Why it makes economic sense to help the have-nots in times of a financial crisis

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Shutting the stable door: the case for a borrower-led economic policy

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Introduction

August 9, 2007 is widely regarded as the starting date of the global financial crisis. BNP Paribas stopped trading in three of its investment funds exposed to the U.S. sub-prime mortgage markets as the liquidity in these markets had all but dried up.

Liquidity is a relevant factor for the supply side of funds: the lenders' side. This group is comprised of banks, hedge funds, asset managers, pension funds and also affluent private investors.

The financial crisis of 2007-2008 was a lenders' crisis. Generally, banks had insufficient capital to absorb the losses created by the reduced liquidity levels in the financial markets. Central banks had to step in to rescue quite a few of them.

The fact is, however, that underlying the financial crisis of 2007-2008 was the far less publicized one experienced by borrowers. In the U.S., over the years 1997-2007, households had to borrow an ever-growing percentage of their earnings in order to get themselves on the property ladder or rent a home. Long before 2007, in fact by 2003, the additional amount that a household had to borrow on average to get a home was equal to a full year of earnings. At best sluggish average income growth was met with rampant mortgage volume growth. This imperiled borrowers who were forced to allocate increasing percentages of their earnings to servicing mortgage debts or renting a home.

The notion that lenders will rein in their lending as a consequence of free market competition is a fallacy. The key factor is not the price of funds borrowed, but the volume of funds lent per time period in comparison to average household' nominal income growth.

The consequences of a borrowers' crisis are different from a financial markets' liquidity one. When households have to allocate an increasing share of their income to either buy or rent a home, fewer funds are available to spend on other goods and services. When households are subsequently confronted with foreclosure and ultimately repossession of homes, they lose most or all-past savings accumulated in the home. The poor get poorer, both in income and asset values terms. The gap between the haves and the have-nots widens dramatically.

While volume of lending control and to some extent rent controls can prevent a new financial crisis occurring, more measures are needed to overcome a borrowers' crisis; to shut the stable door before the horse has bolted.

1. The income-house price gap in the U.S. over the period 1996-2016

A borrowers' crisis does not develop overnight, but may take a number of years before the storm signals are raised. Over the period 1996-2007, such storm signals were ignored. As table 1, below, indicates: in 2003 the median nominal household income in the U.S. could afford a house price of $203,089. Such affordability level indicates that income available for other goods and services grows equally with the increase in such household income: there is therefore no forced shift in the spending pattern. In 2003, the actual average home sales price in the U.S was $246,300. On average each household entering the home market would need to borrow an additional $43,211 to acquire a home. Such amount was equal to a year's average income in 2003. What should also be considered is that median income households cannot spend 100% of their income on debt servicing. They usually spend around 40% on housing costs. If so, the $43,211 should be seen in this context. It translates in 2.5 times the $43,211 or $108,000 in future debt commitments.

How new home buyers were affected, differed from year to year. The lucky buyers were the ones who had the opportunity to buy a home in 1997 and 1998. From 1999 on, the gap between the average home sales price and the affordability price, based on nominal average income levels, started to deviate. The money allocated to mortgage lending over the period 1999-2003 doubled from $524 billion in 1999 to $1.112 trillion by 2003. Such increased lending levels had a somewhat positive effect on the volume of new housing starts, especially for 2003; however most of the increased lending influenced the average home sales price over the period 1999-2003.

This excess in funding resulted in a situation that by 1999, the average home sales price in the U.S. was 2.5% over the income based affordability home price. By 2000 the percentage had increased to 5.15%, in 2001 to 7.22%, a further increase followed in 2002 to 15.02% and the percentage reached 21.27% by 2003. As no action was taken to stem this rapid increase in the volume of lending, actual home prices moved up faster than the income affordability ones; by 2007 this affordability gap had grown to 33.1%. This meant that by 2007, on average, an extra amount had to be borrowed of over 1.5 times the median household nominal annual income for each new homeowner. It also meant that average rental prices went up, so that a large number of households were forced to allocate a disproportionate level of their income to either buying or renting a place.

