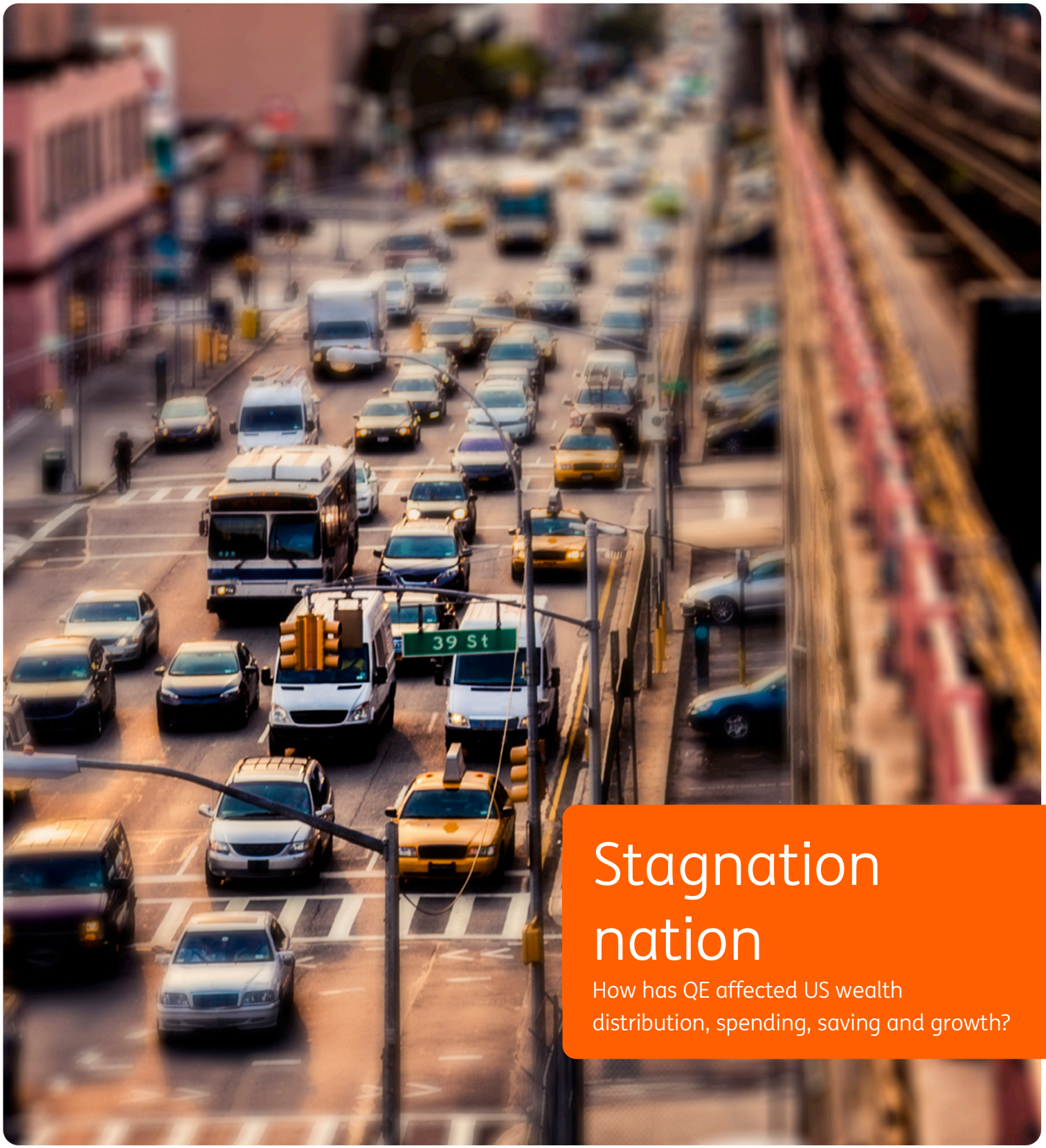


Stagnation nation

How has QE affected US wealth distribution, spending, saving and growth?

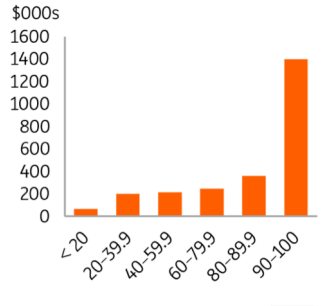
ING Economic and Financial Analysis
Consumer Economics

ING

Stagnation nation

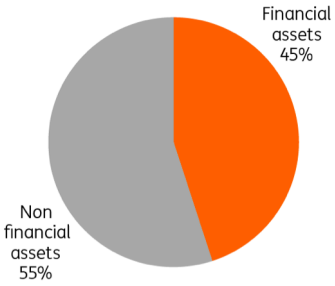
How has QE affected US wealth distribution, spending, saving and growth?

Financial assets by income group (median household)



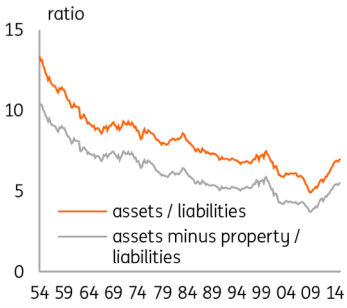
Source: SCF

Household assets by type



Source: SCF

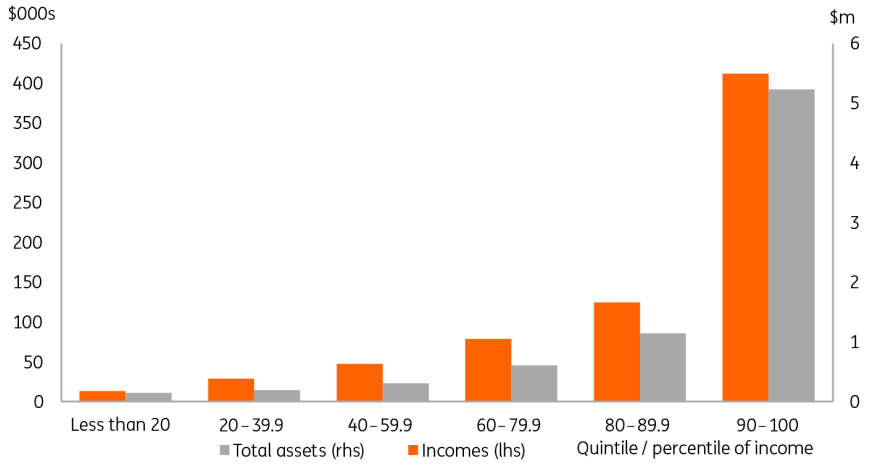
Household assets and liabilities



Source: Macrobond

When the US Federal Reserve first started quantitative easing (QE) at the end of 2008 and early 2009, few analysts gave much thought to the distributional effects that this policy would have. But now that QE in the US is finished and the European Central Bank has embarked on its own aggressive QE programme in the Eurozone, we take a look at how QE has helped change the distribution of US wealth, altered incentives for saving/spending and consider what this implies for ongoing experiments with unconventional monetary easing. Using official data and the results of the ING-ASR US Survey of Household Finances[11], we conclude that QE has encouraged even greater disparity in incomes and wealth in the US, and that the net effects of QE on consumer spending are, at best, marginal.

Fig 1 US mean incomes and (total financial and non-financial) asset distribution by income groups, 2013



Source: Survey of Consumer Finances, Macrobond

- Following the introduction of QE at the height of the financial crisis, approximately 83% of the wealth gains – and 80% of the income gains – have accrued to the top 10% of households by income.
- Wealth effects, that should have added approximately 2% to consumer spending, have failed to deliver anything of the sort. We suspect this is partly due to higher inequality, and partly due to changing demographics, with older households suffering from reduced incomes on savings.
- QE may also have drained spending power to the tune of 0.8% pa as a result of bigger household purchases of assets.
- While low rates have also stimulated borrowing and hence consumption, this leaves households more indebted and therefore vulnerable to higher interest rates.
- This is particularly true for lower income households.

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[1] "On thin ice", ING-ASR US Household Finances Survey, 11 December 2015, Mark Cliffe and Rob Carnell

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Summary

According to the latest Federal Reserve Survey of Consumer Finances (SCF), the richest 10% of the US population earns, on average, more than thirty times the income of the poorest 20%. In addition, and backed up by US Flow of funds data, and the ING-ASR US Survey of household finances, we note that:

- Wealth has risen by some US$30tn (40%) from the low – thanks in part to the impact of QE in boosting financial and non-financial asset prices.
- This surge in wealth compares with only an 18% rise incomes over the same period.
- The resulting wealth effect, based on previous experience, suggests that this ought to have added 2% pa to consumer spending.
- And that ultra-low interest rates should have provided a further boost to consumption of 0.6% pa via lower debt service costs.

However:

- The gain in wealth still leaves it US$25tn (25%) below where it would have been on the pre-crisis trend (which would have added 1.6% pa to consumption based on the same benchmarks).
- Approximately 83% of the wealth gains – and 80% of the income gains – have accrued to the top 10% of households by income. Although employment has risen, the bulk of households have seen their income stagnate, and wealth increase much more slowly. The ING-ASR survey shows households with an income of less than US$75,000 a year on a net basis, feel no better off than in previous years.
- We suspect that wealth effects may have been less powerful this time around, partly due to higher inequality, partly due to changing demographics, with older households suffering from reduced incomes on savings.
- QE may also have drained spending power to the tune of 0.8% pa as a result of bigger household purchases of assets.
- While low rates have also stimulated borrowing, and hence consumption, this leaves households more indebted and therefore vulnerable to higher interest rates.
- This is particularly true of the households outside the top 40%.
- This concern is reinforced by the results of the ING-ASR survey. Households with an income below US$75,000 are, on balance, worried about their debt levels and think interest rates are too high, while those with incomes above that level think the opposite.
- Lower income households are also markedly short of liquid assets with which to weather higher interest rates.
- And if asset prices correct on the back of the Fed's tightening, then the wealth effects would also swing into reverse.

Introduction

Quantitative easing (QE) kicked off in the US properly with the purchase of financial assets in 2008

One of the longest unbroken upswings in annual (YoY) economic growth in the US came to an end in 3Q08 and, within months, the US Federal Reserve Bank (Fed) had embarked on a programme of unconventional monetary easing, with Fed funds rates at zero and purchases of agency debt and mortgage-backed securities (MBS). A few months later, the Fed added US Treasuries to the mix. Quantitative easing (QE) had begun.

The Federal Reserve balance sheet has ballooned by over US$5tr

From a resting total of c.US$800bn, the US Fed's outright holdings of Treasuries and other securities expanded to over US$6tr at its peak. But despite such an apparently enormous unleashing of unconventional monetary firepower, the rationale for QE was never very clear. In its first incarnation, it seemed as if QE was aimed at driving down bond yields in an attempt to drive down borrowing rates and thereby stimulate corporate and retail borrowing and investment and personal consumption.

The impact of QE has not always gone as expected – with short-term increases in bond yields at times

This did not happen, at least not in the way that was envisaged. Bond yields did slide further as QE continued. But the immediate impact of QE was not to lower bond yields, but to raise them, as the principal beneficiaries of QE were risk assets, including equities. These rallied hard in response to repeated bouts of QE, at least once it was clear that the US economy was not headed into a 'death spiral'.

The real economy has responded slowly, if at all, to QE

As for investment, jobs and wages, well, investment did eventually pick up, but it has remained soft, possibly a perverse by-product of low rates and bond yields on the financial position of corporate pension funds. The jobs market has been more impressive, with US employment now 11 million higher than at its 2009/10 trough.

Wages have remained very weak, and consumer spending has been subdued

But wages remain very subdued, even if there is some tentative evidence that wage growth is beginning to finally stir. And consumer spending, though much improved compared to the depths of the financial crisis, is not as strong as one might have imagined, given the low costs of borrowing, and the expected wealth effects from asset price increases. At least on these metrics, QE has not delivered the robust recovery hoped for, and some suggest it may be responsible for the ongoing mediocrity.

Theories of 'secular stagnation' have been advanced, to explain this economic malaise

A number of well-known commentators have posited suggestions as to why the macro economy remains sluggish, most notably former US Treasury Secretary, Larry Summers. He has popularised notions of 'secular stagnation' and argued that QE has been a type of reverse-Robin Hood policy, transferring wealth from the poor to the rich, and pushing policy stimulus at those elements of the economy where spending and investment are relatively insensitive to incomes and wealth – again, the rich.

Personal experiences of QE vary depending on age, income and wealth amongst other differences

It is undeniable that QE has had varying impacts on different segments of the US population through their exposure to the real economy and to both sides of the household balance sheet. In what follows, we start with a look at how different income and age groups in the US have differed in their experiences of income and wealth evolution following quantitative easing. In the second part of the note, we step back to see how the different outcomes for income and age groups aggregate for the household sector as a whole. Whilst most of the analysis uses official sources of data, we have also bolstered this analysis with the result of the ING/ASR household finance survey for November 2015.

Part 1: Inequality

Incomes, wealth and distribution

Incomes and savings

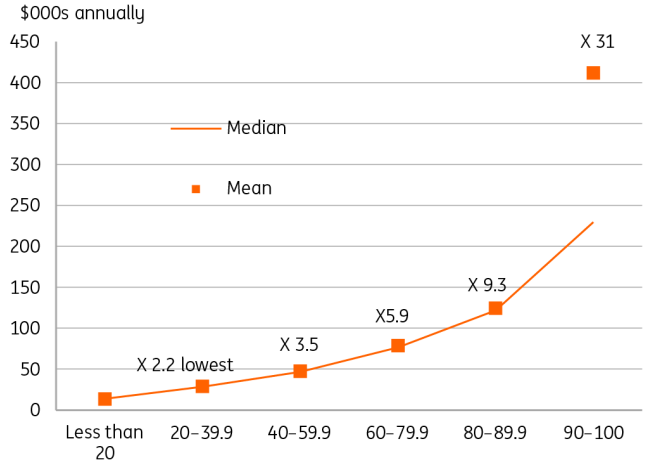
Income disparity in the US is huge

We start this section by looking at household incomes and saving, and also with an oddity. Figure 2 is not wrong, though it looks as if it is. It shows median and mean household incomes by income quintile and decile for 2013[2], the latest data from the Fed's Survey of Consumer Finances. The oddity is the top group. Whereas the medians and means for all other quintiles are roughly the same, suggesting an even distribution of household income across the quintiles, the top quintile shows a marked discontinuity. Actually, this is an even greater discontinuity than it appears, since the top quintile is split into two deciles, and the pick-up over the sample population is, in fact, twice as dramatic as implied by the chart.

There is no linear progression in US incomes, with the richest of the rich much richer than everyone else

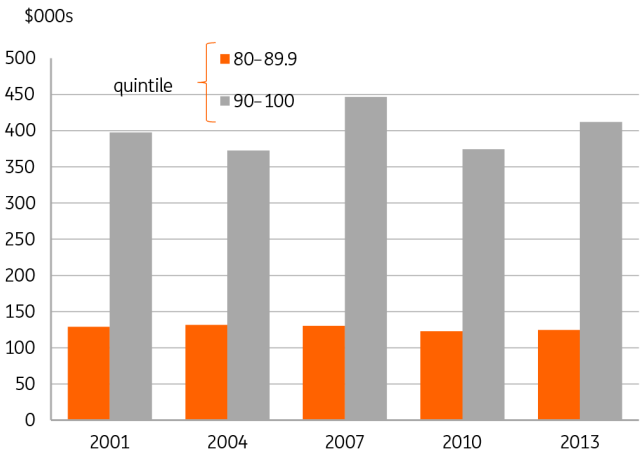
Summarising the chart, median household incomes rise steadily from the lowest quintile, with only a slight tendency for the line to steepen, apparently, by the time you reach the ninth decile (80.0-89.9% range). But then, the series starts to steepen sharply, with the median of the top decile almost twice as high as the next highest, at US$229,600 pa. This is immaterial, though, compared to the rise in **mean** household incomes for the top income group, which are not far off, being twice as high as the median at US$412,000 per year, and more than three times that of the next highest mean.

