Economics
5 October 2010

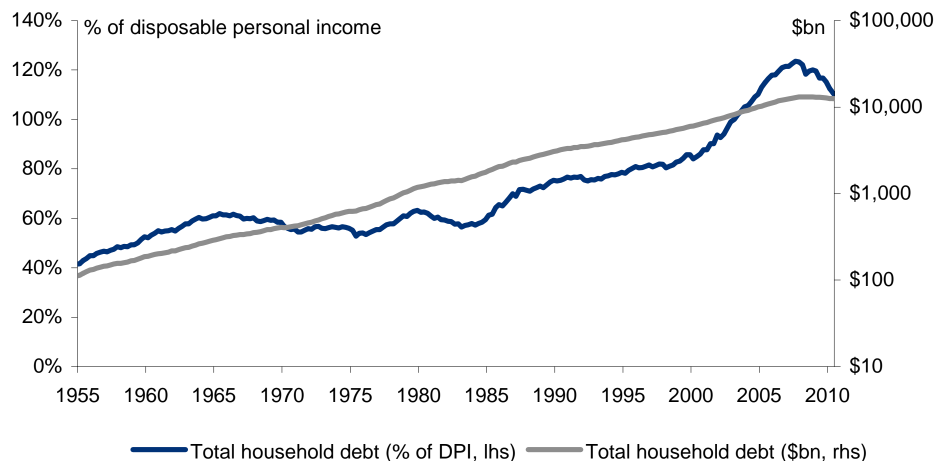
Financial Markets Outlook

Deleveraging is quite depressing

US household debt has been decreasing for two years now. But the US consumer is not really paying off his mortgage. The debt decrease is caused mainly by charge-offs. Regardless of who's paying, reducing household debt is bound to depress GDP growth for several years.

In the early 2000s, we got used to US household debt increasing by a trillion dollars per year. Debt outstanding peaked at just over US$13trn in 2008. The more relevant ratio of debt to disposable personal income (DPI) hovered around 60% until well into the 1980s. Then, the debt ratio started to creep up, reaching 85% of DPI in the late 1990s. After that, things went fast. The debt ratio shot up and peaked at over 120% of DPI.

Fig 1 US household debt



Debt includes residential mortgages and consumer credit. Right hand scale is logarithmic.
Source: EcoWin.

Debt has already come down to 111% of DPI in 2Q10, a reduction of US$600bn from the peak. So at first sight, it seems that US households have switched focus from spending to paying down debt. The increase of the savings rate, from a low of 1.5% of DPI to over 5% this year, seems to confirm this view. However, closer examination of the data reveals that the decrease of US household debt is not explained by repayments. Instead, it is due to debt being charged off by lenders. It is not active deleveraging, but defaults, foreclosures, debt forgiveness and modification plans that explain the reduction in debt (see Figure 2). It should be immediately added that zero net borrowing in aggregate means that some households are still borrowing, while other are repaying and actively deleveraging.

It may seem like good news for consumption that the household sector is not actively paying down debts. But households did stop adding debt. This is a huge change from the US$900bn of debt they added each year in 2000-06. Net borrowing boosted disposable personal income by on average over 11% in these years. So in effect, even just abandoning the habit of accumulating debt – let alone actively reducing it – has reduced the financial means available to households by 11%, or US$1.2trn per year in today's dollars.

Rate forecasts & market views

	4Q10	1Q11	2Q11	3Q11
ING forecasts				
US	0.0	0.0	0.0	0.0
EU13	1.0	1.0	1.0	1.0
JPN	0.05	0.05	0.05	0.05
Implied market rates (3mth strip)				
US	0.355	0.415	0.480	0.565
EU13	1.055	1.140	1.200	1.260
JPN	0.300	0.275	0.265	0.265

As at 0900 BST, 5 October 2010
Source: Bloomberg, ING estimates

ING FX forecasts

	4Q10	1Q11	2Q11	3Q11
EUR/USD	1.40	1.40	1.40	1.40
USD/JPY	80	80	82	85
GBP/USD	1.65	1.65	1.59	1.65

Source: ING

Upcoming key events

8 Oct	US Sep Labour Report Canada Sep Labour Report
11 Oct	UK Sep RICS House Price Bal. Norway Sep CPI
12 Oct	US Minutes of FOMC Meeting US NFIB Small Business Optimism Germany Sep CPI UK Sep CPI Sweden Sep CPI
13 Oct	US Monthly Budget Statement Eurozone Aug Industrial Prod'n UK Aug Weekly Earnings UK Sep Claimant Count UK Sep Jobless Claims UK Aug ILO Unemployment France Sep CPI
14 Oct	US Sep PPI US Sep Core CPI Spain Sep CPI Turkey Benchmark Repo Rate
15 Oct	US Oct Empire Manufacturing US Sep Uni. Of Michigan Conf. US Sep CPI US Sep Retail Sales Eurozone Sep CPI Japan Aug Industrial Production