The income-house price gap does not develop overnight. It also does not affect all borrowers in the same way. Early borrowers, those who entered into a mortgage commitment in 1996-1997, were much better off than those who entered between 2003-2007. Households, who owned their homes outright, were even less affected in their spending power out of current incomes.

The real threat to the U.S. economy originated from the gradual shift in disposable income levels for individual households, after the impact of increasing costs of mortgages were taken into account relative to incomes earned. This threat is based on the limits in the earning capacity of each individual household. No household can force an employer to pay more for their services. As incomes experience limits set by the labor markets, expenses for mortgage or renting purposes will also need to fall in line with such income growth, otherwise real consumption levels will drop and more and more borrowers will experience debt servicing problems. Ultimately economic growth will slow down or –in the worst case scenario like in 2008- will collapse.

Table 1, below, illustrates the cliff edge results of the mortgage-lending boom over the period 1996-2008, with the cliff being passed in 2008. Nominal mortgage lending levels in 2016 were still below the 2001 levels. New housing starts in 2016 were still below the 1996 levels, some 20 years earlier. Unemployment rates doubled from 5% to 10% over the 18 months from early 2008. It took to April 2016 to get back to the 5% level again. Equally bad was the impact the crisis had on real household median incomes. According to Sentier Research, the real median household income in the U.S. reached $59,190 in January 2008. After a substantial drop in the years to 2017, it now stands at $59,345 as in May 2017. For nine years there has been no growth in real incomes.

Perhaps the time has come to consider how a borrowers' crisis can be identified and defused, rather than focusing on the antecedent rescue of the banking sector and the implementation of myriad lender-led policies.

Table 1: The developments of volume of mortgage lending, annual housing starts, average U.S. home sales price, nominal median income of households and U.S. home sale prices based on such incomes

Year	1 Volume of Home mortgage Lending X U.S.$ billion	2 Annual Housing starts X thousands	3 Average U.S. Home sales price X U.S. dollars	4 Median Household Nominal Income X U.S. dollars	5 Income Affordability House price X U.S. dollars
1996	329	1370	166,400	35,492	
1997	341	1566	176,200	37,005	173,494
1998	437	1792	181,900	38,885	182,308
1999	524	1708	195,600	40,696	190,798
2000	544	1532	207,000	41,990	196,864
2001	685	1568	213,200	42,228	197,980
2002	907	1788	228,700	42,409	198,828
2003	1112	2057	246,300	43,318	203,089
2004	1211	2042	274,500	44,334	207,852
2005	1351	1994	297,000	46,326	217,233
2006	1327	1649	305,900	48,201	226,025
2007	1057	1037	313,600	50,233	235,553
2008	319	560	292,600	50,303	235,881
2009	186	581	270,900	49,777	233,414
2010	-167	539	272,900	49,276	231,065
2011	104	694	263,400	50,054	234,713
2012	105	976	285,400	51,017	239,229
2013	223	1010	319,300	53,585	251,271
2014	312	1081	312,500	53,657	251,609
2015	407	1160	352,500	55,775	261,541
2016	596	1226	384,000		

2. The implications of an income-house price gap

The fact that, by 2007 as compared to 1997, a household had to borrow an extra amount of 1.5 years average nominal income, just to afford to buy a home, implies that an income gap was created between the 1997 buyers and the 2007 ones. The 2007 buyers, and also the buyers from 1999 to 2007, were the victims of the unfettered increase in mortgage lending. Each of these latter buyers was made worse off than the 1997 buyers and those before them. They, the 1999-2007 buyers, had to take on a mortgage amount that represented a considerably higher percentage of their nominal income than the 1997 and previous generations. The nominal income amount can only be spent once and if more funds need to be allocated to a relatively higher mortgage amount or higher rents, the result will be that less is available for spending on other goods and services. Such a shift in allocation represents not only a loss in drivers of economic growth, but equally a shift from the poorer to the richer classes. The poor become poorer and the rich relatively richer, simply as a result of excess lending.