Fig 2 Incomes by quintile, 2013



Source: Survey of Consumer Finances

Fig 3 Ninth and tenth decile means, 2001-13



Source: Survey of Consumer Finances

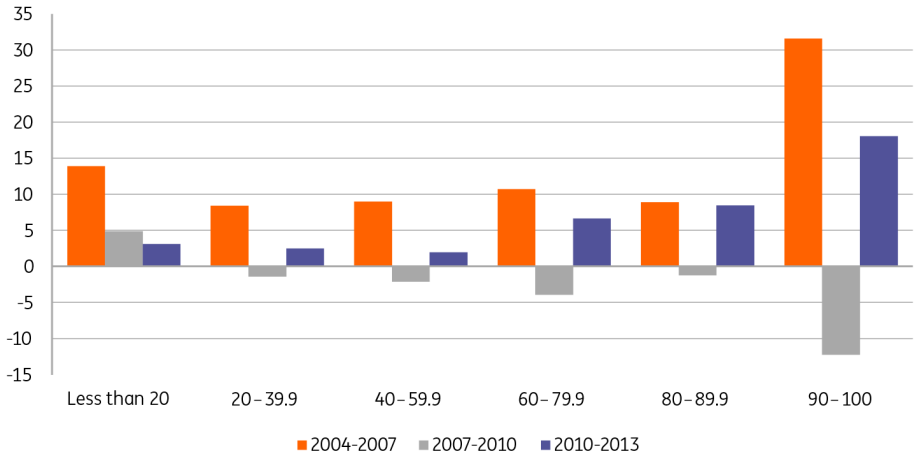
But high incomes also bring with them high income volatility…

With high incomes, there also appears to be higher income volatility. Over time, it is quite clear that the bulk of the variation in incomes is for households with the very highest income earners. Between 2004 and 2007, very-high income earners

[2] Mean in this case is the arithmetic average of a sample, whereas the median is the central observation in a ranked sample. Where there are outliers, a median can give a more "reasonable" view of the "average", though both are useful measures.

saw mean incomes rise by more than 30%. This was more than three times as much as the next highest income group, and more than twice as much as the second fastest income growth group over this period. Middle-income earners saw incomes rise by 5-7% over this period.

Fig 4 Income volatility for different income groups (%chg)

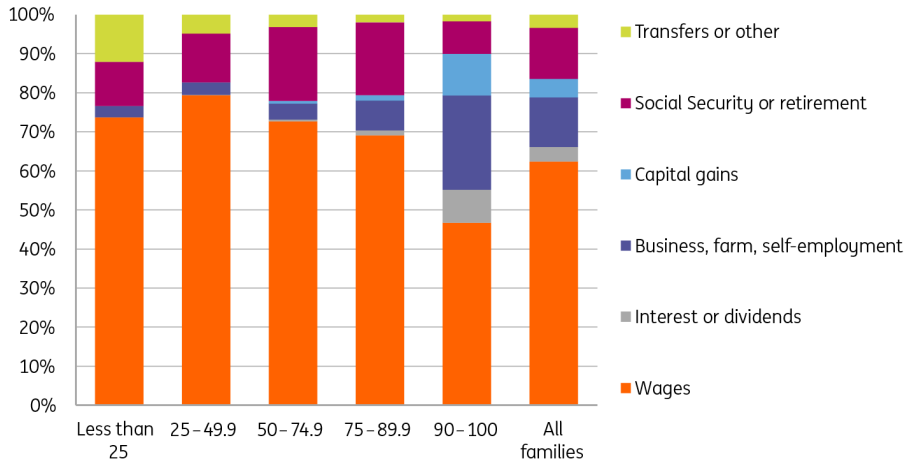


Source: Survey of Consumer Finances

...though income foregone in the crisis by the rich was more than made back in the subsequent recovery

But the financial crisis also saw higher-income earners as the most exposed to income volatility, with the drop in dollar terms or as a percentage of previous income (c.12%) many times that of the next richest group and other lower-income groups. Then again, high-income earners saw incomes rebounding the most in the recovery, though not quite returning to pre-crisis levels. In contrast, incomes for other groups fell only by 1-4% for the middle income groups, and continued rising for the very lowest group (though more slowly). Income losses during the crisis years (ie, 2007-10) were mostly recovered in the post-crisis years of 2008-10, though not as dramatically for the middle income groups as for the two highest. Most of those at the poorer end of the pay scale would no doubt see this extra volatility in incomes as a price well worth paying.

Fig 5 Sources of income, 2013



Source: Survey of Consumer Finances

Wages are a much more important component of income for the poorer segments of the population...

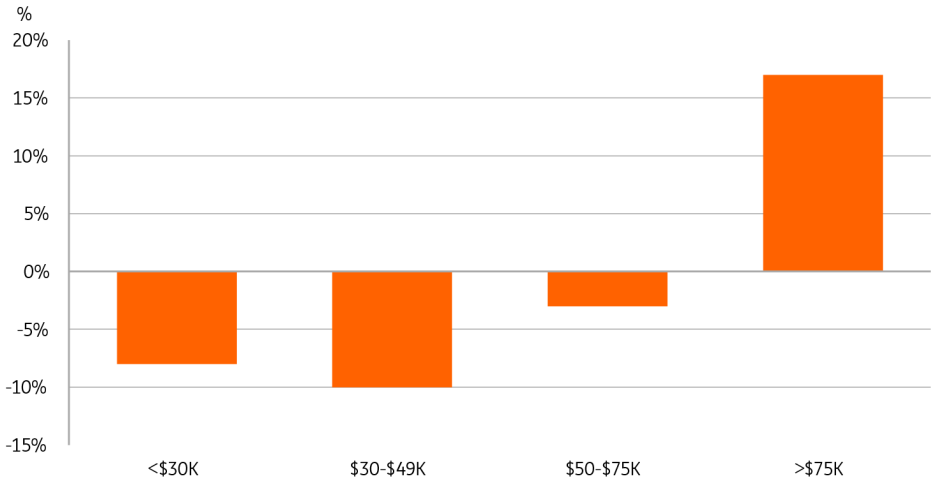
One explanation for the discrepancies in income growth of these groups during the turmoil of the financial crisis and afterwards comes from the breakdown of their incomes by source. For most income groups, wages comprise the bulk of all incomes. This is usually close to or over 70% for most income groups, including the 75.0-89.9% of incomes range. Indeed, like many of the other charts that follow, the real deviations only occur at the very highest income levels, with surprisingly little deviation in the lower and middle incomes groups.

...and recently, wages growth has been very slow

Importantly, wages growth in recent years has been very slow, rising at a little more than 2% in nominal terms for the last five years. In real terms, it is only recently, with the decline in oil prices, that growth in real wages has been higher. And that boost is likely to dissipate, as base effects drop out. In short, the key contributor for lower-earning households has been stagnant.

As the ING-ASR US Survey of Household Finances shows, even recently, it is only the richest groups that are experiencing any significant improvement in incomes and household finances, with the poor and middle-income groups still registering declines.

Fig 6 Would you say that you are better or worse off financially than last year?*



*Net % better off than last year by household income category
Source: ING-ASR US Survey of Household Finances

Transfers are also a more important source of income for the poorest groups

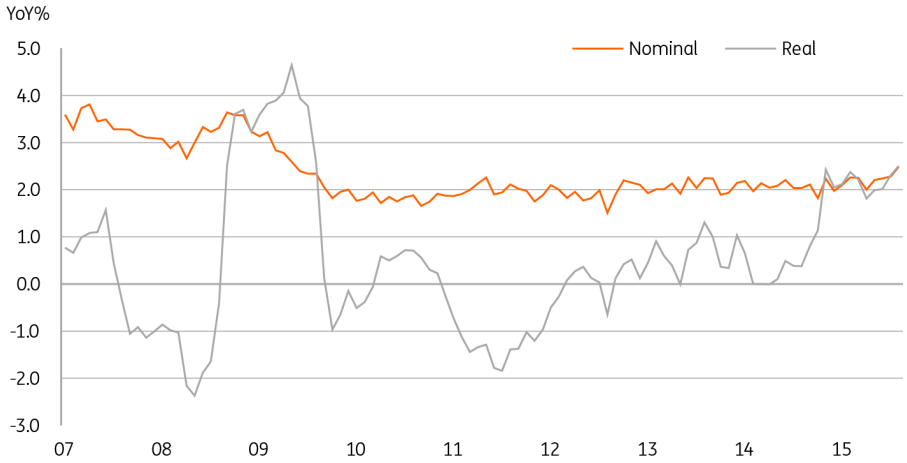
For the very lowest household income groups, transfers constitute a much bigger source of income than for higher earners. These are mainly government transfers. In contrast, transfers for the richer groups account for a much smaller proportion of the total and could also include the sort of intra-generational transfers as described by Thomas Piketty[3]. Such transfers from richer, typically older households to their younger, and typically lower income relatives could become a more important source of income to these groups in the future, as generations that have benefited from strong asset prices and income growth in the past seek to provide in-life assistance to younger family members struggling to cope with lower income growth or get a toe-hold on the property ladder. Tax policy on inheritance and pre-inheritance gifting is likely to play an important role in how this trend develops.

[3] Capital in the Twenty First Century. Thomas Piketty, August 2013

Importantly, household income is determined by its composition: number of workers, etc.

The makeup of the household is also important, with findings from other surveys such as the consumer expenditure survey showing that the number of earners in a household is an important determinant of household income and, therefore, spending behaviour. The lowest-earning households are likely to contain fewer earners, or even none at all, while also earning less individually than those in higher earning groups.

Fig 7 Nominal and real (deflated by CPI) hourly wages growth



Source: Macrobond

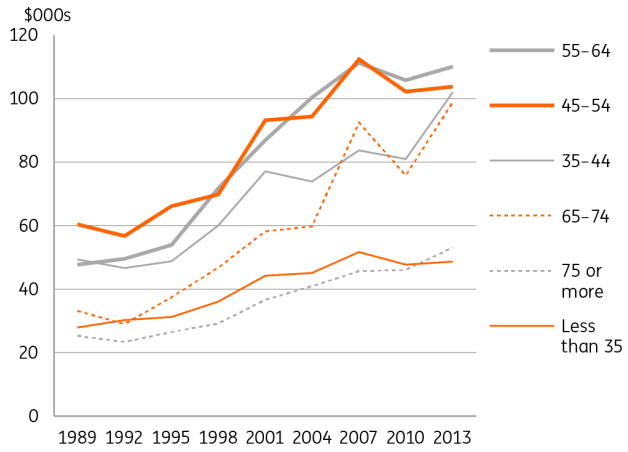
Wages are not even 50% of total incomes of the rich

For the highest earners, wages play a much smaller role, not even comprising 50% of total incomes. Other incomes, notably from business, make up much larger chunks, with greater contributions also from interest /dividends, capital gains and pensions. Perhaps the key message here is that you are unlikely to become a millionaire by working for someone else, though your wages are likely to be fairly steady. But, if you run a small business, and can take some sharp fluctuations in incomes, then the sky is the limit.

Age is also an important determinant of incomes, though the peak age for earning power has changed

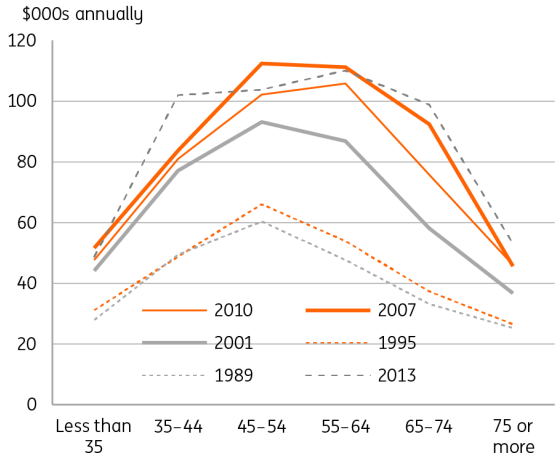
In addition to a wide dispersion of incomes by earning power, there is also a strong impact of age on incomes. The lowest-paid-age cohorts are the young and the very old, both tracking together over time. For the young just starting out in employment with fewer transferable skills, lower wages are no great surprise. The wages of this age group have also seen no discernible upturn in the recovery, though they also saw almost no decline during the crisis. This might also be explained by a greater prevalence of minimum wage earners in this age group, which have not seen much increase (and of course, no decrease) except for very recently.

Fig 8 Mean income distribution by age group



Age of head of household
Source: SCF

Fig 9 Mean income distribution by age group



Age of head of household
Source: SCF

Older workers are earning more than they typically have, relative to the next youngest groups

By the time employees reach the 35-44 age group, they are earning more than twice as much as the under 35s. Interestingly, this age group has almost caught up with the next two age cohorts, which have seen little pick up in wages since the crisis. In contrast, the 35-44 age group has seen a healthy uptick.

Younger workers have not simply been swapped for more expensive older workers during the crisis

Meanwhile, the slightly older 55-64 age group has overtaken the traditionally highest paid age cohort (45-54) in the last six years, suggesting that something more complicated than a swap of younger for older workers is taking place. This is probably not explicable entirely in terms of wage income, and we most likely need to consider other non-wage sources of income to help explain this. If this was simply a case of higher-paid prime-age workers being laid off in the crisis and failing to find similar good jobs in the recovery, we suspect that this would also be reflected in the 55-64 age group too, who would be most likely to have taken early retirement. Capital gains could be one source of non-wage income, which would help explain this move, and for some of these groups, intra-generational transfers could also be important.

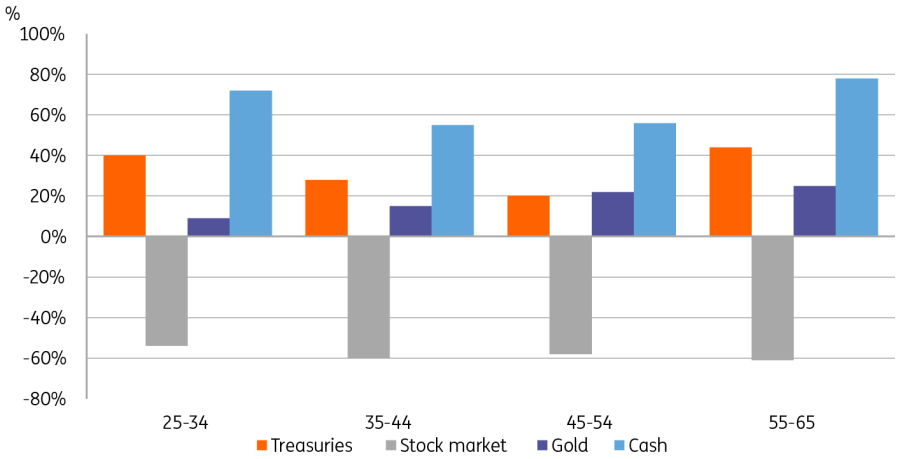
Incomes drop, as households move out of employment to retirement

The second oldest cohort, aged 64-75, experienced one of the largest declines in incomes during the crisis years. Intuitively, these individuals at the end of their working life and beginning of retirement, should have some of the highest stocks of assets and lowest outstanding liabilities. As we will see later, this is backed by the data, and their high relative income volatility is predominantly a reflection of fluctuating financial asset prices and yields.

Both very old and very young households are the worst off in terms of incomes

The difference in incomes between the oldest and the youngest group is pretty marginal, with only a slight upward trend over the entire sample period. Much of the income of the older group arises from pensions, based on a presumably dwindling pool of assets. Given their advanced years and likely preference for lower-risk assets, this is also likely to contain a larger proportion of fixed-income assets with falling yields and cash and near-cash alternatives, compared to the portfolios of younger groups (backed up by risk assessments of different asset classes for different age groups). In short, these age-related income breakdowns seem intuitively plausible.

Fig 10 Age-based assessment of riskiness of different assets*



*Net % of age group thinking safe vs risky
Source: ING-ASR US Survey of Household Finances

What these initial figures do is suggest a positive relationship between age and income. Older working-age groups, on average, have double the income of the under-35s. This means that we can infer an overlay with the earlier discussion on income cohorts. When assessing household incomes, we should bear in mind that in addition to having more earners, there is likely to be a tendency for the better-off income groups to have a higher representation of 'prime-age' earners and fewer young and pension-age individuals and vice versa for the lower-paid income groups.

