow problems caused by the coronavirus pandemic by establishing a Municipal Liquidity Facility that will offer up to $500 billion in lending to states and municipalities. The Treasury will provide $35 billion of credit protection to the Federal Reserve for the Municipal Liquidity Facility using funds appropriated by the CARES Act.

1.1 Global and domestic threats

Even a country as big and important as the United States, it still operates in a global economy. The corona virus pandemic has affected practically all countries in the world and has and will have a major impact on the ways we live, go shopping with a shift to online shopping, the ways we work with a change from working in offices to working from home and the ways we travel for business and for pleasure. International trade will be affected as well, as countries will prioritize their own survival over trading with other nations.

Secondly the purchasing power of local populations will come down as unemployment and underemployment levels rise. This fact will, in its own right, reduce the level of international trade in goods and services. What may be expected if more and more households lose their jobs is that house prices will drop, evictions and repossessions will rise and generally consumption levels will grow at a slower pace, putting even more workers out of their jobs. Tax revenues will not grow as expected and the deficit is likely to increase, leading to more borrowings for the government.

These threats will lead to a greater hardship for most U.S. households. A substantial share of these households depended on the $600 a week in unemployment benefits.

2. The choice between using borrowings or savings to fight the 2020 recession.

So far, the U.S. government has, in line with many other western governments, kept on providing the funds for helping to overcome the shortfall for individual households, for companies and for States and Municipalities. In this support the Federal Reserve has played a key role. In a paper written for the Brookings Institution, David Wessel, explained the difference between Government debt

and a Government deficit. One observation was that: “At 17.9% of GDP in fiscal year 2020, the federal deficit is almost twice as large than the worst of the Great Recession in 2009.” Another one was that: “The Federal debt, measured against the size of the economy, is larger than at any time since the end of World War Two and is rising”. A third conclusion was that “the U.S. government spends as much on interest (payments) as the combined budgets of the Departments of Commerce, Education, Energy, Homeland Security, Housing and Urban Development, Interior, Justice and State”.

These facts do not imply immediate disaster for the U.S. government, the U.S. Dollar or for its citizens. However, the warning signals are becoming louder and louder.

Should one not starting to ask a different question?

Should the choice be between monetary policy, fiscal policy and/or a household’s savings or spending policy?

The opinion of former Atlanta Fed President Dennis Lockhart is -as reported by CNBC⁵-:

“US officials may need to ramp up fiscal stimulus to avoid a double dip recession, If authorities fail to control the virus and that results in further economic pain, a second downturn could be on the cards, Lockhart said.

However, the Federal Reserve has already cut interest rates to almost zero and indicated they will remain low for a while, and can't make "dramatic increases" to its asset purchases.

If there's going to be an effective effort to really ward off a worst-case scenario, particularly for portions of the American public that are most vulnerable, then it's going to come from the fiscal side.”

There are two points that can be made about the choices of monetary or fiscal policy.

The first one is related to monetary policy. When banks –thanks to the Fed’s actions- have surplus money available for lending at very low rates, the question is will they do so when the expectation is that many households, but also many companies will be unable to repay their loans? It does not depend on the interest rate applicable, but on the economic circumstances that make customer defaults very likely. The corona virus pandemic has changed expectations far removed from standard patterns of economic growth.

The second one is related to fiscal policy. The U.S. government debt has already reached 107.7% of GDP. As this and previous governments have not been able to create a fiscal surplus for the last twenty years –the latest surplus was in Q4 2000\(^6\) –the option that this could be done now with the economic uncertainty created by the corona virus is remote.

Hence the suggestion to evaluate another option: the option of involving households’ savings and spending patterns.

The question could be: Why, in a country where its citizens have collectively accumulated $32.3 trillion in pension savings and a further $19.656 trillion in home equity, not to mention further savings in bank deposits and individual holdings of shares and Treasuries, should the option of temporarily using some of such savings not being considered?

These savings in pension funds and home equity are equivalent to more than double the 2019 GDP -the exact number is 2.42 times the GDP of $21.43 trillion-.