There is no doubt that if the stable door is left open and a borrowers' crisis left to unfold, the horse will bolt in the shape of a lenders' crisis. If a sufficient number of households cannot afford to repay the loans that have been granted to them, the lenders will have to absorb the losses. Such lenders could be holders of mortgage-backed securities, banks, pension funds, insurance companies, hedge funds and investors in mutual funds or wealthy individual investors.

It is clear from the statistics of foreclosures and repossessions in the U.S. that all these fund providers will do everything in their legal powers to force borrowers to pay up the maximum they can or, in case they cannot, take over their property through repossession procedures.

What is also clear is that there can be different solutions to solve a borrowers' crisis, especially one that is caused by the lenders collectively, rather than wait for the lenders to take legal actions that multiply the effects of such excessive lending.

3. The lenders' crisis "solutions"

The 2008 financial crisis in the U.S. laid bare a number of weaknesses in the structure and organization of the financial system.

U.S. banking supervision was spread over several agencies preventing a coordinated approach to action taking.

Big banks and insurance companies regarded themselves as "too big to fail" and expected government cash injections in case doubtful debtors exceeded their capital levels. Their mix of commercial and investment banking activities -the latter including own risk positions taking, which was regarded by many as authorized gambling- did create losses not only on ordinary loans, but also on many synthetic products barely understood by outsiders.

The big U.S. investment banks had taken advantage of the fast increase in the volume of mortgage lending over the period 2001-2007. Especially from 2004 these brokerage houses created synthetic products that could be sold to investors around the world. Many included sub-prime mortgage loans. The big brokerage houses took on enormous debts; so much so that their debt to capital ratios had deteriorated to 32 to 1 by 2007[1]. A failure by any one of these brokers could lead to a liquidity crisis, which it did by August 2008.

Credit rating agencies clearly failed in their duties to protect investors from excessive risk taking, as many investment products had an AA or triple A level ratings attached to them, which turned out to be erroneous.

[1]https://www.penguin.co.uk/books/133337/too-big-to-fail/

The Federal Reserve in coordination with the U.S. Treasury took a number of steps to countenance the impending financial crisis.

In November 2008, Quantitative Easing –the action of buying up of U.S. Treasury bonds and Mortgage Backed Securities- started. In total $4.2 trillion of bonds were bought up over a period of three years, split over $2.8 trillion Treasury bonds and $1.4 trillion mortgage backed bonds. At the date of writing this paper -October 2017-, the $4.2 trillion were still on the books of the Fed.

The second step was a lowering of the effective Funds rate by the Fed. Over the year 2008 the rate was lowered from 3.94% in January 2008 to 0.15% in January 2009.

The third step was to create stronger legislation to address some of the weaknesses in managing the financial system. The Dodd-Frank Act was enacted in July 2010. Banks were forced to improve their debt to equity ratios.

In 2008 in the U.S., but also in other countries including the U.K., the financial authorities gave maximum attention to stabilizing the financial sector, especially focusing on the banking sector and some insurance companies.

The pre-crisis interest rate policies.

U.S. financial authorities maintained that a volume of lending excess could be rectified by an interest rate correction. Table 2 reflects the effective Fed funds rate over the period January 1996-January 2009[2].