Age/income inequality has implications for policy setters, to prevent income disparities from widening further

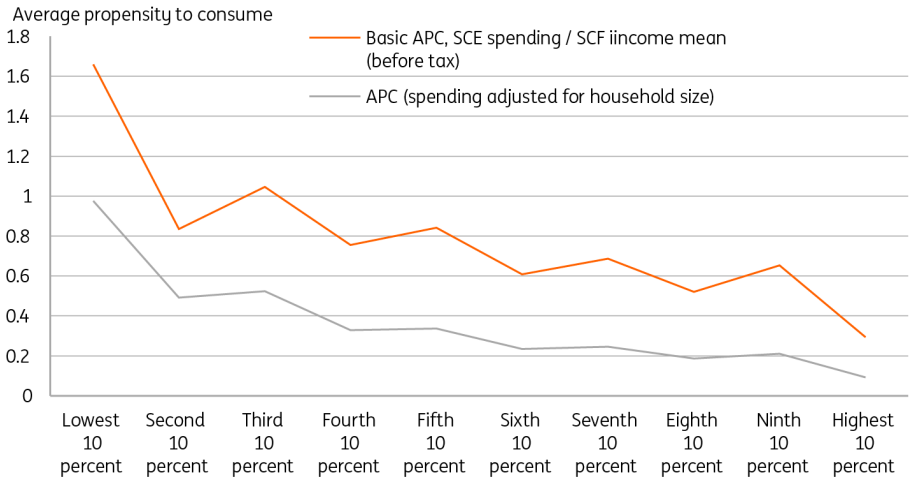
This age inequality might well have implications for policy setters, especially in trying to achieve an equitable and efficient balance between fiscal and monetary policies. Protecting pensioners from austerity, while simultaneously boosting asset prices, might disproportionately favour elderly cohorts over those of the young, despite the received (and probably incorrect) wisdom that elderly savers have been some of the worst victims of the current low-yield environment.

Economic theory correctly postulates that the poor spend proportionately more of their incomes than the rich do

A related point stems from the disparities in spending by different wealth groups, which, for once, does coincide with traditional economic thinking. We usually assume that lower-income groups spend proportionately more of their incomes than the rich. To explore this further, we have constructed 'average propensity to consume' estimates (APCs) for different income groups, based on gross incomes before tax (disposable income breakdowns not available). Although we would not place too much importance on the absolute APC estimates generated, the generally downward slope supports the idea that the lower-income groups spend proportionately more of their income than the rich do. Hence, policy stimuli aimed at the poorer income groups in society are likely to generate a larger aggregate effect on consumption, compared to those that disproportionately benefit the rich.

In reality, progressive taxation and government transfers are likely to flatten the income-based decline in average propensities to consume, compared to our gross-incomes measure, but it seems unlikely that it would fundamentally alter the conclusion, as theory indeed postulates, that poorer-income households will spend proportionately more of their incomes than richer households would.

Fig 11 Average propensity to consume (APC) proxies



Source: Survey of consumer expenditure, SCF, ING

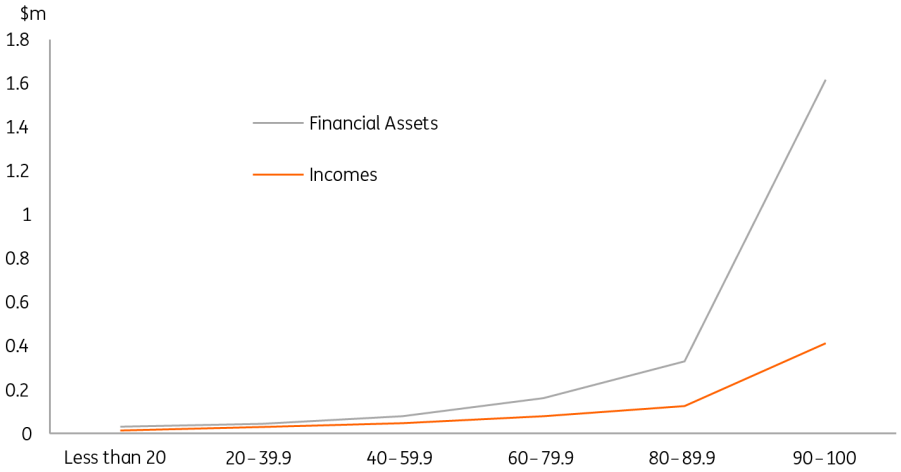
Assets

Financial assets:

Wealth disparity is even greater than income disparity

We move now from incomes to assets, and the very first point about asset distribution in the US is that if you thought income disparity was large, then asset disparity is gargantuan.

Fig 12 Mean incomes and financial assets by incomes – 2013



Source: Survey of consumer finances

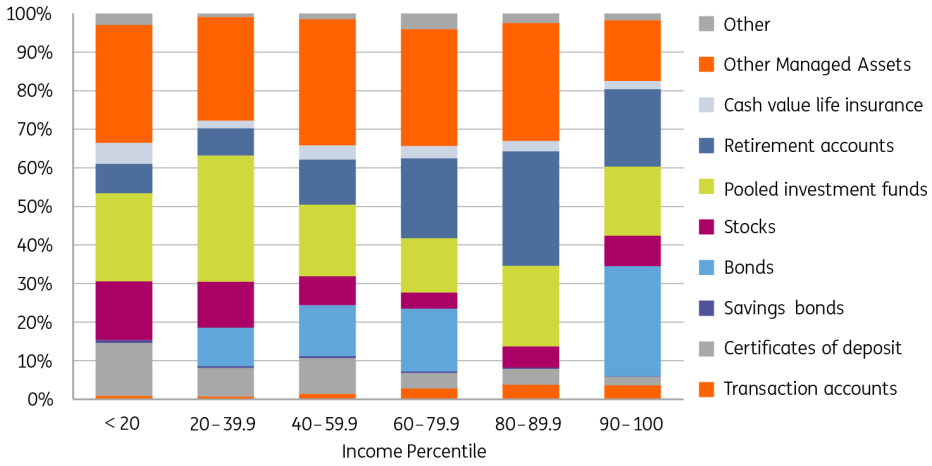
An accurate comparison is hampered by outliers, but the rich/poor asset difference may be as much as 100 times

According to the survey of consumer finances, the difference in incomes in the US between the highest and lowest income groups is about thirty-two times, a difference of more than ten times between the highest and lowest income groups when one considers mean asset holdings. But this is clearly biased by a small number of wealthy individuals on low incomes, as the median wealth figure for the lowest income groups is only a tenth as large as that for the mean (about US$66,000 vs US$600,000), and the difference between the median top income

assets and the median lowest income assets is about 29 times. If we take the lowest income median assets as more representative of that group and the mean assets for the highest, then the difference between the two income groups is about 100 times.

Whatever the right comparison here, there is clearly a huge deviation between the haves and have-nots in terms of assets.

Fig 13 Median household financial assets by income (% of total), 2013

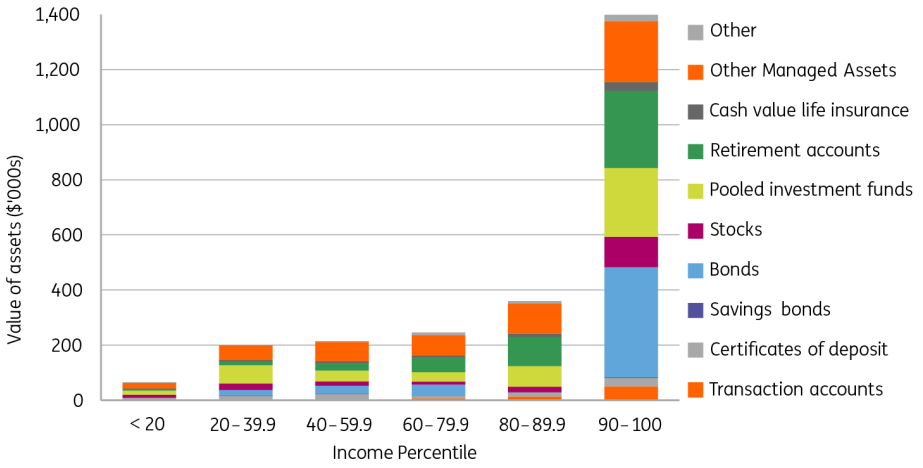


Source: SCF

The rich own more bonds than anyone else

There is also a big difference not just in terms of the scale of asset holdings for different income groups, but in terms of the assets that are held. For financial assets, the richest income groups tend to hold a much greater proportion of their wealth in bonds compared to other income groups. The top 40% of income groups are also the only household groups to see increases in bond holdings during the financial crisis, though not apparently subsequently. There is less of an obvious relationship with stock holdings, with the very rich cutting stock holdings as the financial crisis developed, and boosting them subsequently.

Fig 14 Median household financial assets by income quintile (US$ 000) 2013



Source: SCF

Retirement funds have grown strongest, with retirement cited as one of the most important reasons for saving

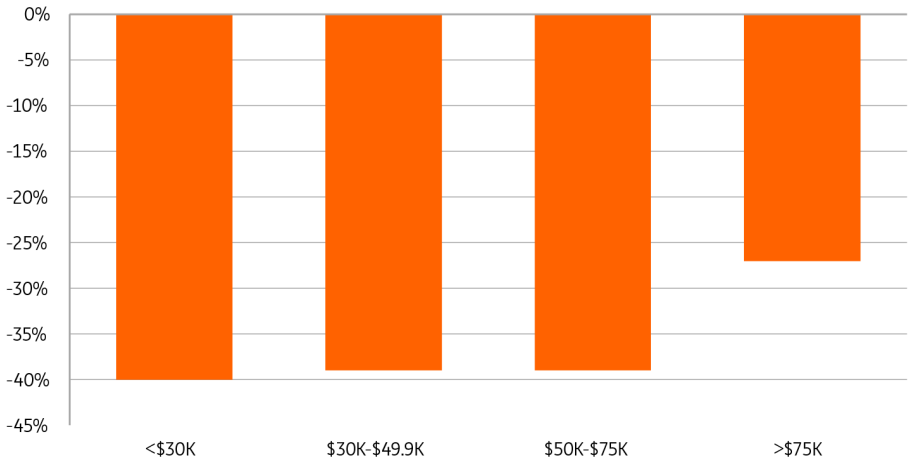
Looking at how holdings of financial assets have evolved over the recent past, the asset class that saw the greatest proportional increase in holdings between 2007 and the crisis years of 2010 are retirement funds (pooled investments also grew strongly). Most household groups, irrespective of incomes, saw increases in retirement fund holdings (matching a later finding that retirement was one of the most important reasons for household saving). Although their overall holdings are still relatively small, it is the lower end of the income and wealth spectrum of households that have expanded their holdings of retirement funds the most.

Retirement saving could be motivated by experience of house price volatility amongst other factors

There could be various motivations for this, but amongst them, and driven by their experience of the financial crisis, we see the following as consistent with the data:

- Housing is not considered as "safe" a repository for wealth as it once was, despite remaining popular (Figure 15);
- Likely returns from existing retirement funds are smaller than had been anticipated relative to aspirational retirement incomes;
- Retirement holdings had been rising prior to the crisis – prompted by tax-efficient savings vehicles, and a decline of defined benefit funds;
- These funds are viewed as an easy-access vehicle for stock market investment.

Fig 15 Housing riskiness a reason for other savings?*



*Net % say housing very or fairly safe minus very or fairly risky by household income category
Source: ING -ASR US Survey of Household Finances

Liquidity preferences have increased, but not as much as one might have thought

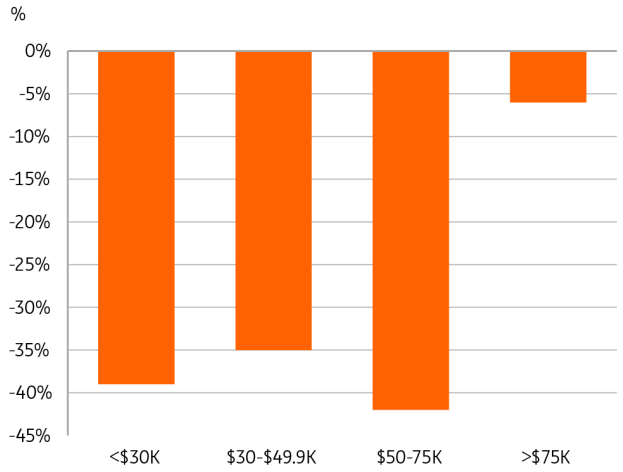
Most income groups saw some increment in retirement holdings over this period, prompted by assessments that pension saving was inadequate for most income (and age) groups, along with increases in transaction accounts. Though with regard to the latter, the amounts remained relatively small compared with other asset groups – preferences for liquidity clearly increased during the financial crisis, but perhaps less than one might have imagined.

Prime-age workers and those on low incomes are most concerned about lack of retirement savings

Survey evidence on savings for retirement also shows some interesting disparities based on incomes and wealth. Whilst no income group actually thought they had saved enough for retirement in net terms, this proportion dropped sharply for those with household incomes above US$75,000. But it was the prime-age workers, aged 45-54, and obviously getting closer to retirement than the younger

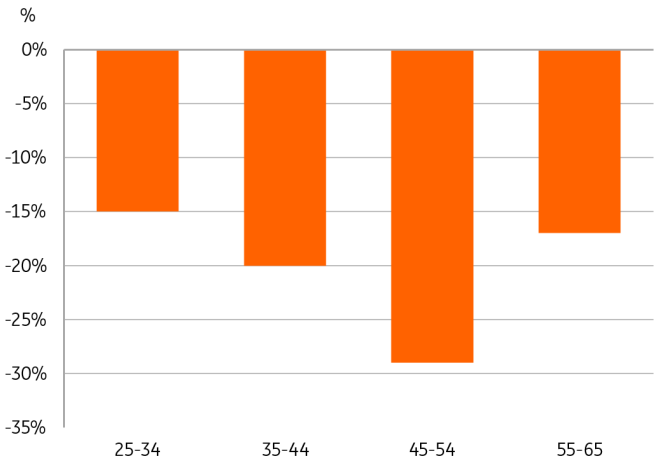
age groups, who clearly felt the most anxiety related to savings for pensions. The next age group up also felt that it had under-saved for retirement, but may have done better from capital gains on existing holdings to lessen their sense of unease. Younger age groups may view retirement as too distant a prospect to be unduly worried yet.

Fig 16 Enough saved for retirement by income group?*



*Net % think they have saved enough
Source: ING-ASR US Survey of Household Finances

Fig 17 Enough saved for retirement by age group



Source: ING-ASR US Survey of Household Finances

Near-cash liquid investments soaked up some traditional cash saving as interest rates fell

As the economy moved out of recession between 2010 and 2013, transaction account holdings typically reduced, and preferences switched back to stocks for all but the poorest household groups. Holdings of savings bonds also increased for most groups, maybe as a less liquid near-cash alternative to transaction accounts as cash preferences declined. Low yields on savings accounts may have encouraged a trade-off, moving from traditional savings vehicles to more fixed-term saving to gain a modest increase in nominal yield.

Younger groups are more switched on to outright stock holdings – maybe an 'online' phenomenon

Looking at asset holdings by age cohorts over the same period shows similar, though not particularly clear-cut, patterns. One of the most obvious messages thrown out by the data is for stock holdings. Here, younger groups (<35yrs) show a clear preference for outright stock holdings from 2010 (maybe a function of the growth in online brokerages and ETFs). Indeed, increases in stock holdings are evident for all age cohorts during 2010-13. The picture for bond holdings by age is less clear.