Why should a government having to continue to borrow when households could use some of their savings to help the economy return to economic growth? What needs to be done to make such a system work?

\[2.1 \text{ Timing issues}\]

Any government in the world that wishes to expand its expenditure during recession periods usually borrows these funds from the financial markets. Such funds may partially originate from Quantitative Easing activities from their central bank. Governments generally do not hoard a lot of cash –savings made in previous years.

The U.S. is no exception to this method.

What this statement means is that the U.S. government, like many others, does not set money aside from tax receipts to be used at future dates when economic growth turns from a healthy growth pattern to a recession period. It also means that in future years such shortfall needs to be made up from increased tax receipts. The effect is that the private sector (households and companies) need to “save for the government”, rather than for themselves. Economic growth levels would be better served without such forced savings.

The exceptional occurrence of the Corona virus pandemic –a non-economic fact but with enormous economic implications through lock-downs- has brought “forced savings” to the fore more strongly than at any other previous recession.

The “costs” of such lack of savings by a government implies a slower recovery period than the one that would have occurred had a government “saved” in a

\(^6\) https://fred.stlouisfed.org/series/GFDEGDQ188S
previous period. One has only to look at the current costs of the U.S. government debts, where the expenses of eight major U.S. Government Departments are equal to the interest costs to be paid over the U.S. government debt. This did occur at a time that interest rates were and still are at their lowest levels for many years. However borrowings are not cost free! Higher taxes are usually the norm.

Politically and historically speaking, over the last 20 years, neither the Republicans nor the Democrats did levy taxes to be turned into government savings during strong growth periods. They all preferred to postpone the day of reckoning till after the money had been spent. The U.S. “balanced budget principle” means that the balancing act takes place in the years after a recession. “Government Save” after a recession implies that the recovery is weaker than it could have been due to tax receipts having to be used to pay interest due and some principal amounts.

Unemployment levels will continue to remain higher than otherwise would have been the case. One has only to study the recovery period after the last financial crisis to see how long it took to restore the employment level to the 2006 situation: more than 10 years! One should also be aware of the effects of higher unemployment levels on the housing market, whereby house prices dropped and repossessions and evictions took over with all the negative effects on many households.

The “spend first and save later” method may not be the best way to run an economy, but it is probably the only political option available.

However, there is another option. Individual households usually “save first to spend later”. The two major items of U.S. savings are in pension savings at $32.3 trillion⁷ and in net home equity levels of $19.656 trillion⁸.

U.S. households have -on basis of these two categories of savings alone- saved an astonishing $52 trillion, which equals nearly 2.5 times 2019 GDP.

This paper will investigate the why and how of using household’s own savings to create the demand levels that the U.S. economy so desperately needs.

3. The Why of using home equity savings

Home equity savings are savings built up over many years as stated in the net home equity levels reported by the Federal Reserve (statistic quoted in reference 8). In recession periods, unemployment levels go up and more households will find it difficult to meet their financial obligations. The level of foreclosures and

⁸https://fred.stlouisfed.org/series/OEHRENWBSHNO
reposessions goes up, putting pressure on home prices as was clearly shown during the previous financial crisis.

Three dates will be compared: Q3 2006, Q1 2012 and Q1 2020.

In Q3 2006, the net home equity levels were respectively $14.260 trillion and an outstanding mortgage debt level of $9.796 trillion\(^9\), reflecting an average home equity level of 59.3%. By Q1 2012 the net home equity level was $8.213 trillion and a mortgage debt level of $9.726 trillion reflecting an average home equity level of 45.89%. In Q1 2020 the net equity level had risen to $19.565 trillion and the mortgage debt level was $10.682 trillion reflecting an average home equity level of 64.7%.