Table 2: Effective Fed funds rate January 1996- January 2009

Date	Effective Fed funds rate %	Date	Effective Fed funds rate %
January 1996	5.56	January 2003	1.24
January 1997	5.25	January 2004	1.00
January 1998	5.56	January 2005	2.28
January 1999	4.63	January 2006	4.29
January 2000	5.45	January 2007	5.25
January 2001	5.98	January 2008	3.94
January 2002	1.73	January 2009	0.15

[2] https://fred.stlouisfed.org/series/FEDFUNDS

The conclusion to be drawn from table 1 and table 2 combined is that the lowering of the base rate from 5.98% by January 2001 to 1.73% by January 2002 certainly achieved the effect of increasing the volume of mortgage lending from $685 billion in 2001 to $907 billion in 2002 and $1.112 trillion in 2003. However, what was not fully appreciated at the time was that lowering the interest rate had a substantial price effect on house prices. As table 1 indicates, it encouraged average home sales prices to increase faster than the income affordability house prices. This trend, which started in 1999 and continued slowly through 2000 and 2001, accelerated strongly in 2002 and 2003.

In 2002 and 2003, the act to stimulate economic growth by lowering interest rates simultaneously undermined the capacity of new home owners and rent paying households to maintain their spending levels out of current incomes. This negative effect on household income levels was an immediate result of the volume of mortgage lending exceeding the capacity of households to increase their nominal incomes.

Neither in 2003, nor in later years to 2008, was a policy introduced to restrain lenders by reducing the growth in home mortgage volumes to within the limits of the nominal income growth levels of U.S. households. By 2007-2008, many U.S households were confronted with a liquidity crisis as a result of their mortgage borrowings. This was not a result of their own making, but a direct consequence of the volume of mortgage lending that far exceeded the growth in median nominal household incomes. Excessive lending volumes in themselves had a destructive effect on economic growth levels.

Some observations about the solutions to the lenders' crisis.

Pre-crisis, the price of money was substantially lowered from 5.98% in January 2001 to 1.73% by January 2002. This price lowering had a strong effect on the volume of mortgage funds supplied to individual households. The latter expanded by 34.5% in a single year in 2002 over 2001. In 2003, the growth rate was even higher at 62.3% over 2001 levels and for 2004-2007 such expansion was even higher as compared to 2001. Between 2001 and 2007 the U.S. nominal median income levels grew by 18.95%. Over the period 2001-2007, the volume of new mortgage funds supplied to U.S. households overwhelmed, by a very large margin, the income growth figures.

To illustrate this diverging gap with some different figures: in 2001, the actual house price was $15,220 higher than the affordable house price for a median income household. The $15,220 represented 36% of the annual median income in 2001. By 2007 the actual house price was $78,042 higher than the income affordable one. This represented 155% of the nominal median income level in 2007. By 2007, the average mortgage borrower had to take out an extra

mortgage volume equal to more than 1.5 times his median annual nominal income compared to home mortgage borrowers in 1997. Such extra debt load for homeowners (or renters) meant that the house price inflation levels –supported by low interest rates- weakened the financial position of each and every household at or below the median income over the period 2001-2007. More debt taken on than was either necessary by historical standards or manageable only served to make the poor poorer.

No preventive action was taken to slow down the volume of mortgage lending over the period 2001-2007.