Non-financial assets

Non-financial assets are dominated by housing and businesses…

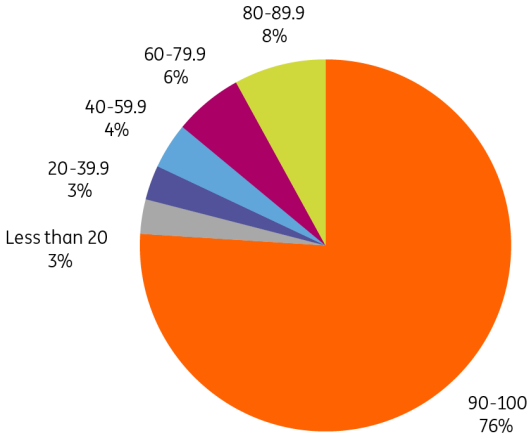
The SCF figures for non-financial asset holdings are not particularly robust, and are sensitive to outliers. But as a generalisation, they are dominated by property (primary residences, other residential property and non-residential property) and also by business equity. For the aggregate figures, we believe the flow of funds data included in the following section is more reliable.

…with richer groups dominating business holdings

Although there are some question marks over the reliability of this data, there is probably still some valid information in the breakdown by incomes. And in line with earlier data on income sources for different income groups, business equity holdings are heavily skewed towards the richer end of the population (Figure 18). For most households on lower incomes, the principal non-financial asset remains the primary residence. Indeed, as we note later, with non-financial assets forming

the bulk of assets for younger and less well-off families, the residential residence may be the principal asset of any type, financial or non-financial, for many households.

Fig 18 Median holdings of business equity by family income groups (% of total), 2013

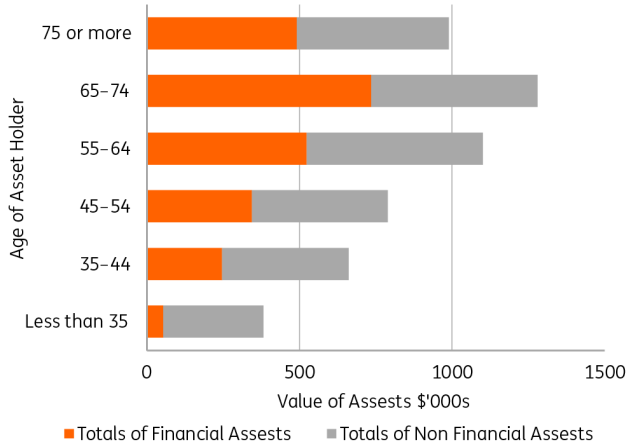


Source: SCF

Non-financial assets typically accumulate with age...

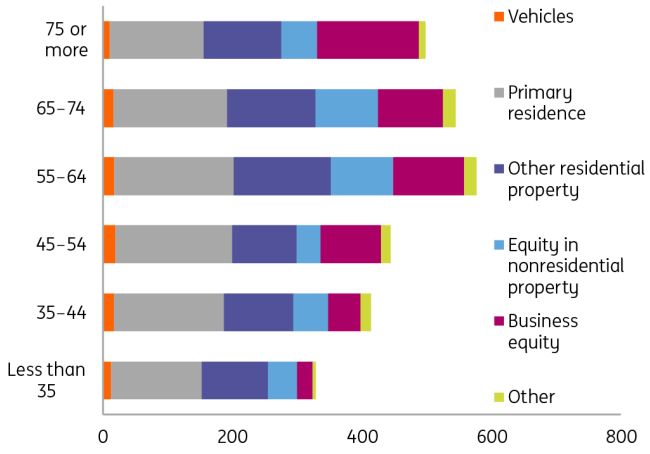
Different age groups also have very different holdings of financial and non-financial assets. Financial assets and non-financial assets typically grow with age, as both will accumulate as a result of savings and price valuation increases.

Fig 19 Financial and non-financial assets by age (medians)



Figures for non-financial assets are for 2010, non-financial assets for 2013
Source: SCF

Fig 20 Non-financial assets by age of household head (US$000) (medians)



Source: SCF

...though with some evidence of 'drawdown' in old age

The main finding regarding changes in financial and non-financial asset holdings based on age is that the most elderly groups have lower holdings of both types of assets, having presumably liquidated some of their financial asset holdings to bolster pension incomes. There is also some evidence in this data of 'trading down' non-financial property holdings – mainly of primary residences – perhaps to free up capital for spending, or alternatively, to make gifts to younger family.

Liabilities, net worth and financial health

Like assets, liability exposure is differentiated according to incomes

One of the most obvious impacts of quantitative easing was the decline in interest rates. And for those households with liabilities, this could have provided a helpful boost to disposable income and discretionary spending through reduced debt service costs. The fact that consumer spending does not appear to have bounced back particularly strongly despite this merits some further examination of the liability side of the household balance sheet. One explanation for the moribund consumption response may lie in the evolution of liability holdings across different income groups, where there are clear differences.

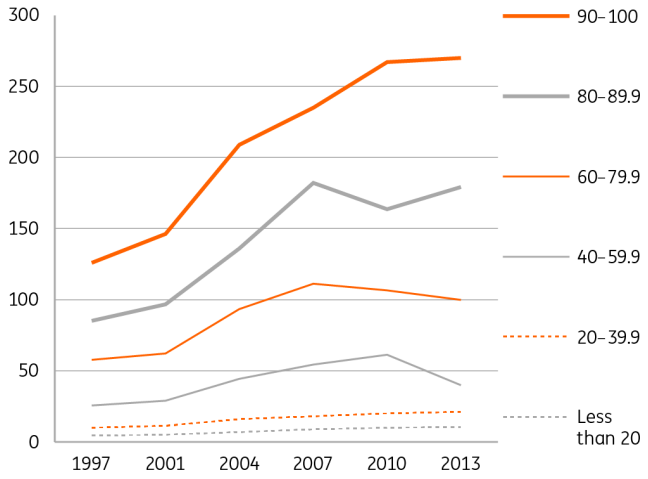
The rich have more debt than the poor…

Much like the asset side, there is a high level of dispersion of liability holdings across different income groups, with the latest figures showing higher income groups on average (median) having twenty-five times the liabilities of the poorest groups. This is similar to the dispersion of incomes, but not quite as marked as it was for assets.

…but growth in debt has been greatest amongst the poorer groups

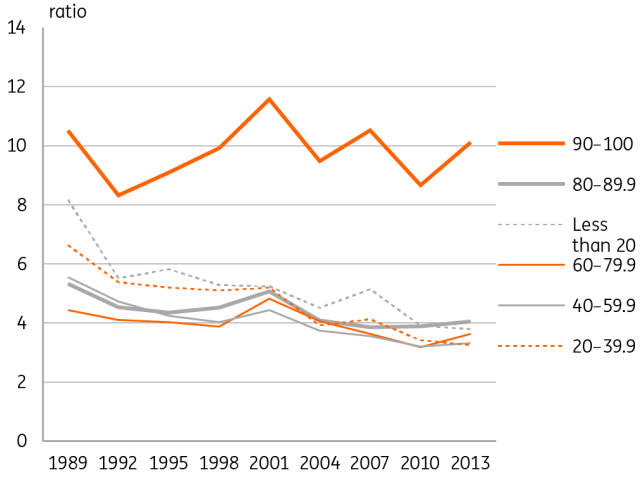
Since 1997, this dispersion has become much more marked in dollar terms. However, whilst recent events have tended to push up or at least maintain the dollar liabilities of the very rich versus lower income groups, debt levels for the two lowest income groups have typically increased at a faster percentage rate throughout the sample period (and also relative to incomes) than they have for higher income groups, with middle income groups seeing a meaningful decline from 2007 to 2013, perhaps helped by mortgage write-downs, and even default.

Fig 21 Mean liabilities by income quintile (US$ 000), 1997-2013



Source: SCF

Fig 22 Mean assets to liabilities (ratio), 1997-2013



Source: SCF

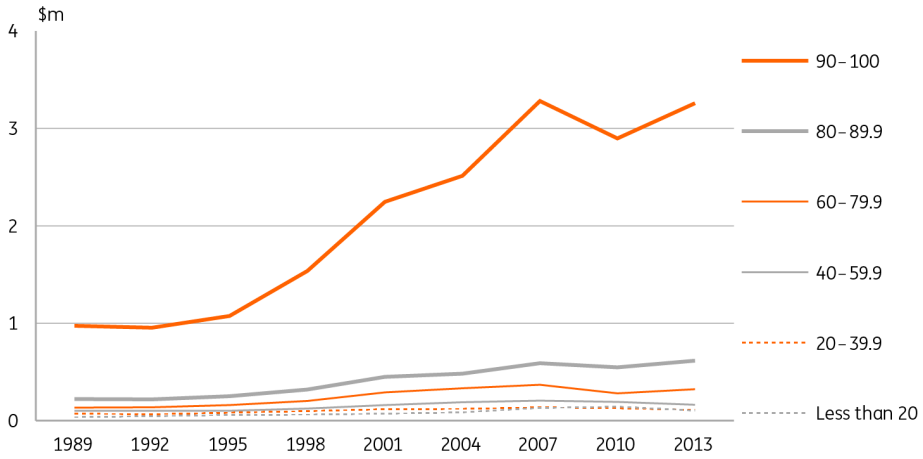
Assets have been declining relative to liabilities over time…

Over time, the ratio of assets to liabilities for the population as a whole has decreased, with liabilities rising at a faster pace than assets for all incomes groups. This ratio of assets to liabilities is greatest for the richest group (more than ten times), but roughly the same for all other groups at about 4 times, with no meaningful distinction between middle and lower income groups.

…mainly due to a worse ratio for poorer groups

The history of asset-to-liability ratios shows that the biggest decline has not come from the richest groups, where the ratio is roughly unchanged since 1989, but rather, all other groups.

Fig 23 Mean net worth (total assets minus liabilities) by income group

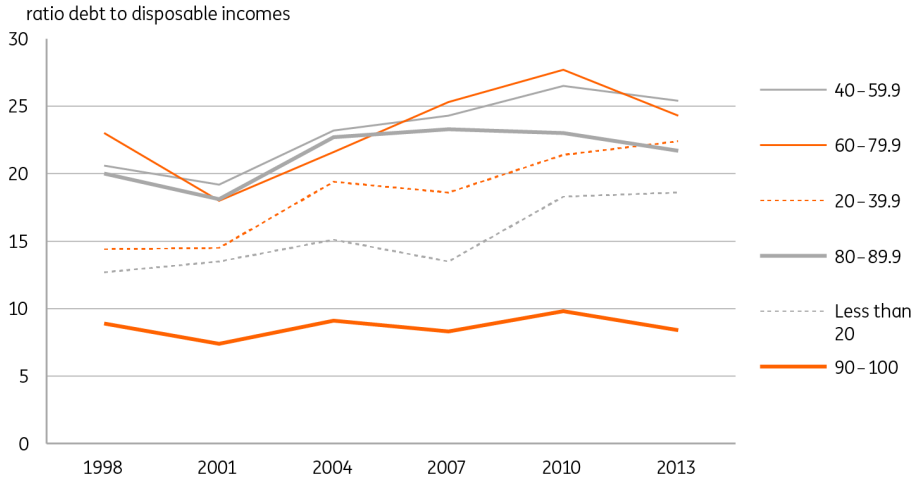


Source: SCF

Leverage ratios of the poorer groups have risen, but remain largely unchanged for the rich

In relative terms, and considering the ratio of liabilities to incomes (leverage ratio – a common measure of financial health), richer households enjoy a low relative leverage ratio (total debt to personal disposable incomes), despite high absolute levels of debt. And the ratio has remained roughly constant over the sample period. The very rich simply don't need to borrow, being able to consume and invest out of current incomes and liquid assets.

Fig 24 Mean leverage ratios (debt to personal disposable incomes), 1998-2013 by income group



Source: SCF

The very poorest groups have seen leverage ratios rise the most

The poorest households on the other hand, despite seeing faster-than-average growth of liabilities over the sample period, have started from a very low base relative to incomes, having initially been considered too bad a risk to be allowed to own substantial amounts of debt. Unlike the very rich, the very poor have seen leverage ratios rise over the sample period, including during the financial crisis. Indeed, the two lowest paid income groups have seen the greatest increases in leverage ratios over the sample period, with increases of between eight to ten times, compared to three to five times for middle-income groups. The fastest

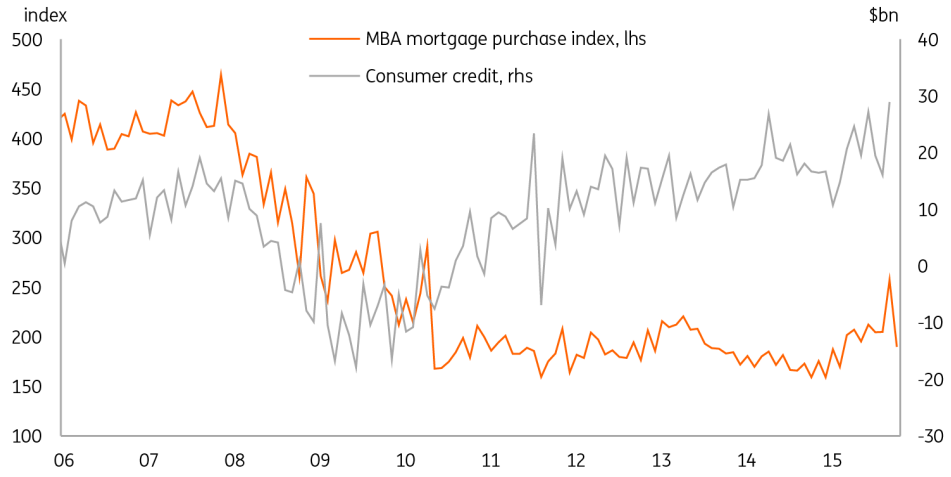
pace of increase for both groups looks to be between 2007 and 2010, coinciding with QE and the decline in borrowing rates.

Fig 25 Excessive debt to incomes – by income groups*

*Net % saying debt is too high relative to incomes
Source: ING-ASR US Survey of Household Finances

Indeed, this sense that the poorer income groups remain over-indebted relative to their incomes is supported by survey evidence, with all but the richest groups indicating that they continue to have higher levels of debt than they believe they should relative to their incomes – possibly having imagined that their incomes would rise faster over recent years than they in fact have.

Fig 26 Consumer credit outstanding (US$bn) and mortgage borrowing (index)



Source: Macrobond, Bloomberg

Middle-income groups are the prime target for bank lending given their better risk profiles

Middle-income groups are not rich enough to finance all consumption and investment out of incomes. Yet they have been a prime target for lending by banks and mortgage brokers, given their better incomes and lower risk profiles. The middle-income groups are all bunched together with relatively high leverage ratios. And despite some tendency to rise over the sample period, leverage ratios for these groups have dipped in recent years, probably again reflecting mortgage write-downs and default, as incomes have not risen substantially.

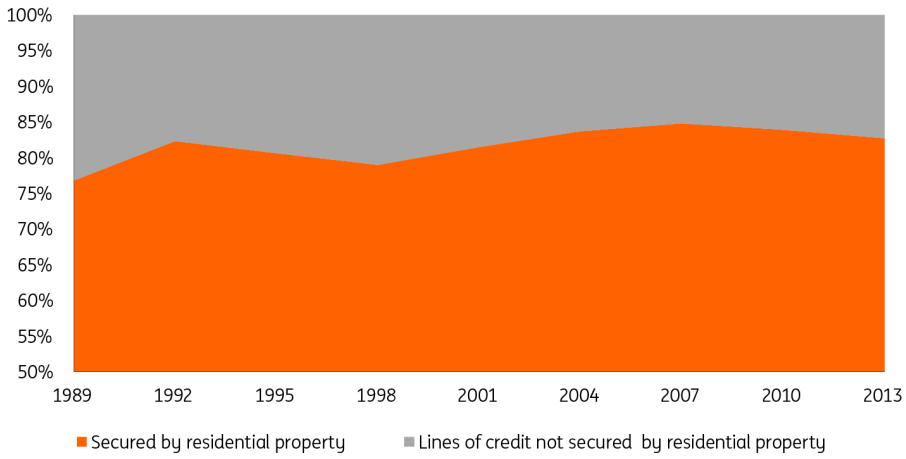
Leverage ratios are high for the young, but decline with age

Like assets, liabilities have a clear relationship with age. Leverage ratios start high for younger groups, and as households become older, and their incomes (and assets) rise and their debts decline, their leverage ratio converges on zero.

For many households, a mortgage on the primary residence is the main, if not only, liability

Much in the same way as the assets for most households, and in particular, the poorer households in the US were concentrated in the residential property market, the liability picture is very similar. Indeed, of all household liabilities, some 80% is secured on residential property.

