Collective Household Economics: Why borrowers rather than banks should have been rescued!

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By

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Introduction

In a series of lectures Dr. Ben S. Bernanke[1], the former Chairman of the Federal Reserve, discussed the two main responsibilities of central banks-financial stability and economic stability. Financial stability is achieved by central banks standing ready to act as lenders of last resort by providing short-term liquidity to financial institutions, replacing lost funding. For economic stability, the principal tool is monetary policy; in normal times that involves adjusting short-term interest rates.

Dr. Bernanke admits that when the U.S. financial crisis occurred in 2007-2008, no government entity was in overall control of the measures that needed to be taken to counteract the crisis. This was seen as a managerial shortcoming.

There were various other factors at play, which made it difficult for governments to deal with and contain the crisis. The demand for new homes seemed to be out of touch with reality. The shift in borrowing patterns for new homes was taken for granted rather than being scrutinized. The freedom to introduce poor quality mortgage products was left unchallenged. The widespread conversion of long-term mortgage debt into daily liquidity products through securitization was also left to market forces. However what resulted in the financial crisis being unduly prolonged and at much greater expense was that, in sharp contrast to the focus on support for lenders, no serious consideration was given to help the legions of mortgage borrowers who found themselves in trouble.

Financial stability won over economic stability; put simply, there was no plan ready to be implemented to assist the 21.3 million households who were faced with foreclosure proceedings during the period 2006-2013. There was also no plan for the homeowners of the 5.8 million homes that were repossessed. Financial stability measures were not for the short term either. The balance sheet of the Federal Reserve as at 7th January 2016 still shows a holding of $1.747 trillion in mortgage-backed securities and $2.461 trillion in U.S. Treasury securities; several years after they were acquired. For the mortgage sector this still represents 18.5% of all outstanding mortgages as at same date.

In September 2007, a few members of Congress pushed for direct federal aid to help homeowners in trouble, but most members did not want to spend substantial taxpayers funds on the problem. With the benefit of hindsight, the latter view may be regarded as a serious error of judgment. As this paper will show, the total costs of helping homeowners in trouble would have been $1.173 trillion over the period 2007-2013, which is less than the $1.747 trillion in mortgage bonds still on the books of the Fed. More importantly the U.S. government debt increase would have much lower than the nearly $9 trillion over the period 2007-2014. The only choice on the table should not be between

[11] The Federal Reserve and the Financial Crisis, lectures by Ben S. Bernanke, Princeton University Press, ISBN 978-0-691-16557-8, Edition 2013.

economic growth or inflation, but between individual households' income stability or instability. Income instability is a major cause of recessions.

1 Demand and supply in the U.S. housing market

1.1 The demand for new housing units in the U.S.

In November 2007 three members –Eris S. Belsky, Rachel Bogardus Drew and Daniel McCue- of the Joint Center for Housing Studies of Harvard University wrote a paper© about the "Underlying Demand for New Housing Units[2] in the U.S. for the period 2007-2014". The writers specified three reasons for the demand level of new housing units: (i) The demand for additional units to accommodate the growth in the number of households; (ii) The demand for new units to replace existing units lost from the stock of houses for one reason or another, including fire, weather conditions, floods; and (iii) The demand for additional second homes and vacant units for rent or sale to accommodate the normal turnover of a large housing stock.

Under several assumptions, they concluded that the demand level for the period 2008-2014 would be a demand for 1.82 million new housing units annually. In this paper the figure of 1.8 million has been used. This number represents the level of housing starts that are needed to keep up with population growth, changes in household size and in the age composition of the population.

It is noteworthy that in the analysis of the demand for new housing units, the income level of individual households was not mentioned and neither was the applicable mortgage rate. The latter are economic variables that have a significant bearing on whether the target demand level is reached. The economic but also the social objective of policy makers should be to facilitate the pursuit of the 'American Dream' and help all those aiming to get on the housing ladder to do so with the result that the 1.8 million new homes are built annually. Enabling most of them to stay in their homes at times of economic stress should be the second aim.