4. Some ideas about how to solve a borrowers' crisis

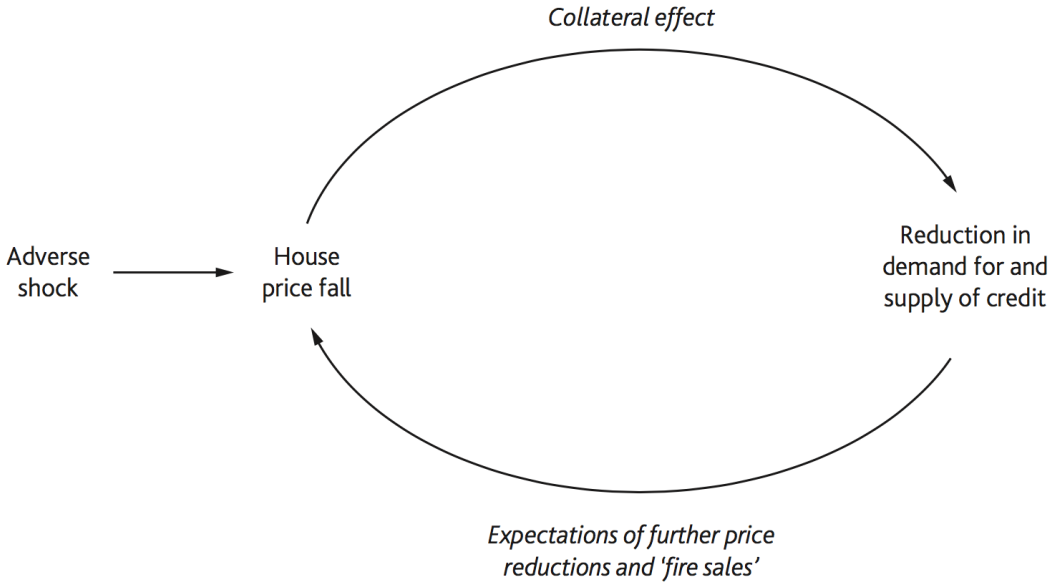
Is it not a troubling irony that the two major solutions to the lenders' crisis: Quantitative easing and a further lowering of interest rates added insult to injury for the median nominal income households fortunate enough to remain in a job after 2008. In 2008, this income level was $50,303 and only by 2012 did it exceed the 2008 level to $51,017.

With the lowest interest rate on record at 0.15 %, U.S. households collectively reduced their outstanding mortgage lending level by well over 10% over the period 2008-2015 or in actual amounts by $1.24 trillion from the high of $10.712 trillion over the period Quarter 1 2008 to $9.471 trillion over Quarter 2 2015.

U.S. households that fell into payment arrears were pursued through the legal system. It is important to mention that a legal system can replace economically sensible measures. This was made clear in the latest financial stability report of the Bank of England. The Bank of England in its latest 2017 Financial Stability Report[3] has developed a diagram of a "self-reinforcing feed back loop". It shows the potential relationship between an adverse house price fall, its collateral effect, the reaction of the banking community in reducing the supply of credit, the expectation of further house price drops and "fire sales" and the reinforcement of an adverse house price shock.

[3] http://www.bankofengland.co.uk/publications/Pages/fsr/2017/jun.aspx

Figure A.1 Feedback loops between mortgage credit and house prices can amplify a downturn



The Bank of England's report expresses a fear that the "self-reinforcing feedback loop" can be the cause of a next financial crisis. It is recommending steps to force banks to increase their capital buffers against such adverse events.

The situation in the U.K. differs in one major aspect from that in the U.S. In the U.K., for many years, not enough new homes were built to satisfy the needs of the growing population. Such undersupply creates an artificial scarcity effect, which pushes house prices up far in excess of average income growth. In the U.S., over the period 1997-2007, the volume of new housing starts was well in line with the population growth over that period, but the growth in mortgage lending far exceeded the average growth in incomes.

In the U.S. the first adverse shock came from the number of households unable to continue to service their mortgage debt by 2007-2008. The legal system took over through foreclosure proceedings and repossessions.

Table 3 gives an overview of U.S. foreclosure proceedings started, completed and repossessions.

Table 3: Foreclosure filings, foreclosures and home repossessions in the U.S. 2004-2016

Year	Foreclosure Filings	Completed Foreclosures	Home Repossessions
2016	956,864	427,997	203,108
2015	1,083,572	569.825	449,900
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	1,566,398	973,000	356,000
2005	1,126,637	773,000	312,000
2004	948,031	582,000	274,000

The above table shows clearly that already by 2006 over 1.5 million households got into financial difficulties due to mortgage borrowings, a 65% increase over 2004. Over the period 2006-2014 22.9 million households were confronted with foreclosure filings. Over the same period 6.2 million homes were repossessed. Is it any surprise that over the period 2007-2016 new housing starts dropped of the scale?