Fig 27 Total liabilities by type of security



Source: SCF

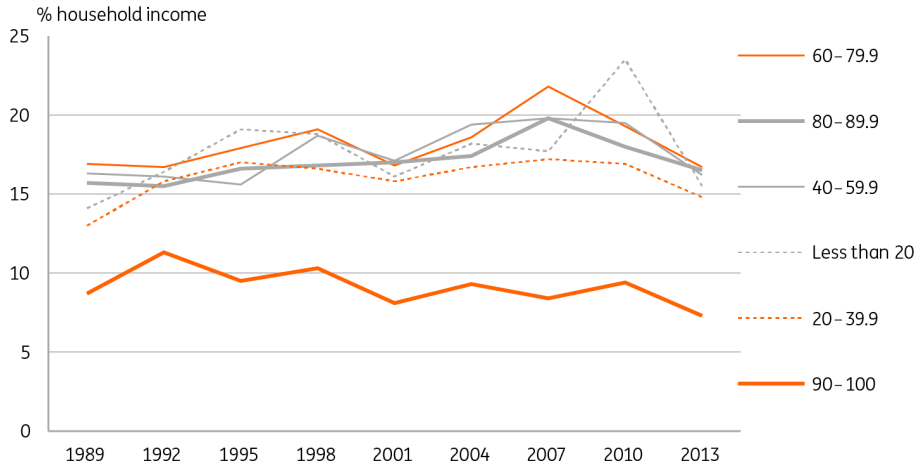
Buy-to-let mortgage liabilities dropped in the crisis, but remain higher than before the crisis

Within this total, the non-primary residence exposure of liabilities changed most substantially between 2001 and 2010, rising from 6.2% of the total to 10.1% by 2017, typically due to the rise in investment property (non-primary residence) purchases. This has since dropped back, though still represents some 9% of the total.

Instalment loans make up the second-biggest liability

A large chunk of the liabilities not secured on residential property is instalment loans, currently about 13% of the total. Auto loans are one of the biggest elements of this sub-total, but declining job and remuneration prospects have no doubt been a factor pushing up education loans, which now dominate the instalment loan segment, especially for the lower paid. Credit card balances have accounted for only around 2-4% of total liabilities over time, and this proportion has dipped from 3.5% in 2007 to only 2.4% in 2013.

Fig 28 Mean debt payments to family income (aggregate) by income group



Source: SCF

It is hard to say that greater borrowing by the poor following QE is an entirely positive development

For the liability side of the household balance sheet, the financial crisis and QE response leading to lower borrowing rates and increased borrowing could be argued to have disproportionately aided the poorer (and maybe younger) sections of the population, supporting spending and the housing market. Though arguably, given their weaker financial starting positions, higher leverage ratios for the lower income groups may not be considered by all to be an unambiguously positive development.

And overall debt service costs are not much different to pre-crisis levels except for the very rich

Indeed, though most income groups saw debt service costs decline as the financial crisis took hold and QE helped lower borrowing rates, the lowest income groups saw debt service costs spike in the crisis before falling again, potentially as lenders re-priced the risk of lending to what they viewed as higher-risk groups. Moreover, debt service costs for all except the richest groups are little changed from pre-crisis levels – this is arguably a better point of comparison, as debt to disposable incomes and interest rates were all rising in the run-up to the financial crisis. Looking at all except the highest income groups, the reduction in debt service costs in reality appears to have been marginal relative to previous periods.

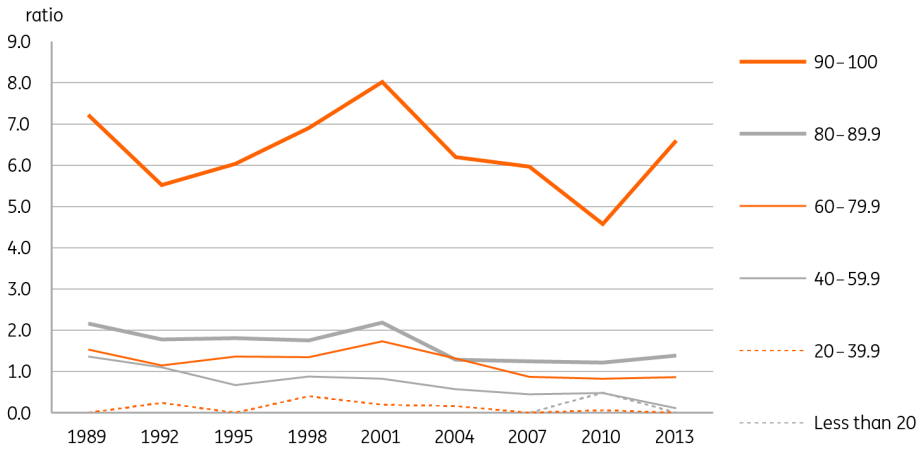
Liquidity of wealth is also important...

The topic of financial health is discussed in detail in a paper by Cynamon and Fazzari[4]. They make the point that financial health also has to take into account the liquidity of the assets held. So, for example, the primary residence may be the most valuable element of most household balance sheets, but it is impractical to sell this in order to realise cash. Likewise, as most investments in retirement accounts are locked away for a long period, and cannot be considered a ready source of liquidity, these should also be excluded from measures of financial health.

In the following charts, we show how the financial picture changes once liquidity is taken into consideration.

[4] Inequality, the Great Recession and Slow Recovery. Barry Cynamon and Steven Fazzari. 24 October 2014

Fig 29 Mean 'liquid' assets* to liabilities

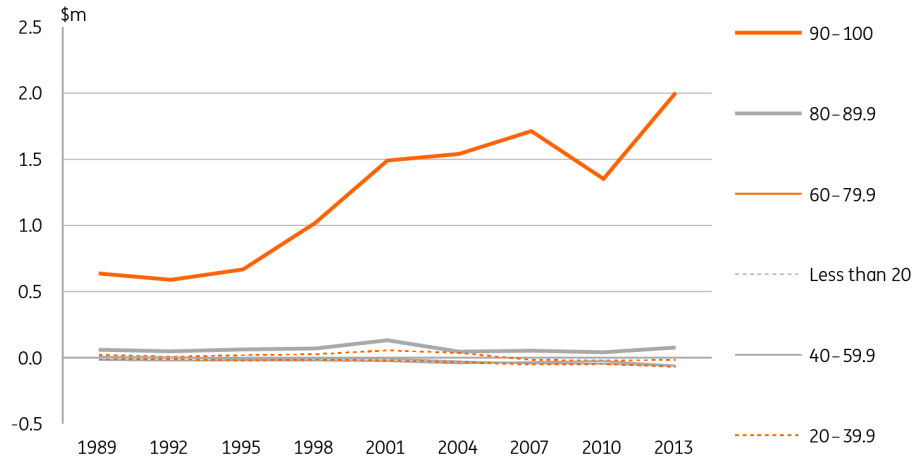


*Liquid assets are total assets minus primary residences and pension investments
Source: SCF

...and for most households except the rich, liquidity is very poor

Liquid assets (assets excluding primary residences and pension funds) to liabilities have generally deteriorated for most groups, though the very rich have seen a marked improvement since the end of the crisis. At the same time, net worth excluding illiquid assets is virtually zero for almost all household groups until one gets as far as the 60.0-79.9 quintile, when it begins to rise, and then surges for the highest income groups.

Fig 30 Mean net worth ex primary residences and pension funds



Source: SCF, ING

Part 1: Summary

The rich have done the best out of QE...

Following the debt-fuelled boom and subsequent asset price bust of the financial crisis, the remedy pursued by central banks, including the Fed, of boosting financial asset prices through QE and encouraging debt take-up with lower interest rates has disproportionately benefited the very richest parts of society – given that it is this group that owns the vast bulk of all financial assets.

...and the poor are not well positioned for normalisation of interest rates

Whilst it could be argued that making loans for poorer (and younger) households cheaper has been a benefit to them, it has also coincided with and perhaps encouraged greater leverage for many of the poorest groups, worsening measures of their financial health, and potentially, storing up problems for the future as these households will be the least able to cope with rising debt service costs.

Whilst QE did not create wealth inequality, it may have exacerbated it

Inequality of incomes and net worth existed before QE, but looks to have been exacerbated by it. Moreover, considering this alongside the relative weakness of wealth effects, and the propensity of lower income households to spend proportionately more of their incomes, does lend support to notions of secular stagnation. At the very least, it highlights the inefficiency, and shortcomings of recent unorthodox monetary policy. But as the following section will suggest, in addition to inequality and inefficiency, there are some grounds for thinking QE may have actively hampered growth in the years following its initial implementation.

Part 2: Aggregate analysis

Incomes

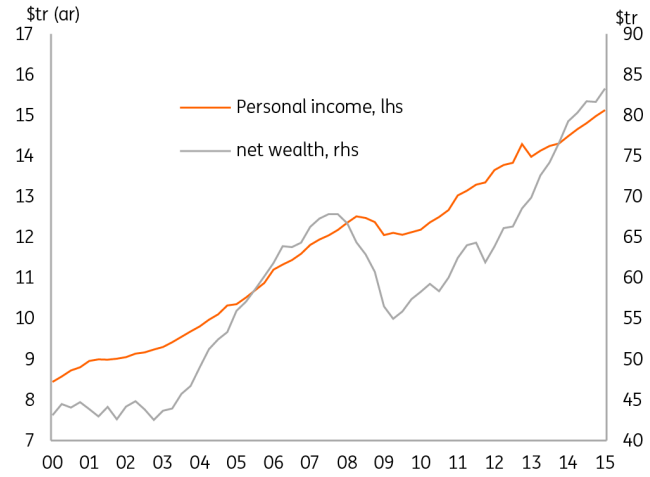
Wealth growth should be a function of economic growth...

In very simple economic models, wealth accrues from accumulated savings. So for constant labour shares of income, steady savings rates, and investment returns in line with income growth, wealth should grow at a pace which is a function of economic growth.

...and savings

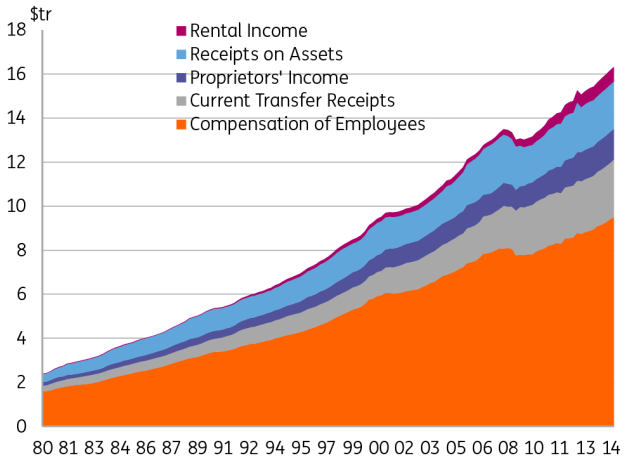
For lower-income households, this simplification of the real world may not be too far from the truth. Where there is scope for savings, which may be limited for more income-stressed households, these will tend to accrue as cash or near-cash savings, deposit accounts and other liquid instruments with a low interest rate. So wealth accumulation will not occur much faster, and potentially slower in real terms than the pace of income growth.

Fig 31 Personal income and net worth



Source: Macrobond

Fig 32 Sources of household incomes



Source: Macrobond

But wealth can grow significantly faster than incomes... especially at low growth rates...

For the US economy as a whole, a comparison of the dollar gains in wealth and income suggest that wealth is growing significantly in excess of the pace of incomes, or the economy as a whole (a point Thomas Piketty has formalised in his recent work[5]).

However, when viewed on a comparative scale (Figure 31), although aggregate nominal household incomes are only some US$7tr higher than they were back in 2000, compared to an increase of closer to US$40bn for net worth (assets minus liabilities), the percentage growth of incomes of about 85% is not that far off that for wealth, which is closer to 100%.

...and it seems to have done just that

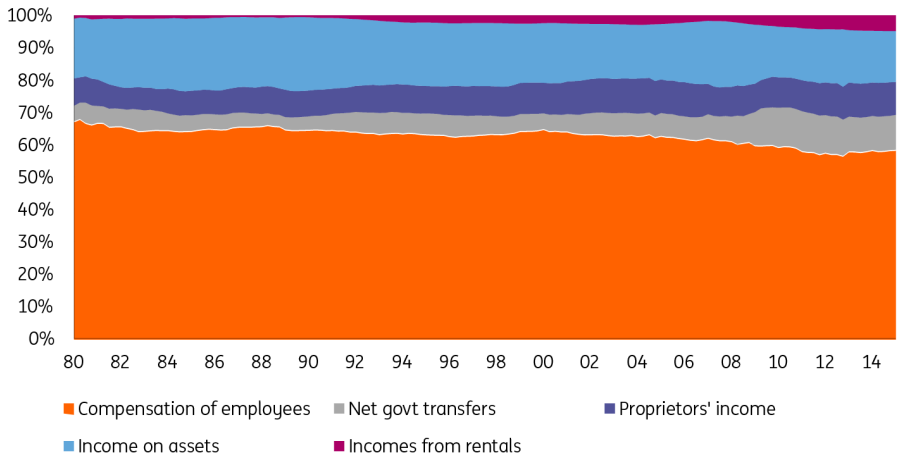
Whether or not this is a meaningful comparison is another matter, as incomes are a flow, and wealth a stock. But such small deviation as there is could be explained through relatively weak incomes growth. Wealth should continue to increase even given flat incomes, assuming a positive savings rate.

[5] Capital in the twenty-first century. Thomas Piketty. August 2013

The contribution of wages to household incomes has declined over time

In terms of the composition of household incomes, what we also see from the data is that there has been a marked decline in the contribution of wages and salaries to total incomes. The wages share is now down from about 70% in 1980 to only about 63% today, with the difference mainly made up through increases in transfers, and proprietors' incomes (small family businesses). Rental income (gross) from property ownership is also up about 4 percentage points over this period from virtually a zero share back in 1980.

Fig 33 Household income by source

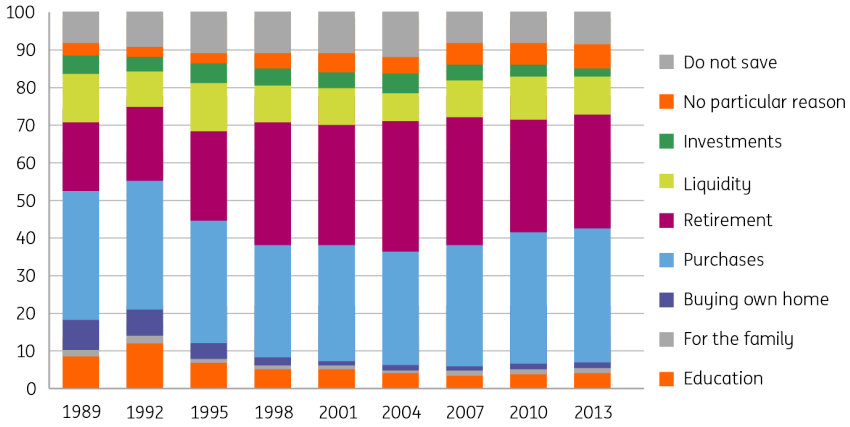


Source: SCF

Although proportionately more assets are owned, their contribution to incomes has declined

However, despite the rise in financial assets owned, the proportion of total income from assets has also fallen over the same period by about 2 percentage points to a little over 14% today.