The first fact is that when economic variables cause that the level of demand is not met, the desired demand level remains unchanged. A supply gap arises.

The second fact is that when supply does not satisfy demand levels, house prices have a tendency to increase faster than in previous periods. House price levels become an obstacle rather than an equalizer in bringing supply and demand together. Lower and median incomes do not keep pace with house price inflation levels. The need for new homes remains unchanged, but the price per new home

[2] http://www.jchs.harvard.edu/sites/jchs.harvard.edu/files/w07-7.pdf

deters more and more individual households. Rent levels usually follow house price levels.

The third fact is that under-supply of new homes coupled with rapidly rising house prices requires increased mortgage borrowing levels in order to get onto the housing ladder. Future income levels, especially of the lower and median income classes, will be reduced disproportionally compared to previous periods. Consumption levels of other goods and services will suffer.

The fourth fact is that base rate adjustments in relation to the housing markets are ineffective in that they focus on the supply side of funds, accelerating or slowing down mortgage lending rather than encouraging more new home starts. A supply gap cannot be overcome with the interest rate tool alone. One of the main causes behind house price rises is the lack of sufficient new housing starts. Fighting house price increases with the interest rate tool does not encourage more home starts; the effect is rather the opposite.

When such an important market as the housing market does not behave like an ordinary market in that demand levels encourage supply, conventional economic theories of how to adjust such market is also likely to fall short of the mark.

The aim of this paper is to set out what can be done to bring back a demand driven market, whereby lending booms do not lead to housing busts.

1.2 The demand for new housing units in the U.K.

In the U.K. the annual demand level is at least 260,000 new homes according to the Barker review. Since 1997 the U.K. never achieved this level. The closest it came to 260,000 was in 2006 when 219,000 homes were built.

The Barker Review of Housing Supply[3] published its final report on the 17th March 2004. The report was authored by economist Kate Barker and presented recommendations to the UK government for securing future housing needs. The findings of the report were:

- That the U.K. had a level of new homes being constructed of 140,00 annually.
- That the UK had experienced a long-term upward trend of 2.4% in real house prices over the past 30 years.

3 http://webarchive.nationalarchives.gov.uk/20130129110402/http://www.hm-treasury.gov.uk/d/barker_review_execsum_91.pdf

- In order to reduce this rate of increase to 1.8% an additional 70,000 houses in England are required.
- In order to reduce this rate to the EU average of 1.1% an additional 120,000 houses each year may be required.

The policy recommendations outlined in the report were:

- For government to set a goal for improved market affordability.
- Between £1.2 - £1.6 billion of additional funding per annum to meet predicted social housing needs.
- Implementation of a planning gain supplement to capture some of the benefits of development for the community.
- Establishment of a Regional Planning Executive to advise the Regional Planning Body on the scale and distribution of housing required meeting the market affordability target.
- Allocation of additional land in Local Development Frameworks, which could be released by market triggers.
- Establishment of a Community Infrastructure Fund to help to unlock some of the barriers to development.
- Limited term retention of council tax by local authorities for new housing developments to promote growth and cover transitional costs.

As a result of recommendations made in the Barker Review, the National Housing and Planning Advice Unit was formed.

1.3 Supply in the U.S housing market 1997-2015

The following table shows the annual new privately owned housing units started in the U.S. over the period 1997-2015.

Table 1. New housing starts in the U.S from 1997-to date.

Year	Annual Housing Starts x Thousand	Year	Annual Housing Starts x Thousand	Year	Annual Housing Starts x Thousand
1997	1,474.0	2004	1,955.8	2011	608.8
1998	1,616.9	2005	2,068.3	2012	780.6
1999	1,640.9	2006	1,800.9	2013	924.9
2000	1,568.7	2007	1,355.0	2014	1,003.3
2001	1,602.7	2008	905.5	2015	1,206.0*
2002	1,704.9	2009	554.0		
2003	1,847.7	2010	586.9		

*September 2015 figures on an annualized basis.