The lesson that can be learnt from the Great Recession is that home equity levels and mortgage debt levels did not move in tandem. Over the period Q3 2006 to Q1 2012, the home equity level dropped by over $6 trillion, while the mortgage debt level remained practically the same at $9.7 trillion. One needs to realize that the loss in home equity of over $6 trillion has major implications on the level of household spending. It is also a loss that does not show up in one year, but gradually occurs over a number of years; in this case in over 5 years.

Such loss is not the result of unwillingness by households to save but their inability to collectively do so as unemployment levels increased. In June 2006 7 million persons were unemployed in the U.S. This number went up to 15.098 by December 2009 and it did reach 12.813 million by Q1 2012. Each unemployed person for any lengths of time loses his/her income base. Such loss often translates into an inability to serve long-term debts like home mortgages, especially for the median and lower income households. Their mortgage debts were mostly at a fixed rate, so lowering home mortgage rates did not help them either.

The applicable average interest rate for a 15 year fixed rate mortgage dropped from 6.41% on July 20, 2006 to 3.97% on March 17 2012 and to 2.97% on February 6 2020.

Why did the home equity level move out of tandem with the mortgage debt level?

The reasons are simple: lending banks have all the legal powers on their side to enforce a mortgage contract once a borrower falls behind with their payments. These powers show up in the number of foreclosure fillings in the years 2006-2013.\(^{10}\)

\(^9\) https://fred.stlouisfed.org/series/MORTGAGE15US
\(^{10}\) http://www.statisticbrain.com/home-foreclosure-statistics/
If 2006 is used as a base year and the 1,215,304 Foreclosure Filings in that year are equivalent to 100 then the following years rank as follows:

<table>
<thead>
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<th>Year</th>
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<tr>
<td>2006</td>
<td>100</td>
</tr>
<tr>
<td>2007</td>
<td>181.3</td>
</tr>
<tr>
<td>2008</td>
<td>248.5</td>
</tr>
<tr>
<td>2009</td>
<td>284.5</td>
</tr>
<tr>
<td>2010</td>
<td>316.3</td>
</tr>
<tr>
<td>2011</td>
<td>322.6</td>
</tr>
<tr>
<td>2012</td>
<td>189.9</td>
</tr>
<tr>
<td>2013</td>
<td>112.7</td>
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On top of these foreclosures filings, property owners who rent out flats or homes also have the legal right to evict their renters if the latter fail to pay their rent levels on time.

In a study made by the Federal Reserve in 2017, the evidence clearly pointed to the lowest quintile paying more than 50% of their incomes for rent. What was also indicated was that the severe burden of rents on low-income families did go up from 2006-2015 to more than 50% of incomes, while income levels dropped.

Turning to the current financial crisis, the level of current renter households who are unable to pay their rent equals 17.3 million out of a total of 44 million households or nearly 40% of renter households. These households have built up a debt of $21.5 billion in rent arrears according to Reuters. They are most likely to suffer the long-term impact of such debts.

What the above clearly shows is that a financial crisis does not stop when two quarters of economic growth have materialized. The owners’ equity level in homes dropped from a level of $14.260 trillion in Q3 2006 to a level of $8.213 trillion by Q1 2012—a loss of $6.05 trillion—and went back up again to the level $14.390 by Q2 2016; it took practically 10 years of adjustments to reach the 2006 starting point.

In many respects the current situation is more severe than the Great Recession period. There is no cure yet for Coronavirus; secondly the U.S. government has reached its highest levels of debt to GDP since the Second World War. Its low incomes families are faced with debt levels, they cannot hope to earn back in their lifetimes. Jobs have disappeared and new jobs will be scarcer.

The fortunate element is that the level of savings built up in homes currently stands at $19.656 trillion as per Q1 2020. Key is to get demand levels up and thereby creating rising employment levels. Key is also that such scheme does not

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require additional borrowings by the Government, as households own such equity in their homes already, reflecting savings from the past.

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 QE, 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.

In a previous paper by this author: "Savings: the least understood economic concept; the U.S. case\textsuperscript{13}, a number of conditions were formulated to turn such QE activities into reality.