Fig 34 Reasons for savings



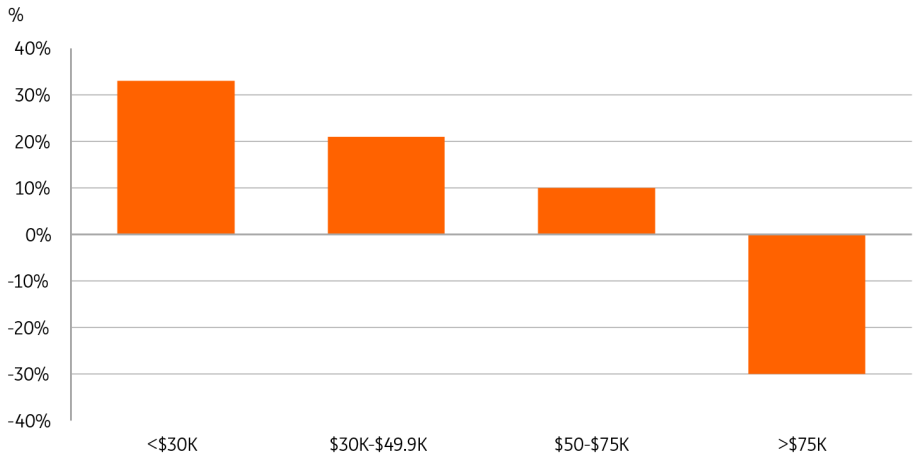
Source: SCF

Falling interest rates may have encouraged greater saving to offset declining incomes from investments

With yields as low as they are on most financial assets, one explanation for this trend may be that households are increasing the volumes/values of assets they hold to offset declining income yields from them and from sources of employment income. This interpretation ties in with the reasons why households save, with 'liquidity' (35.8%), retirement (30.5%), and more latterly education

(8.6%) – a big future outlay for many American households – being the principal drivers for saving.

Fig 35 Attitudes to the level of interest rates by income group*

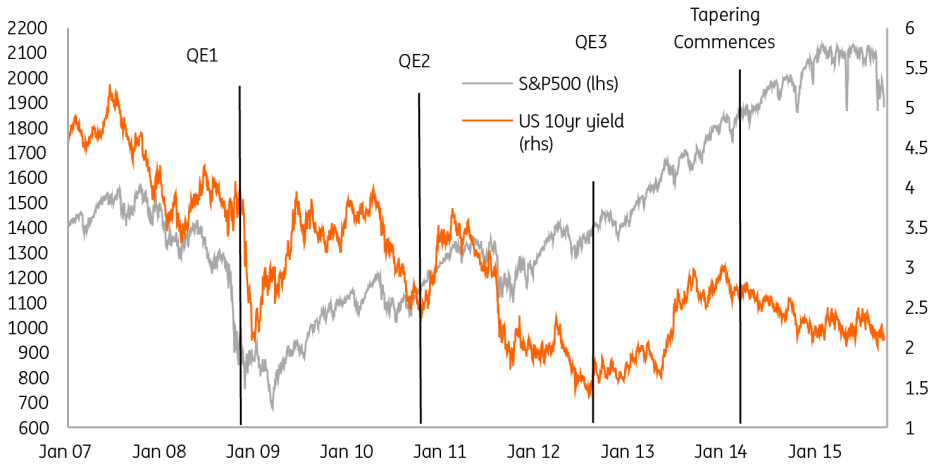


*Net % think interest rates are too high
Source: ING -ASR US Survey of Household Finances

...though this is perhaps more likely to have been reflected in greater saving by richer/wealthier households

When questioned about the level of interest rates, US households are again polarised by incomes and wealth, and also the extent to which they already invest in financial products, with a clear overlap of higher incomes and wealth to investor/non-investor status. Survey evidence provides some support for our notion that lower rates have encouraged some additional acquisition of financial assets (saving), with the richest groups most likely to purchase these assets, also indicating that they view current interest rates as too low on balance. Meanwhile, poorer groups typically see interest rates as too high.

Fig 36 Equity prices and bond yields during and after QE regimes

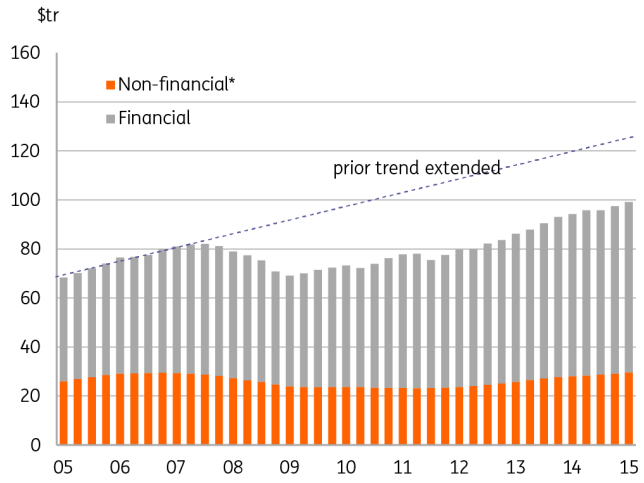


Source: Macrobond, ING

Assets

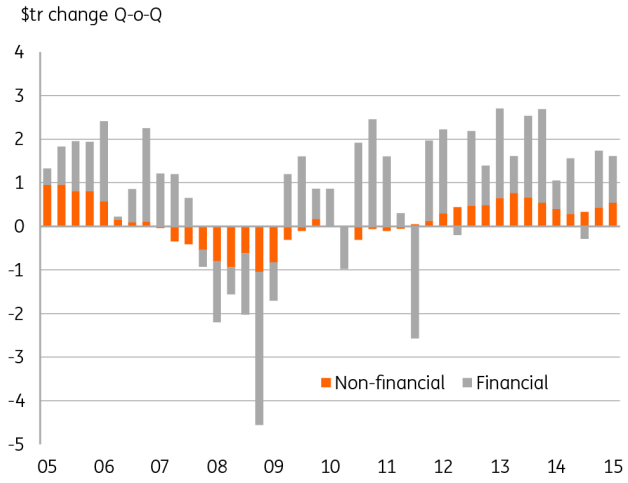
So if incomes do not seem to have benefited substantially from QE (and perhaps in some cases where reliant on income streams from investment assets, suffered), what of asset accumulation? We start our analysis of changes in household assets with an overview of aggregate data from the flow of funds data.

Fig 37 Assets for households and non-profit institutions



*Largely residential property, see text
Source: Macrobond

Fig 38 QoQ change in household assets



Source: Macrobond

Asset accumulation has been dominated by financial assets since the crisis

The charts above show household assets at quarter end, peaking at a little over US$80tr in 2007 before the financial crisis started to bite, falling sharply by about 13% to only c.US$70tr at its worst in 2009. Since then, the asset position has risen by about 40% to within a shade of US$100tr. Based on the previous trends in asset growth, this leaves the total asset position about 25% lower (about US$25tr) than a simple extrapolation of the prior trend. However, looked at from a longer run perspective, this pre-crisis period of asset growth does look to be unusually fast, and most likely associated with borrowing spurred by the house price bubble that preceded the subsequent bust and financial market crisis. In contrast, the most recent period of asset accumulation has been dominated by financial assets.

Current asset accumulation is in line with pre-bubble trends

The most recent improvement in total asset positions for the household sector does not look particularly sluggish if the periods from 1997 to 2009 are considered aberrations with their accompanying market corrections. In that case, recent asset growth looks more like a continuation of the trend prior to this period, and before house price inflation began to accelerate towards its eventual mid-2006 peak.

Within the overall aggregate for household financial assets, equities have shown the greatest volatility, compressing sharpest during the financial crisis, but also expanding the fastest in the recovery. Mutual funds show a similar pattern, though are only about half as large as household holdings of corporate equities, and there is also a similar, though less marked, pattern in pension fund holdings.

The household sector owns few Treasuries directly

Interestingly, the household sector as a whole owns relatively few Treasuries directly, though it will do so as an element of managed pension fund holdings and pooled investments. The same is true of open market paper, corporate equity,

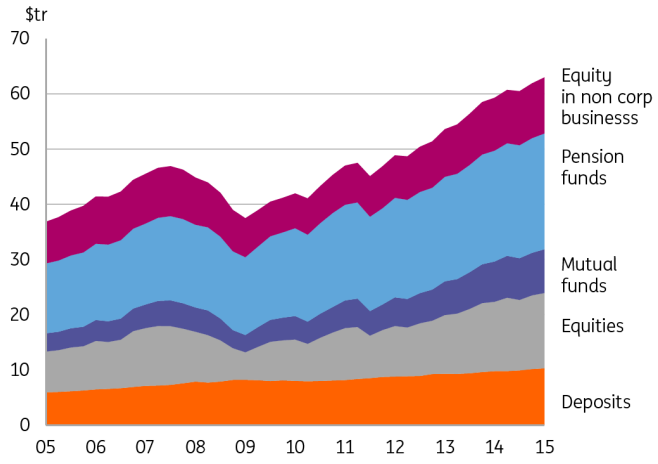
agency and municipal debt. Together, these and other miscellaneous asset types do make a significant contribution to total asset holdings of the US household sector, but individually, they do not, and we will not consider them in any further detail here.

Holding of non-financial assets are dominated by primary residences

Holdings of non-financial assets by households are dominated by residential property. For the first twenty years of the post-war period, property remained fairly constant as a proportion of non-financial assets. But through the 1970s, this ratio began to drift higher, promoted by government policy and tax incentives for mortgage borrowing. There have been cyclical peaks and troughs throughout this time, though the peak in 2006 at close to 85% of all non-financial assets (33% of total assets) does seem to differ substantially from previous peaks in its magnitude and deviation from previous trends. If there were any doubt about the US housing market being in a bubble at that time, with hindsight, it looks fairly clear that it was.

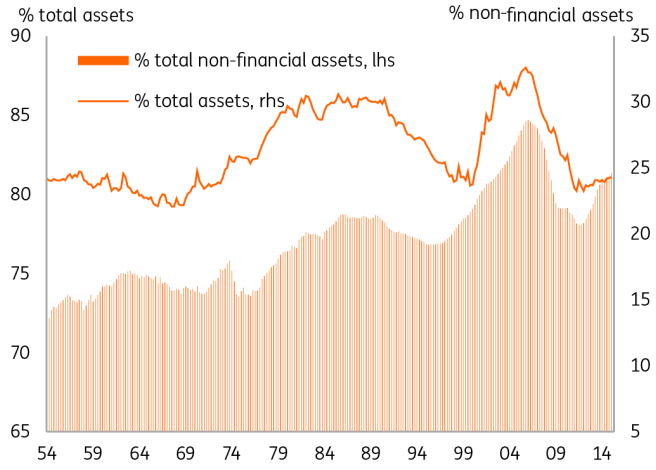
Ownership of property has risen strongly again since the end of the crisis, and at over 80% of non-financial assets, is closing in on the higher end of the trend of recent peaks of ownership of these assets, though not in terms of total assets, accounting for only 24% of this total, and only 2ppt above the low since 1954.

Fig 39 Main financial asset types held by households



Source: Macrobond

Fig 40 Property as % of assets



Source: Macrobond

It does not look as if we have entered a new house price bubble, yet

House price growth is currently, barring some pockets in places such as Manhattan, not particularly alarming. If this is a re-run of the property bubble, it looks like early days, with plenty of time to moderate policy before things get too messy.

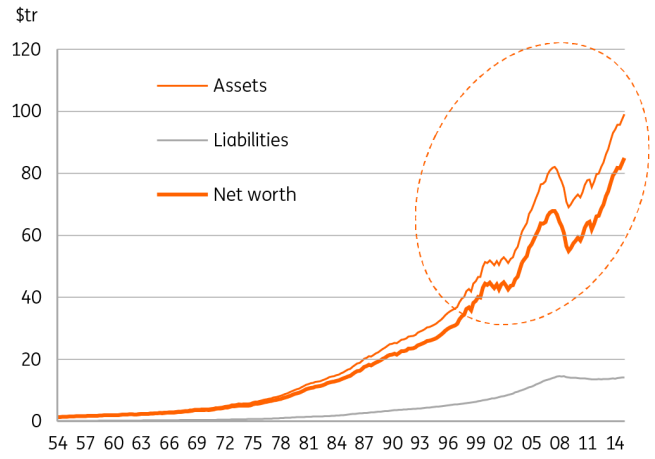
Property prices are likely benefitting from QE

Is this current property pick-up also a side effect of QE? It certainly could be. With yields on assets such as bonds having fallen as bond prices have been bid higher, and rates on accessible savings instruments such as time deposits running close to zero thanks to Fed policy, housing has offered an alternative, if illiquid alternative, source of savings. Real assets (in particular, property) have been consistently popular with both institutional and retail investors, especially as they worried about the debasement effects of QE on the internal, and external, value of the dollar.

Financial asset price swings have dominated asset volatility in recent years

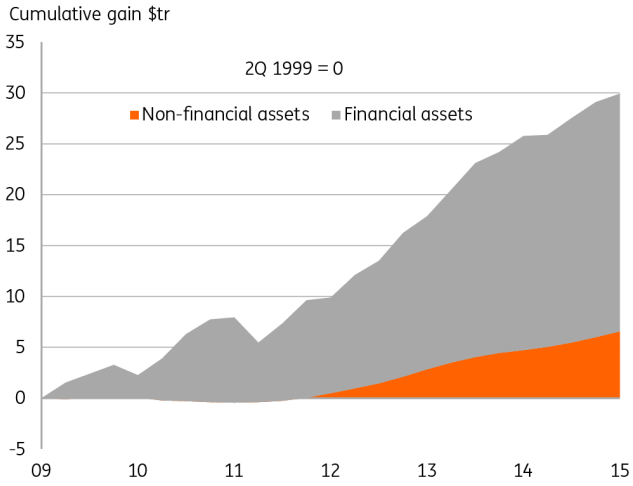
However, in the period leading up to the financial crisis, prior to QE, it was financial, not non-financial assets that were the strongest source of additions to gross household assets, and they also fell the most rapidly during the crisis. At one point during 2008, financial asset declines (largely equities) wiped off more than US$3tr from household net worth in one quarter alone. This is three times more than the loss from the worst fall in non-financial assets in any one quarter.

Fig 41 Longer run view – assets and liabilities



Source: Macrobond

Fig 42 Cumulative gain in financial/non-financial wealth

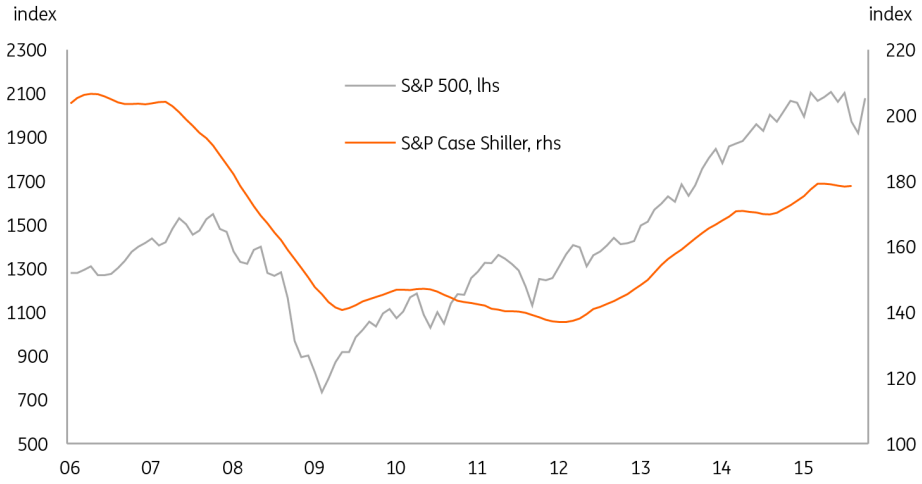


Source: Macrobond

Financial assets have dominated gains in household wealth

The volatility of financial markets during the crisis has been more than matched by the gains in financial assets during the recovery, with the cumulative gains from mid-2009 close to US$25tr in total (or 45%) by 1Q15, whilst non-financial asset gains over the same timeframe, of which 81% are residential real estate, were a mere US$5tr (26%).

Fig 43 Equity and residential housing price gains, 2006-15



Source: Macrobond

What would have happened in the absence of QE, we will never know

So what would have happened without QE? How much less (if at all) these financial assets would have risen in price without QE we will never know. Indeed, there is a very real chance that both financial and non-financial asset prices would have crashed, and perhaps not recovered. What we do know is that the impact of wealth gains, particularly from financial assets on personal spending behaviour are weak, with the full effects only being felt over many years. We also know that incomes from assets have declined by about 2% of total incomes over this time.