Only in 4 years during the 19-year period did the level of new housing starts reach the 1.8 million of new homes being built. The needed 1.8 million homes are not based on the usual market supply-demand considerations. A lower house price level does not necessarily lead to a higher demand level for new homes, but a higher price level will deter a number of potential buyers as lower and median incomes can no longer support those prices. The demand level for new homes is relatively fixed by the growth in population, the shift in family and age composition and the changes caused by different home quality requirements. The supply level can be influenced by home repossessions.

Three elements played a role in why the volume of new homes built was insufficient to satisfy demand levels. The first one is the scarcity factor. Scarcity in new home construction –the situation that the number of new homes built is below the demand level- leads to suppressed demand. Usually such a situation pushes up prices of existing homes faster than would have occurred if annual demand had been met. The scarcity factor also leads to construction companies considering whether postponing new home starts will be beneficial in financial terms. This is especially relevant when construction companies are simultaneously large landowners. The construction companies' profit motive may conflict with the desire to increase new construction levels.

By way of example, in the U.K. as at the end of 2015, the nine biggest house builders in Britain had 615,152 housing plots that have not been developed. This is four times the total number of homes built in 2014.[4]

Secondly, house prices are inextricably linked to incomes. In particular, if house prices rise faster than median incomes, newcomers to the housing market will have to allocate a higher and higher percentage of their incomes in order to be able to buy a home. Other types of goods and services consumption will suffer as a consequence. The breaking point comes when a larger and larger share of the new entrants no longer can afford such house acquisition and have to resort to renting.

The third element is the interest rate applied to a mortgage. The base rate sets the tone for banks to decide the level of mortgage interest rates charged. From 2004 the Fed applied a gradual base rate rise from a 1% in 2004 to 5.25% in 2006. Such a rise had a strong impact on the costs of borrowing for individual households. What the Fed and other regulators failed to do was to stop the banks lending excessively. They did not control the mortgage products on offer; they did not impose increased reserve requirements on mortgage lending levels and they did not stop the investment banks turning long-term mortgage risks into daily market liquidity risks. The latter was done through the mortgage-backed

[4] http://www.independent.co.uk/news/business/news/615000-new-homes-thats-what-uk-housebuilders-could-put-up-on-their-landbanks-a6791486.html

securitization process whereby low and high-risk mortgages were repackaged and sold off in high volumes throughout the global financial system. When some high-risk mortgages were no longer serviced, liquidity in the mortgage backed security markets disappeared and the long-term risk of mortgage loans was turned into an instant loss for investors.

In conclusion economic policies are needed, which focus on the level of new housing starts needed to meet demand, rather than actions that ultimately make mortgage loans more expensive thereby harming demand.

1.4 The funding side

Table 2 sets out the new borrowing levels used for new housing starts as well as for funding house price increases in the U.S during the period 1997-2015.

Table 2: Increase/decrease in outstanding mortgage levels in the U.S. over the period 1997-2015[5]

Year	Change in Outstanding Mortgage Levels X U.S. $billions		Change in Outstanding Mortgage Levels X U.S. $billions		Change in Outstanding Mortgage Levels X U.S. $billions
1997	180	2004	950	2011	- 220
1998	301	2005	1,053	2012	- 209
1999	377	2006	998	2013	- 83
2000	382	2007	701	2014	- 0.5
2001	509	2008	- 32	2015	62.5*
2002	706	2009	- 161		
2003	881	2010	- 504		

*Per 30th September 2015

Table 2 clearly shows the boom and bust of mortgage lending in the U.S. What it also shows is the long-term impact that an excessive home mortgage-lending period has had. Only by the end of the third quarter in 2015 does one see a very small increase in mortgage lending again. After eight years of adjustment since 2007, the modest level of mortgage growth of 1997 has not been reached yet. This shows a nearly 20-year cycle.