They are:

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

\textsuperscript{13}https://mpra.ub.uni-muenchen.de/id/eprint/101878
2. Such request can also come from homeowners who rent out properties. However there need to be limits of such equity conversion to less than 50% 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 corona virus; a non economical influence.

4. Many young persons and low-income earners face the greatest hardship as a consequence of the corona virus. 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 QE 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 set up might be abused by some homeowners. Therefore if a homeowner does not fulfill 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

Fluctuations in unemployment levels are part and parcel of an economic system where independent entrepreneurs in the course of pursuing profits make the choices. The current corona virus pandemic –a non-economic fact but with enormous economic implications- has led to a staggering increase in unemployment levels. Without work, households of working age are facing a financial nightmare. Debts taken up in good times become unaffordable, especially for the lower and middle-income families.

The previous Great Recession showed the inefficiency in the adjustment pattern. A main effect was that households together lost $6 trillion of savings in their homes over the period Q3 2006 and Q1 2012. It took to Q2 2016 before households had “re-saved” the level of home equity back to the Q3 2006 level.

In 2012 there were 132.7 million homes in the U.S. of which households owned 63.8% or 84.650 million homes. The $6 trillion loss in home values represents an average loss on all 132.7 million homes or $45,215 per home. Proportionally the lower and middle incomes suffered the most, as their incomes and savings were the lowest to absorb any losses.

In 2012 the median household income was $51,017.
In a document released on the 27th of August 2020 by the Federal Open Market Committee of the Fed it states its Approval of Updates to its Statement of Longer Running Goals and Monetary Policy Strategy.\textsuperscript{14}

“The Fed wishes to facilitate a strong labor market particularly for many low-and moderate-income communities. It aims to have a robust job market without causing an outbreak of inflation. However when inflation had been below the 2pc target for a while, the Fed would allow it to climb over 2pc for a longer period to average out.”

Could the Tessa Method fall within the new objectives of the Federal Reserve?

It is a method that utilizes savings of a specific type: accumulated home equity.

The Tessa method increases consumer demand not on basis of borrowings, but on basis of a conversion of some home equity into cash. In doing so an increased level in demand will help to create the right circumstances for a higher level of employment. Implementing a Tessa system will fulfill a number of the objectives of both the Fed and of the U.S. government. The U.S. government on the advice of the Fed can decide about the desired level of the conversion of home equity into cash. Such economic stimulus will benefit the economy with a higher level of employment. It will also increase government tax income as companies and households will experience higher levels of income. Stock markets will reflect the higher earnings levels. Banks will benefit in that their doubtful debtor levels will reduce.

Perhaps there is an additional third way –the Tessa way- to manage an economy rather than solely relying on a fiscal or monetary policy.

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4\textsuperscript{th} September 2020

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References


OECD, Paris; Economic Outlook 2020 issue one; Outlook for the U.S.A. https://read.oecd-ilibrary.org/economics/oecd-economic-outlook/volume-2020/issue-1_0d1d1e2e-en#page1


Federal Reserve Bank of St. Louis; Federal Debt: Total Public Debt as percent of Gross Domestic Product; series; https://fred.stlouisfed.org/series/GFDEGDQ188S


Federal Reserve Bank of St. Louis; home equity levels; series; https://fred.stlouisfed.org/series/OEHRENWBSHO

Federal Reserve Bank of St. Louis; home mortgage levels; series; https://fred.stlouisfed.org/series/MORTGAGE15US

Statistic Brain Research Institute; Los Angeles and San Francisco; Number of Foreclosure filings U.S.A.; 2006-2013 http://www.statisticbrain.com/home-foreclosure-statistics/

Federal Reserve; Washington; Study 2017; Assessing the severity of rent burden on low income families; https://www.federalreserve.gov/econres/notes/feds-notes/assessing-the-severity-of-rent-burden-on-low-income-families-20171222.htm


De Koning, Kees; Savings: the least understood economic concept; the U.S. case; MPRA Paper 101878; 23 July 2020 https://mpra.ub.uni-muenchen.de/id/eprint/101878