It looks as if QE might be promoting greater financial asset ownership by depressing rates…

Based on the prior analysis, we think that a case can begin to be made for suggesting that the causation of QE is from low yields to higher ownership (greater pace of accumulation) of assets. Realistically, the causation here is going to be circular, and complicated by such factors as wealth effects and the age make-up of the population. Our suggestion, while it does not refute the secular stagnation arguments based on inequality, suggests that in addition, there is something even more complicated going on than a simple transfer from the poor to the rich.

…and encouraging asset accumulation to compensate for falling projected income streams

In short, the household sector in the US may have even more financial assets than they did before QE, not just because they have benefited from the price effects emanating from that policy, but because they have bought more financial assets to satisfy target revenue streams from these holdings as yields have fallen. Changes in the age composition of the population could be important here. Declining future streams of income from asset holding is perhaps a greater motivation for saving by those of younger to prime working age, who have still to build up a satisfactory asset portfolio for retirement than for those already in retirement. For the already retired, the price effect on assets following QE may be more important.

This effect could have weighed on current consumption

For those members of the population for whom yields are more important than price effects, increases in net financial asset accumulation on a transactions basis may have been paid for by reductions in current discretionary spending, net of any wealth effects. This is a tricky counterfactual, complicated by unequal wealth distribution and declining propensities to consume out of income as incomes rise. But there is strong evidence that consumers are less inclined to spend realised gains in financial assets than they are, say, to spend incomes from employment and other sources.

Estimates of wealth effects may overestimate the impact on the economy, if concentrated with the rich

Estimates from the Federal Reserve Bank of New York and elsewhere put wealth effects on spending at about 5.5 cents for every dollar of capital gain, which in the case of equity gains, are spent only over a five-year period, with similar impacts from residential property gains, though spent far quicker[6,7]. With wealth increasingly concentrated in the hands of the rich, and very rich, we question whether even such weak wealth effects on spending may have further weakened since these assessments were undertaken.

Transaction flows show increased purchase of assets following QE…

Flow of funds data further shows that gains in aggregate household asset holdings following the introduction of QE in the US were not simply the result of rising asset prices. Whilst the bulk of the charts we have constructed in this section are time series for household balance sheets, and include price as well as volume changes, the flow of funds data also provides 'transactions' data, removing the effect of price changes of financial assets.

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[6] Housing Activity and Consumer spending. Jonathan McCarthy and Charles Steindel. FRBNY, 2006.

[7] Housing Wealth Effects: Eric Belsky and Joel Prakken. December 2004

...especially pension funds, mutual fund shares, time and savings deposits

What the charts below demonstrate is that during the period since the recovery in the US economy (around mid-2009) until the present time, there has been a substantial increase in household transactions into financial assets, in particular, pension funds, mutual fund shares, and time and savings deposits.

Not all financial assets boomed post-QE...

Not all financial assets boomed as strongly during the period following QE. Municipal bonds did poorly, no doubt tainted by the monoline insurance problems of the crisis. Money market funds also were taken up in much smaller quantities than previously, no doubt hit by collapsing yields, and corporate and foreign bond take-up also did badly.

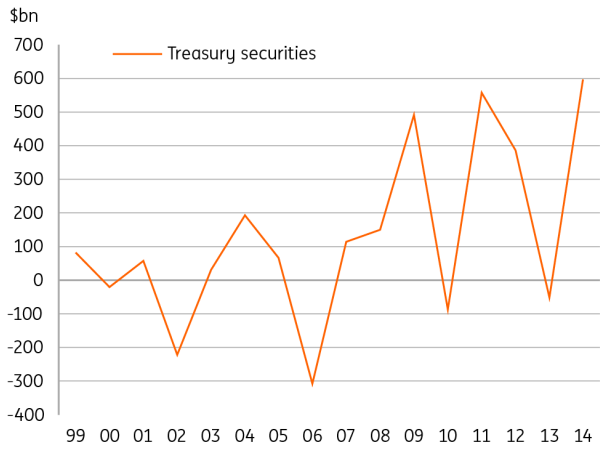
...but overall, financial asset accumulation has risen faster than disposable incomes growth

Nonetheless, and from an admittedly depressed base, total accumulation of financial assets over this time have grown from an annual pace of about US$0.96tr per annum to around US$1.5tr, whilst over the same time, personal disposable incomes have risen from about US$11tr to about $13tr. Had financial asset accumulation accumulated at the same pace as incomes, they would have risen to an annual pace of only US$1.1tr, suggesting that something like an average US$100bn per annum in additional purchases are occurring in this environment – that is about 0.8% of current annual consumer spending. This analysis is sensitive to starting points, but it does suggest that a period of QE was consistent with, and perhaps encouraged by, a much stronger take-up of financial assets than can be explained by income growth alone.

These flows can explain some of the mediocre economic growth following QE

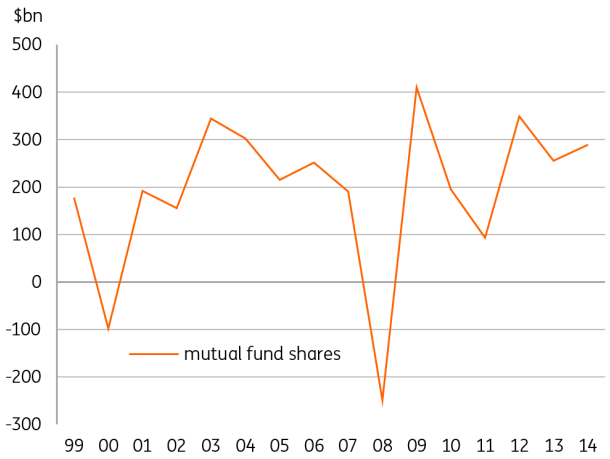
Even if current low rates and previous unconventional policies account for only a fraction of this transaction increase, with the rest explained by the bounce from very depressed crisis levels of asset accumulation, and household re-balancing, these totals are sufficiently large that if some portion of these transaction flows could have been diverted instead towards consumer spending, they could have made a meaningful difference to overall US GDP growth.

Fig 44 Net acquisition of Treasury securities



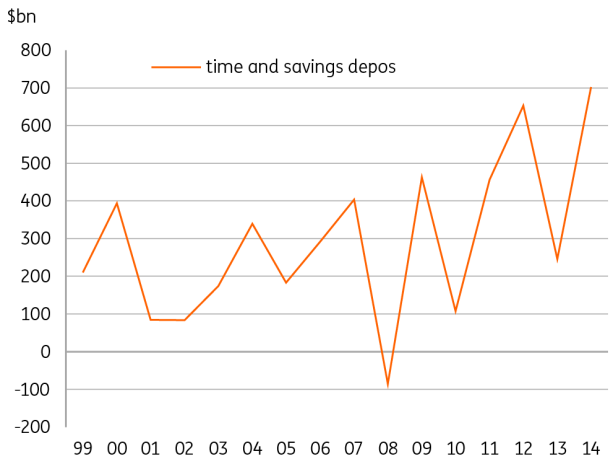
Source: Macrobond

Fig 45 Net acquisition of mutual fund shares



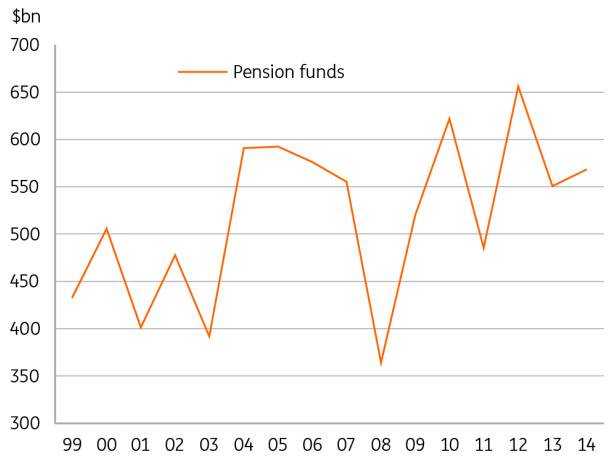
Source: Macrobond

Fig 46 Net acquisition of time and savings deposits



Source: Macrobond

Fig 47 Net acquisition of pension funds

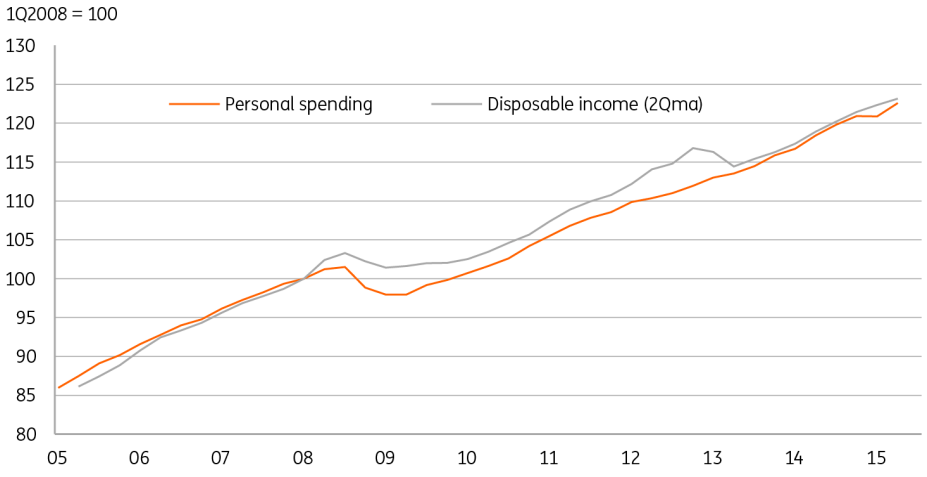


Source: Macrobond

Wealth effects from bouncing asset prices should have been substantial....

Against this, we have to consider the offsetting wealth effects stemming from rising asset prices under QE. Earlier, we indicated that the QE period had seen around US$30tr of household increases in financial and non-financial assets, largely, though not wholly, from capital gains from the trough of prices. Given the existing, though perhaps generous, estimates for such wealth increases on spending, this would imply a total increase in spending of about US$1.65tr. Spreading this over five years as the analysis suggests, should have delivered a US$300-$400bn annual boost to personal spending (approximately 2% of disposable personal income). This is substantial. But against this, we need to net off the rebound in financial asset accumulation over the same period, whatever its drivers, which would offset about a third of that.

Fig 48 Personal spending and disposable income (nominal index)



Source: Macrobond

...but in reality, it is hard to see these having any effect at all on spending

However, the history of personal spending and disposable incomes does not suggest any increase in spending other than what is consistent with disposable incomes. If wealth effects are at play here, or debt service cost reductions, then they appear to have been subsumed by something else, and for a large part of the recovery, to have lagged behind incomes growth. If QE had the impacts the ready-reckoners would have us believe, then it is not apparent here.

If there had been no QE, then no doubt asset prices and consumer spending would have been even worse....

That said, it seems highly reasonable to argue that had they failed to implement QE when they did, the Fed would have risked a substantially bigger collapse in asset prices, business investment and consumer spending. And the recovery of net asset accumulation following the crisis could owe to more than just the influence of QE and policy rates at zero. However, at the very least, we think that the evidence from flow of funds and other sources raises question marks over the benefits from extending such policies long beyond the initial crisis, and it is possible that we might have seen a stronger consumer spending recovery in the latter parts of the recovery if such policies had been scaled back earlier than we have in fact seen, albeit possibly at the cost of less buoyant financial markets.

...but does this justify the length of time and the extent that such policies have been pursued

If so, then aside from any considerations of the adverse distributive effects of QE, which do appear to be substantial, the double-edged nature of boosting financial asset prices through money printing suggests a need for considerable caution with respect to repeat performances of QE in the event that growth weakens again. There is perhaps also a stronger case too for not delaying the selling down of the assets accumulated on the Fed's balance sheet once policy rates do start to be raised.

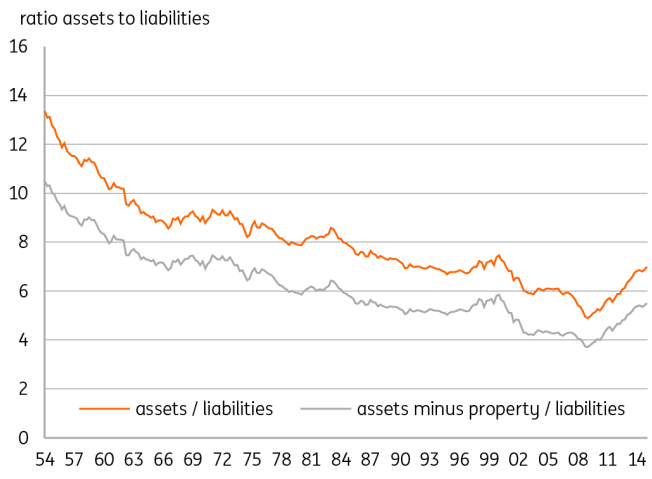
Liabilities

Assets have been falling relative to liabilities since records began

The aggregate household balance sheet is dominated by assets. Yet the ratio of assets to liabilities has been in a long-term decline almost since records began.

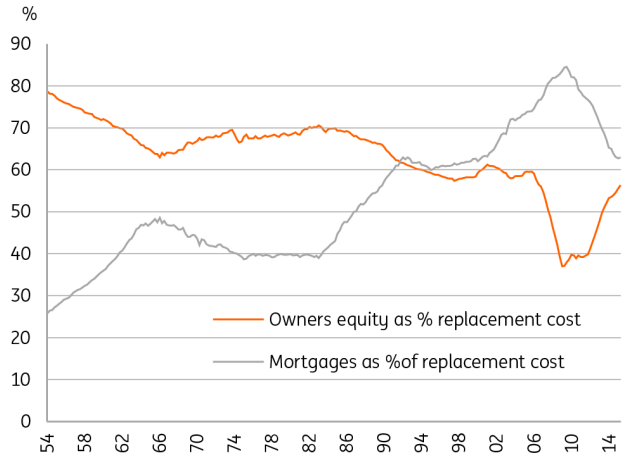
This trend began to change in 2009 as the economy and financial markets began to turn the corner and emerge from the crisis. This turnaround was probably also given a helping hand by the confidence-boosting effect of QE on asset prices (whereas most liabilities will be a fixed-dollar amount). On top of this, active decisions to reduce leverage by the household sector, as well as default, reduced the proportion of outstanding mortgages of the replacement costs of property from 85% at its peak to only about 60% – the pre-crisis level. Meanwhile, owners' equity as a proportion of replacement costs has risen close to pre-crisis levels, also at about 60%.

Fig 49 Ratio of assets to liabilities



Source: Macrobond

Fig 50 Home owners' equity and replacement cost



Source: Macrobond

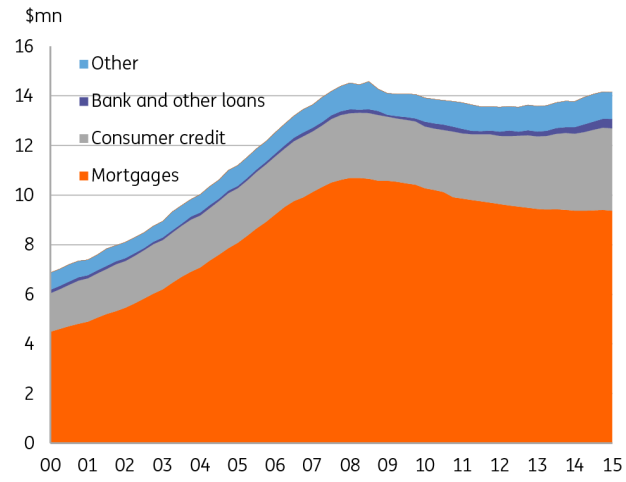
Mind-boggling debt numbers tend to ignore even more mind boggling asset numbers...

The frequently expressed worry by politicians, journalists and other concerned pundits about the level of household indebtedness (usually expressed as some mind-boggling dollar term) usually omits the important fact that, even with the reduction of assets to liabilities (increase in the leverage ratio), assets still exceed liabilities by many times, and the debt service costs of overall liabilities (financial obligations ratios – for the most part mortgages for the household sector) are no higher now (in fact lower) than they were back in 1980, when this data was first collected.