1.5 The importance of household real estate holdings

The U.S Balance Sheet of Households and Non-profit Organizations has shown the importance of the value of real estate compared to the total asset base of all

[5] http://www.federalreserve.gov/releases/Z1/current/data.htm

individual households. From the latest Balance Sheet of 30th September 2015, one can deduce that the collective of individual households own property to a value of $21.826 trillion in aggregate. This figure represents nearly 22% of all assets as per the end of September 2015. What is more important is how home acquisitions have been financed. From the same Balance Sheet one may observe that the outstanding level of mortgage loans was close to $9.5 trillion. Neither figure should however be viewed in isolation. It is encouraging that owners' equity in homes has increased to 56.7% as per the end of the third quarter 2015. This is very close to the 57.6% as per the last quarter of 1997 (the percentage having sunk to 37.0% at the end of the first quarter 2009).

The main asset category of individual households was represented by the financial assets classes, which consist of deposits, debt securities, corporate equities, mutual fund shares, pension entitlements and equity in non-corporate businesses. Financial assets of U.S. individual households stood at $66.925 trillion of all assets as of 30th September 2015.

2. Why did the housing market and then the economy collapse in 2007-2008?

The underlying cause of the financial crisis of 2007-2008 was that banks and other financial institutions in the U.S. and in other countries engaged in excessive mortgage-lending levels over the period 1997-2007. In 1997 the annual increase in mortgage-lending levels in the U.S. was $180 billion; by 2005 it had reached $1.053 trillion, nearly a six-fold increase. This trend continued unabated in 2006 and 2007. Banks and other mortgage originators were not stopped. Banks and other financial institutions also failed to monitor their risk profiles in an adequate manner. In his book: The Courage to Act[6] , Dr. Bernanke describes in

6 The Courage to Act by Ben S. Bernanke, W.W. Norton & Company, Inc. New York, 2015 ISBN 978-0-393-24721

detail what the main players within the Federal Reserve were thinking about the potential risks to the U.S. housing markets, but also how no government entity had overall control over all aspects of the housing market and its funding patterns.

The second cause was the introduction of the poor quality mortgage products gambling on house prices only going in one direction: upwards. The so-called subprime mortgage portfolios grew rapidly from 2004 and later. By 2008 their level had reached $1.3 trillion[7] out of a total outstanding mortgage portfolio of just over $10 trillion.

The third cause was a manifestation of the classical finance dilemma of funding short what are very much long-term obligations. The wanton securitization of mortgage portfolios turned long-term risks into daily tradable risks. When poor and good risks were mixed up, the result was when some of the higher risk assets turned sour, liquidity in the financial markets quickly dried up for these products.

It is in against this background that the Federal Reserve stepped in to restore financial and economic stability in the markets. Liquidity was provided to banks that had sound collateral to offer. For economic stability interest rates were lowered to the lowest rates on record.

Most banks were saved and some $4.2 trillion was used to buy both government securities and mortgage bonds. The actions taken by governments raise many questions. A fundamental one is whether the collective of mortgage borrowers should have been rescued rather than (or as well as) the banking sector? Should economic priority have been given to the collective of borrowers rather than to the lenders? Should economic stability measures have been extended to individual households?

2.1 Was an alternative solution possible?

There are strong reasons to believe that a primary focus on the borrowers rather than on the lenders would have avoided the worst of the economic downturn that followed the excessive lending pattern over the period 1997-2007.

The first reason is that each individual borrower has no control over the behavior of other borrowers. No individual determined or determines the collective mortgage lending levels; only the banks and other financial institutions do. However all borrowers and potential ones are affected if excessive lending levels take place.

[7] http://business.cch.com/images/banner/subprime.pdf

Secondly, the legal system works fully to the benefit of the banks. Once individuals enter into a debt obligation, that obligation must be met and the debt repaid according to the law. There is no need to change the laws, but economic sense should prevail and assist borrowers in their abilities to repay long-term loans.