The magic question

Could the borrowers' crisis have been avoided? The answer is a definite yes. Restraining mortgage-lending levels, when their growth exceeds the growth in median incomes would be a start. Comparing income growth levels with mortgage lending levels is not rocket science. However, no specific mortgage lending control measures were taken over the period 2001-2008. The common opinion was that interest rate movements would help to control the volume of lending. The common failure was not to spot and act upon the danger to household finances that was caused by actual house prices rising faster than income growth levels.

The second main question is: Could the adjustment period have been better handled. My answer is a definite yes.

It is a fundamental mistake to rely upon the legal system to resolve an economic malfunction. The mistake in question was that over the period 2002-2008, U.S. households had to dedicate an ever-increasing percentage of their incomes to

servicing mortgage debts or pay higher rents. This should not have happened. However it did. The debt recovery process did not use economic means to solve the crisis, but legal means of foreclosure filings, completed foreclosures and home repossessions. The Bank of England's feedback loop worked perfectly in this way, to the great detriment of individual households. With falling house prices, households had even less of a chance of any recovery of accumulated savings in the home. The poor were forced into deeper poverty. As stated above, this was not due to a fault of their own making.

There is another option, an economic one and one actually quite similar to providing liquidity to the banking sector, when it ran into financial problems. It can be described as a liquidity support system for individual households.

In a previous paper: "How the financial crisis could have been averted"[4], the writer already illustrated such suggestion. The option could be used when a cap on mortgage-lending levels had not been enforced. In such case the setting up of a National Mortgage Bank was recommended to help households overcome their liquidity squeeze. Such an NMB could act as a lender of last resort for individual households on basis of sharing part of the asset (the home) with the NMB for its cash-flow help. Such help should be differentiated for each income class that an individual household belongs to. Low-income earners should be helped most. This is not without precedent. The U.S. Home Owners Loan Corporation had been created for a similar purpose but was disbanded in 1936. Had such a Corporation been in existence in 2007-2008, it could have done wonders for maintaining the liquidity position for most mortgagors and even taken a subordinated share in the housing market while mortgage-lending levels synced with nominal increases in median household incomes. Rather than buying up mortgage backed securities to the tune of $1.8 trillion, an assistance scheme to directly help households to overcome their liquidity pressures would have been a much more effective way in avoiding the rapid increase in unemployment levels and the subsequent spike in U.S. government debt levels. Economic growth levels would also have been higher.

Lenders should pay a price to the NMB for the reduction in risks that the NMB facilitates. The borrowers should share -on a subordinated basis- with the NMB some of the wealth incorporated in the homes.

With the help of an NMB, mortgage borrowers can be helped –on a temporary basis- to overcome the economic pressures that excess mortgage lending levels have created for them.

This solution is an economic, rather than a legal one and such a solution avoids the feedback loop effects as spelled out by the Bank of England's financial stability report.

[4] https://ideas.repec.org/p/pra/mprapa/77060.html

The impact on households

If economists can agree that the cause of the financial and economic crisis of 2007-2008 was burdening households with more mortgage debt than their income growth would allow them to repay -without having to cut down on spending on other goods and services-, then the solution to solving or avoiding such crisis in future, becomes clearer. A direct approach to help households financially to overcome such liquidity squeeze becomes more rational. Such solution also helps to restore or at least maintain the balance between the rich and poorer households. The lower income households do not lose out due to lending excesses organised by the financial sector. The lenders will need to contribute to an NMB for the lowering of their risks over the mortgage portfolio. An NMB, once it has been accepted as a viable solution, will reduce rather than increase the income and wealth gap between the rich and poor. Moreover, an economic imperfection can be solved more logically, with economic means, rather than with the help of the legal system. Economic growth levels should be less affected as households are enabled to continue to spend on other goods and services. Unemployment levels would not have doubled over a short space of time. Government debt levels would not have risen so rapidly as they did in the U.S. over the last nine years. The stable door will then remain shut.

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