...though the liquidity argument is perhaps a more important one than overall levels

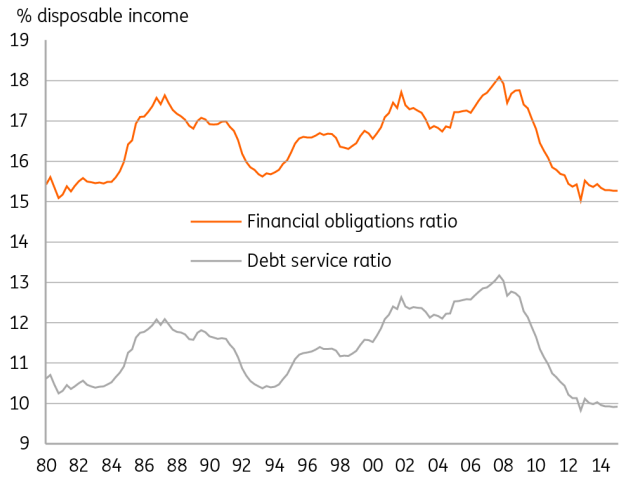
Having said this, a more reasonable criticism would be the point we made earlier, that except for the very rich, liquid assets to liabilities are very low, and net worth ex-pension savings and primary residences are close to zero for a large section of the population. Indeed, one key message from the earlier discussion is that aggregate measures of net wealth, incomes and financial health may be highly misleading, given that they tend to be dominated by the small proportion of the population that owns the majority of all assets.

Fig 51 Household liabilities by source



Source: Macrobond

Fig 52 Financial obligations and debt service ratios



Source: Macrobond

Aggregate debt service ratios fell following QE, though this benefit mainly accrues to low-spending rich households

On an aggregate basis, debt service costs (and financial obligations ratios) fell by about 3 percentage points of personal disposable incomes over the five years since they peaked in 2008 to their current level of about 10% (15% for financial obligations ratios), which was reached by 2013. Over the period during which debt service costs declined, households should have benefited by around 0.6ppt of personal disposable income per annum, and all things being equal, we might have looked for a similar boost from this to personal spending trends.

Wealth effects and lower debt service costs should have offset increased asset accumulation...

Indeed, together with the wealth effects stemming from higher asset prices, these two effects should have been more than enough to negate the net effects of increased asset price purchase. Combining the wealth effects and lower costs of servicing liabilities relative to net asset acquisition leaves our tally at only about 2% of annual disposable income.

...but it is not clear that they have

This net effects of the QE effects considered ought to have provided a substantial boost to consumer spending, though the rebound of consumer spending in the US in this recovery has been nothing special. The answer to this conundrum, we think lies with our earlier analysis of incomes and wealth disparity. The skewed income breakdown of debt service costs to favour the rich, massively unequal financial

wealth distribution and low average propensities to spend for the rich, are all likely explanations for why QE has been a much more marginal monetary stimulus tool than suggested by the sort of netting calculations we have performed.

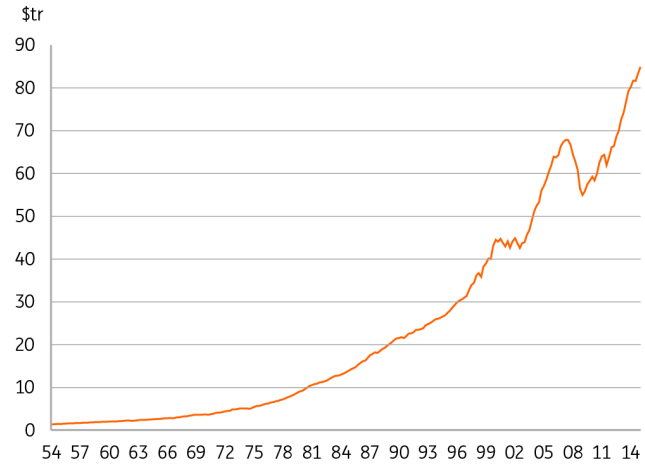
Net worth and savings rates

Net worth in the US is higher relative to disposable income than it is in most European countries

The evolution for aggregate net worth in the US looks very much like the time series for assets, given how much greater household assets are than liabilities. As a result, net worth charts look like a slightly deflated asset history.

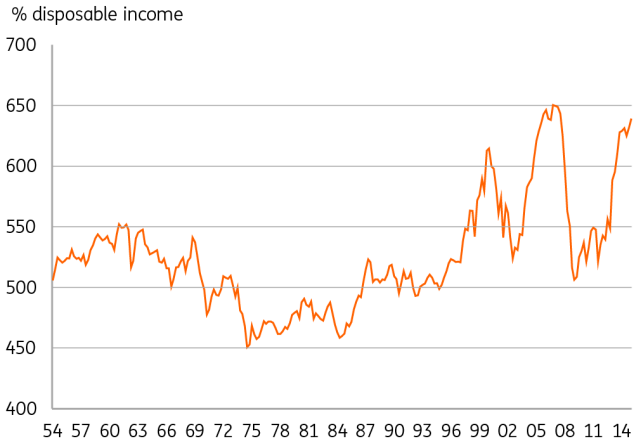
US household net worth is currently close to 6.5 times disposable income – more than in most European countries, and not far from pre-crisis peaks, which were themselves post-war records.

Fig 53 Net worth (US$tr)



Source: Macrobond

Fig 54 Net worth as a % of disposable income



Source: Macrobond

On one level, household balance sheets appear to be in relatively good shape...

So on one level, and contrary to the debt doom-mongers, the US aggregate household balance sheet looks to be in reasonably good shape right now. Asset holdings have been buoyed in price terms, if not in yield, by the Fed's QE programme, encouraging asset ownership either on the expectation of the price pick-up, or alternatively, encouraging greater ownership to compensate for falling yields. At the same time, liabilities have been trimmed, in absolute terms only to a small extent, but certainly in terms of disposable incomes and also as a ratio with assets. Finally, debt service costs are still remarkably low.

...but that might change as interest rates begin to rise

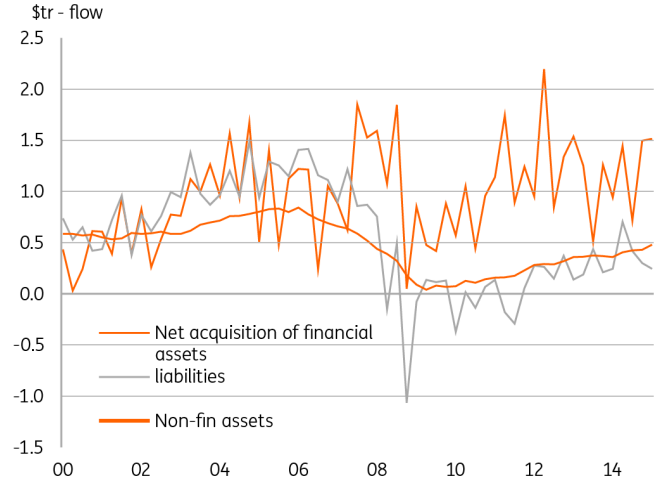
That said, we appear to be headed towards a period of rising interest rates, and if so, this could spur households to (a) acquire financial assets at a slower rate as yields recover, and (b) refrain from borrowing as fast as they have during the recovery, as debt service costs rise. There could also be some distress for the lowest 60% of households by income, who we have shown to have very limited access to liquid assets in the event that debt service costs once again begin to rise.

Savings rates have remained high, helped by financial asset accumulation

Household savings rates are derived from the difference between net financial and non-financial asset accumulation and liability growth, and are expressed as a

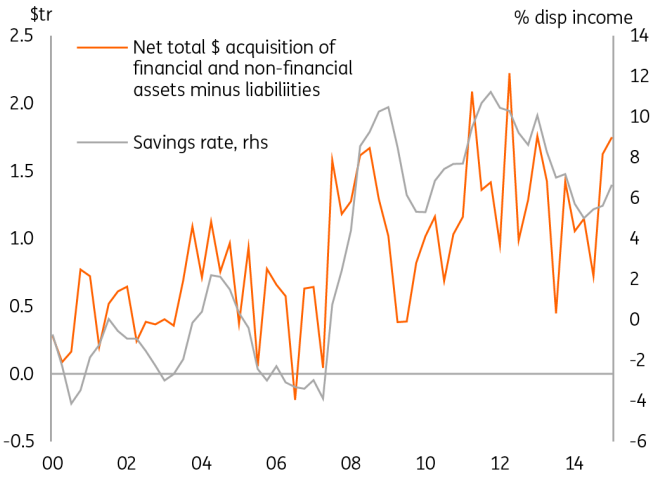
ratio to disposable personal income[8]. The previous analysis shows that although the crisis caused a collapse in asset accumulation, it was liabilities that fell the sharpest, driving up the savings rate (incomes growth was very soft). And whilst QE delivered a boost to both asset accumulation and liabilities growth, it was the asset side of the balance sheet that bounced the most, helping to keep savings rates high, even as the recovery continued.

Fig 55 Net acquisition of financial assets (NAFA), non-financial assets and liabilities



Source: Macrobond

Fig 56 Net 'savings' and savings rates



Source: Macrobond, ING

As rates rise, savings rates could fall, resulting in some boost to spending

Now that rates in the US are arguably on the verge of rising, it is reasonable to expect asset accumulation to slow more than liabilities, and for the savings rate to drop. This is somewhat at odds with conventional economic thinking, but is another way of saying that QE has benefited Wall Street, but not necessarily Main Street. This could be about to change.

The aggregate analysis cannot take us much further. But before we turn to our overall conclusions for this note, it is perhaps worth summarising some of the main surprises and controversial lines of further enquiry emanating from this section.

1 It is not unusual to see wealth growing faster than household incomes (especially at low rates of GDP growth). In other words, the income/wealth dispersion is not abnormal, but to be expected. This is not to say that it is necessarily desirable, or that it should not be addressed with fiscal or other policies.

2 Households have bought more assets since the onset of QE, particularly financial assets, and may be offsetting lower yields on some assets by greater holdings to maintain incomes from assets. If so, then this could lessen the positive impact of other responses to QE, namely wealth effects from higher asset prices, and lower debt service costs. The net impact of all these countervailing effects is open to debate. And it is further affected by the inequality of asset holdings of household groups benefiting from these policies. But it does suggest that the benefits may have been more marginal than anticipated at their instigation.

[8] See also table F6 footnote 6 from US Federal Reserve Flow of funds for savings rate definition.

3 US aggregate household balance sheets do not appear to be in too bad a shape, but the move to higher rates could see improvements slow. However, if this were to lead to stronger consumption out of current incomes – it would not be a bad result from the current position.

4 The statement above is subject to the very unequal distribution of incomes, assets and liabilities demonstrated in the first part of this note, and to the low access to liquid assets for a considerable proportion of the population. A broader conclusion might be that aggregate measures of the US household balance sheet, or household savings rates, are highly misleading representations for large parts of the US population, for many of whom financial health has worsened.

Conclusions

The US household sector has seen incomes and wealth disparity increase under QE

In the first part of this note, we showed how unevenly US incomes and wealth are distributed, how this was becoming even more unequal as the financial crisis loomed, but how the very rich had lost proportionately more than the poor in terms of income and wealth volatility during the crisis, but equally, benefited more than anyone else from the policy remedies of QE afterwards. This has left income and wealth disparities more marked than ever. With low propensities to consume by higher-income households from wealth, the boost to personal consumer spending in the US from these policies has likely been considerably smaller than would have been the case had more households than just the rich and very rich been more exposed to the effect of asset price increases.

Lower rates have encouraged poorer households to increase their liabilities

Furthermore, despite lowering debt service costs for the household sector as a whole, a secondary effect of QE on low-to-middle-income households has been to encourage them to increase their leverage to take advantage of low interest rates. Whilst this may have encouraged home ownership and consumption at the lower-end of the income spectrum, it has also tied the poorer-income segments of the population to higher levels of leverage and lower accessibility to liquid assets, thereby making them more vulnerable to financial stress in the event that stimulatory policies are unwound. One could therefore argue that the greatest benefit of QE has been to boost purchases of real and financial assets and their prices, whereas the real economy has seen only indirect benefits, if any, stemming from theoretical wealth effects, which do not seem to have fully materialised. This is possibly because these wealth gains have largely accrued to rich households with low propensities to consume, and who may also have been more likely to respond to lower interest rates by saving more.

The elderly, as a whole, have fared better from QE than the poor, though with glaring exceptions

For the elderly, the story is similar to that for the higher income groups – though no doubt with glaring instances of asset and income poverty in old age, making a generalised comparison difficult. With that caveat firmly stated, the younger groups of society, like the poor, have been left with very little as a result of QE. However, this in turn may prompt a bigger transfer of wealth between generations, as rich baby-boomers gift assets to their millennial offspring, tying the fortunes of the young closely to those of their older relatives. Moreover, following QE, and perhaps exacerbated by it, the disparities of incomes and wealth between the 'haves' and the 'have-nots' and the old and the young are larger than ever before.

QE may have encouraged a greater take-up of financial assets to compensate for falling rates

The second part of this note confirmed that one of the main effects of QE was to encourage purchases of financial (and non-financial) assets. Although this in turn boosted asset prices and may have delivered boosts to spending through wealth effects, the short-run effects of substitution from current spending to net financial asset accumulation may have considerably dampened the revival in consumer spending. Together with considerations of inequality, this asset accumulation could be an additional contender in explaining the economic malaise experienced in the US and elsewhere following the crisis and experiences of QE.

The unintended consequences of QE and other unorthodox policy actions could be significant...

It is worth considering that given the ageing of the US population and the consequent differences in wealth and income distributions between the old and the young, monetary policies that might have worked well in the past might not work in the same way now, or may possibly even deliver unintended adverse effects for large sections of the population.

...and include even greater income and wealth inequality

Moreover, even if it could be proved that the net effect of QE for the economy as a whole was still positive, once wealth effects and consumption substitution are

netted off, (we clearly harbour some doubts), the tendency of these policies to amplify inequality of wealth make a decent case for pursuing such policies only on a temporary basis and with extreme care, not for the extended periods over which they have been pursued in the US, UK, Japan and now in Europe.

Annex

Data sources

This note draws on four main sources of data. The usual starting point for any analysis of US household balance sheets is the Federal Reserve's quarterly flow of funds data. This extension of the national accounts looks at balance sheets for the whole economy, flows and stocks. It is extremely comprehensive, with a good back series of historical data. Its main shortcoming is that there is little breakdown at a sectoral level beyond the different asset classes. But, it nonetheless provides an excellent high-level overview. One other shortcoming is the balancing that is required for such a system of accounts. Although this provides internal consistency, it could potentially distort the figures. For short-run analysis and changes of small magnitude, this may present some problems. But for our analysis, which takes a medium-term view, we really do not have any reservations with using this data.

The other key source of information is the triennial survey of consumer finances, undertaken by the US Federal Reserve Bank. Although this data only gives us snapshots at three-year intervals, the latest being for 2013, it complements the flow of funds data by providing a much more detailed breakdown of consumer wealth and incomes, breaking up the data into groups, by wealth and income, and analysing other demographic factors such as age, education, and ethnicity. Our predominant interest is the different experiences during the QE experiment in relation to incomes, wealth and age (especially where this demographic data overlaps).

As with all surveys, such data is prone to survey error. The latest survey interviewed 6,500 families. Given the size of the US population, this is on the low side for reliability, and there are problems with outliers, which means that some of the comparisons of median and mean data need to be made cautiously. But, the survey also contains some panel survey elements, so even if there are issues with its being representative of the whole economy, it should at least be consistent with regard to directional changes over time.

The third source of data is the Bureau of Labor Statistics' Consumer Expenditure Surveys. Like the SCF, it provides a great demographic breakdown and very detailed spending analysis. The survey has extensive historical data, with annual numbers dating back to 1980, and decadal surveys stretching back to the late 1800s. Sampling error remains a potential concern, though perhaps less pronounced than the SCF, with the data compiled each year from c.7,000 usable surveys and 14,000 spending diaries.

The final source of data is from the ING-ASR US Survey of Household Finances. This survey of over 1,000 US households asks questions about income, saving, and financial health, among others, and in addition to providing a snapshot of attitudes to risk, interest rates and investment, delivers some time-series data on household conditions.

Disclaimer

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