The third reason is based on the "recovery mechanism" utilized. From 2006-2013 21.3 million U.S. households were confronted with foreclosure proceedings or nearly 45% of all mortgagors. Over the same period 5.8 million homes were repossessed; 1 out of every 8 households with a mortgage. Such "mechanism" drives house prices down, reduces income levels for allocation to other goods and services and reduces the incentive to borrow. Over the period 2007-2014 the collective of U.S. households reduced their net outstanding mortgage levels by more than 10% or $1.2 trillion. The priority in most household income allocation was switched to loan servicing. Such actions reduce consumption levels and thereby government tax revenues. Both factors conspired to slow down economic growth levels.

Finally, the $4.2 trillion injected into the U.S. economy by way of quantitative easing did not directly address the income position of borrowers. It did positively affect financial asset prices like shares and bonds, but this was of little benefit to those median and lower income households who constituted the bulk of the affected borrowers. The latter groups do not own many shares or bonds; hence they need to borrow for buying a home. In the U.S., the historically lowest interest rates did not lead to an increase in mortgage borrowings, rather the opposite.

3. The economic effects of over- and underfunding of the U.S. housing market

For individual households to use other people's money to acquire an asset is tantamount to fixing a claim on future earnings. Governments practice this all the time, not only to acquire assets, but also to fund current expenditure. All households, rich and poor, will ultimately have to foot this government's bill.

For individual households, some will need to fund their home acquisition by taking out a mortgage. The timing depends on age, income levels and (inherited) wealth. Households on a lower or median income will more often than not need a mortgage.

In previous papers by this author regarding Collective Household Economics[8], it was explained that the overfunding process should have been curtailed from as early as 2002. It was also explained that from 2004 onwards the credit risk parameters were loosened. From 2004, the share of sub-prime mortgages in the

[8] https://mpra.ub.uni-muenchen.de/66851/1/MPRA_paper_66851.pdf

overall mortgage portfolio was substantially increased within a rising portfolio. Moreover, the use of mortgage-backed securities increased dramatically, combining low and high-risk mortgages. When some of the high-risk mortgages started to default, liquidity in the mortgage-backed securities markets disappeared, as happened in 2007 and the financial crisis started to unfold.

What tables 1 and 2 clearly show is that by 2009 new housing construction dropped to about one third of the level of 2006 and that households started the reduce their collective outstanding mortgage levels.

Combine this with a very rapid increase in unemployment levels in 2008-2009 and the huge pressure on mortgage borrowers to repay their loans: nearly 45% of mortgagors were confronted with foreclosure proceedings during the period 2006-2013 and 5.8 million homes were repossessed. Disposable incomes available for the consumption of other goods and services, after loan servicing, dropped substantially. The Collective of Individual Households was confronted with an income crisis. As a consequence of this development, U.S. government tax revenues dropped substantially from the level of $2.57 trillion in FY 2007 to $2.10 trillion in FY 2009. Only by 2013 did the nominal level of tax revenues exceed the level of 2007. At the same time government expenditure increased substantially, leading to huge increases in outstanding government debt. U.S. government debt levels nearly doubled from $9 trillion in 2007 to $17.8 trillion by the end of 2014.

4. The case for supporting the Collective of Individual Households

Economic policy makers always have choices. In the lead up to 2007, the choice could have made to slow down the mortgage lending activities of the banking sector. The U.S. government did not go for this option. Instead, the Federal Reserve took the decision in 2004-2006 to make borrowings more expensive. The base rate was gradually increased from 1% in 2004 to 5.25% in 2006. This option focused wholly on the costs of funds, which means costs that are allocated to the borrowers: among others, the individual households. The Fed and others did not restrict the lenders in their lending practices. There was no quality control over the mortgage products on offer; there was no effort made to restrict the volume of lending through bank reserve requirements and there was no guiding philosophy other than the one propagated by the investment banking community that turning long-term mortgage risks into daily liquidity risks was a sound “free market” principle.

When the crisis occurred, the institutional framework was put in place to save some banks, AIG, and some major companies. What was also put in place was: quantitative easing. This was the Fed’s program that injected $4.2 trillion in the purchase of U.S. government bonds and mortgage-backed securities.

What if the choice had been made to help the 21.3 million households who faced foreclosure proceedings and the 5.8 million households whose homes were repossessed?

4.1 Quantifying the potential costs of support for individual households

In 2007 the 47.5 million U.S. households who had a mortgage, had borrowed $10.613 trillion in total; on average an outstanding mortgage amount of $223,431 per household. Over the period 2006-2013 21.3 million households got into financial difficulties as foreclosure proceedings were started against them.

Table 3 U.S. Foreclosure statistics 2006-2014[9]

Year	Foreclosure Filings	Completed Foreclosures	Home Repossessions
2014	1,117,426	575,378	327,069
2013	1,369,405	921,064	463,108
2012	2,300,000	2,100,000	700,000
2011	3,920,418	3,580,000	1,147,000
2010	3,843,548	3,500,000	1,125,000
2009	3,457,643	2,920,000	945,000
2008	3,019,482	2,350,000	679,000
2007	2,203,295	1,260,000	489,000
2006	1,215,304	545,000	268,532

Over the period 2006-2013 the 21.3 million households would have accounted for approximately $4.76 trillion out of the total of outstanding mortgage level of $10.613 trillion. This assumption is based on the understanding that the 21.3 million households would have been equally distributed over the higher and lower income classes. What likely happened is that the lower income classes

[9]http://www.statisticbrain.com/home-foreclosure-statistics/

would have experienced the highest level of foreclosure proceedings, especially in view of the sub-prime mortgage push from 2004 onwards, but that at the same time the amounts per household for the lower income classes would have been lower than the average.

Assuming the remaining maturity of this portfolio was 20 years (which is probably on the short side as nearly 40% of the increase in total mortgage levels was incurred between 1998 and 2007), on an equal repayment basis the annual repayment obligations for the 21.3 million households would have been 5% of $4.76 trillion that equals $238 billion. Add to the repayment, the 2007 interest rate of 6.2% for a 30-year mortgage and this amounts to $295 billion per annum. The total debt servicing for the 21.3 million households would have added up to $533 billion per annum.

One may argue that the low to median income groups, with a median income of nominal $50,233 in 2007 according to the U.S Census Bureau, would not have had an average mortgage debt level of $233,431, but a much lower level than this. However the economic hardship as a consequence of the foreclosure proceedings would likely have been more concentrated on the lower income-earning households.

If all 21.3 million households would have needed help to meet the mortgage debt servicing and that such help would have represented 50% of the annual servicing costs, then the annual bill would have been about $270 billion each year from 2006-2013. Table 3 indicates that not all of the 21.3 million households did need support from day one in 2006. If the calculation had been made on basis of the actual annual number of foreclosure proceedings per annum, the total bill would have been $1.173 trillion spread out over the years 2006-2013.

It is debatable whether selecting the 21.3 million households out of all households having a mortgage represents a fair selection criterion. The reason why banks have to initiate foreclosure proceedings often represents an underlying failure on the part of the banks to conduct their customer due diligence to an appropriate standard. They should have ensured that household incomes could, all other things being equal, afford to repay their outstanding mortgage obligations.

4.2 The economic consequences of such help for households

If the political choice to help households rather than banks had been announced in early 2008, the positive economic consequences would have been numerous. Only Congress could have made such choice, as it would have had to accept financial risks on households and on their home values.

The first positive effect would have been that the number of credit defaults on home mortgages would have been very low indeed. This would have had materially positive consequences for the mortgage-backed securities market, as the much-reduced number of defaults would likely not have led to a liquidity crisis for such securities.

Secondly U.S. banks plus Fannie Mae and Freddy Mac, collectively holding the lion share of the total U.S. mortgage portfolio would also have experienced a greatly reduced level of doubtful debtors. Both the liquidity and the solvency risks for these institutions would have been drastically lowered. The number of banking institutions under threat would have been greatly reduced. The rescue of Fannie Mae and Freddy Mac would not have been necessary.

Thirdly the increased ability by mortgage holders to repay their outstanding mortgage debt in an orderly fashion would have helped these households to maintain most of their consumption levels on other goods and services. The economic benefits for the manufacturing and services sectors would be substantial, as the reduction in consumer demand would have been minimalized. The U.S. government in its tax revenues would have greatly benefitted from the improved level of economic activities. With the same token government expenditure levels would have shown a slower growth path. The need for government borrowings would have been drastically cut.

Fourthly house prices would have held up better, as the threat of 5.8 million home repossessions and forced sales of homes would have been greatly diminished.

Fifthly there would have been a much more limited need for quantitative easing rather than the $4.2 trillion still outstanding.

Last but not least, the number of job losses would have been less, as economic activity levels would have been maintained at a higher level.

4.3 The moral hazard question

If banks knew in advance that arrangements would be in place which would rescue them from the consequences of excessive risk taking, they might be tempted to take on even more risks: moral hazard. As was the case, nearly all large banks had gambled on a government bailout, as they were perceived to be “too big to fail”. The economic consequences of a major bank failure were regarded as unacceptable as many more households and other banks would have seen their assets become worthless.

If individual mortgage borrowers would know that in case times turn tough, they would be helped, they might also be tempted to borrow more than they could afford, or claim more quickly in stating that they could not afford the debt servicing.

Executing a borrowers' support program should therefore be accompanied by rules that impact both the banking sector and the Collective of Individual Households.

On the banking side the rescue of mortgage borrowers should be predicated on there being an environment of excessive lending. Banks make excessive profits during such a period until the levels of doubtful debtors go up. If a government decides to implement a borrowers' rescue program, banks will stand to generate even more profits, thanks to the improved risk environment. Therefore it is logical that banks are taxed in line with such excess profits, both during the excessive levels of lending as well as during the borrowers rescue program. In a way, the heavy fines regulators have imposed on a number of banks already demonstrate this logic albeit applied in a retrospective fashion.

On the mortgage borrowers side, the fact that they need to be helped should not be a scot-free process. What the government could legislate for is the creation of a "sub-ordinate" type of mortgage. The amount granted to a household would be covered by a subordinate claim on the asset: the home.

4.3.1 The "subordinate" mortgage

The key objective for a program to help borrowers is to ensure that mortgage borrowers can service their outstanding mortgage obligations in a manner that does not curtail their spending levels on other goods and services too severely.

The program may last a number of years, but is certainly for a limited period of time.

From the moment the government declares that its support program will start to the moment that it declares that there is no need for further support, individual households who face foreclosure proceedings could be supported by getting a temporary interest free loan from the government. The loan could be channeled through the Fed in a process of direct rather than indirect quantitative easing. The loan could be administered by state sponsored enterprises, like Freddy Mac and Fannie Mae, for instance.

As long as the program is effective, individual households may receive loan support payments on an annual, quarterly or monthly basis. The size of the payments may vary according to the income category of the individual households. For instance the lowest income groups may receive 60% of their monthly mortgage debt servicing. Higher income groups may receive a lower percentage.

As collateral for the government, a "subordinated" claim on the property could be established. Such subordination is subordinate to the existing lender's claim. As the program is meant to stimulate the economy, the borrower will not need to pay any interest or principal amount over the funds provided by the government for as long as the rescue operation is effective. Banks and other financial companies involved in mortgage products should pay the government for taking over some of the risks: a risk premium.

Once the rescue operation is declared closed, payments to the households stop. For the subsequent periods it is suggested that households are not obliged or only to a limited extent to repay principal amounts. Voluntary repayments should always be welcomed. It is also suggested that interest payments will become due at a rate equal to the 10-year funding rate for government debt plus a small administration fee. The ultimate repayment of principal may take place upon the passing away of the owner(s) or earlier if this is the owner's wish. Transfer of mortgage debt from one property to another should be made possible. However any subsequent increase in mortgage amount should have a lower ranking than the government provided loan.

The risks of this program to government finances are relatively small. Against the payout of the $1.173 trillion over a number of years are the benefits in macro-economic terms of higher consumption and production levels as well as higher employment levels. All these elements will most likely contribute more in tax revenues than the cost of the program. On top of this it is a loan program and not a gift to individual households.

4.3.2 Possible moral hazards.

Once the rescue operation is declared to have started, it might be foreseen that some borrowers may be unduly quick to turn to the government for support.

The adoption of a few constraining factors should be considered. The first one is that the rescue program should not provide more than a fixed percentage of the monthly obligations. The percentage may differ from income class to income class, but it should not eliminate the responsibility of the borrowers to share in the monthly mortgage debt servicing.

Secondly, in the event of excessive applications, an administrative brake may be used, so as to slow the number of loans being granted (which is the type of action which should have been applied to mortgage lending practices especially from 2002-2007).

5. Some conclusions

- The 2007-2008 crisis and its aftermath have shown that the Fed did what it could, which is providing the economy with enough liquidity. What the Fed cannot do is to restore solvency, not to banks, not to companies and not to individual households. The housing crisis led to a solvency problem for at least 45% of all mortgagors over the period 2007-2014. It was up to members of Congress to consider formulating a temporary solvency plan for these households. Under the current economic pressures drafting such plan for future use might well be opportune. The lessons from the past crisis show that such program makes economic sense.

- The introduction of a plan to help individual households to meet their home mortgage obligations in times of stress has many advantages over the methods currently in use.

- The main advantage is that it helps an economy to recover faster and in a more efficient manner than providing short-term liquidity to banks, raising or lowering of base rates and printing money in order to buy up government treasuries and mortgage bonds.

- For instance, in the case of the U.S., it would have avoided most of the $9 trillion increase in the government debt level over the period 2007-2014. Government debt is a debt to be repaid by all individual households in future years. Helping mortgage debt holders in times of stress reduces government debt accumulation levels for all households.

- Helping mortgage debt holders at times of stress also reduces risks to the banking sector, including Fannie Mae and Freddy Mac. For this reduction in risks banks should be asked to pay a premium to the government in compensation for such transfer of risks.

- Helping mortgage debt holders to overcome short-term cash flow problems helps them to stay in their properties, with all the advantages of avoiding high levels of home repossessions and forced home sales. House prices levels will be less affected.

- Helping mortgage debt holders with their cash flow problems will also allow consumption levels of other goods and services to be less affected. It will help to avoid big spikes in unemployment levels.

- Last but not least helping mortgage debt holders in times of stress also reduces the gap between rich and poor, as the lower income classes are more vulnerable and less capable than the richer classes to overcome short-term cash flow problems.

References:

- Ben S. Bernanke, The Federal Reserve and the Financial Crisis, Edition© 2013 Princeton University Press, ISBN 978-0-691-16557-8;

- Eric S. Belsky, Rachel Bogardus Drew, Daniel McCue of the Joint Center for Housing Studies, Harvard University; Projecting the underlying demand for new housing units, Inferences from the past and assumptions about the future; November 2007

- Kate Barker: The Barker Review of Housing Supply [in the U.K.], H.M. Treasury, Government of the U.K., March 2004;

- Independent Newspaper U.K. article: New homes what U.K. house builders could put up on their land banks, 31st December 2015

- U.S. Balance Sheet of Households and Non-profit Organizations, Federal Reserve Bank of St. Louis, various dates;

- Ben S. Bernanke: The Courage to Act published by W.W. Norton & Company, New York 2015, ISBN 978-0393-24721;

- Katelina M. Bianco, The Subprime Lending Crisis, Causes and Effects of the mortgage meltdown ©2008 CCH, Speech before the New York Association of Business Economics;

- Kees De Koning, 2015, Collective Household Economics and the need for funds approach, the 2007-2008 financial crisis and its effects, MPRA Paper 66851, University Library Munich, Germany;

- U.S. Foreclosure Statistics, 2006-2014, Statistic Brain Research Institute, U.S.A.