Source: Bloomberg, Reuters

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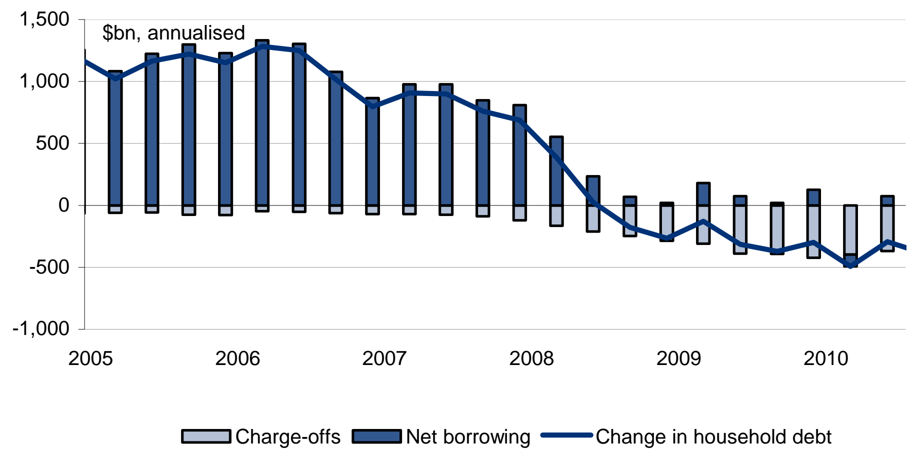
Household debt is diminishing because of charge-offs, not repayment…

Fig 2 Changes in US household debt



Debt includes residential mortgages and consumer credit. Charge-off rates refer to banks only, but are assumed to apply to all household debt, regardless of the lender. Net borrowing is calculated as a residual, and shows gross borrowing minus repayments.

Source: EcoWin, ING calculations.

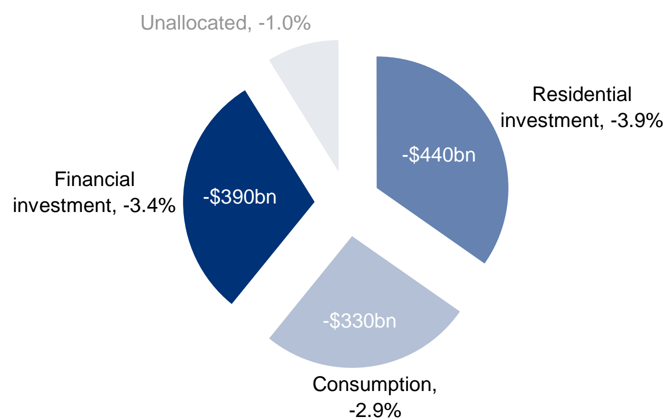
Figure 3 shows how households have compensated for this setback. Unsurprisingly, households have cut back the most on housing investment, c.US$440bn per year. Households have also reduced their net investment in financial assets by c.US$390bn per year. And lastly, households have scaled back consumption compared with their income (representing c.US$330bn per year).

Both residential investment and consumption feed directly into GDP. The direct demand-reducing effect of deleveraging is therefore US$770bn in 2010, or about 5.5% of GDP. Reduced financial investment has indirect effects: households accumulate fewer assets, reducing their wealth and lifetime income, which in turn will reduce their spending. Moreover, US households are a significant investor, and their diminished presence has made itself felt on financial markets.

…but households did stop adding debt, which in itself reduces GDP by at least 5.5%

Fig 3 Household austerity measures

How have households compensated for a 11% of PDI ($1200bn) fall in available financial resources?



1H10 compared with 2000-06. Amounts in 2010 dollars, annualised. “Unallocated” represents the statistical discrepancy between the Fed’s Flow of Funds and the BEA NIPA-tables.

Source: EcoWin, ING calculations.

Deleveraging typically takes seven years

Household deleveraging will be an important determinant of economic activity for several years. Deleveraging after financial crises typically takes seven years, according to research by the economists Reinhart & Reinhart.[1] Household debt started to shrink in 2008. If history is any guide, deleveraging could be with us until 2015. To assess the

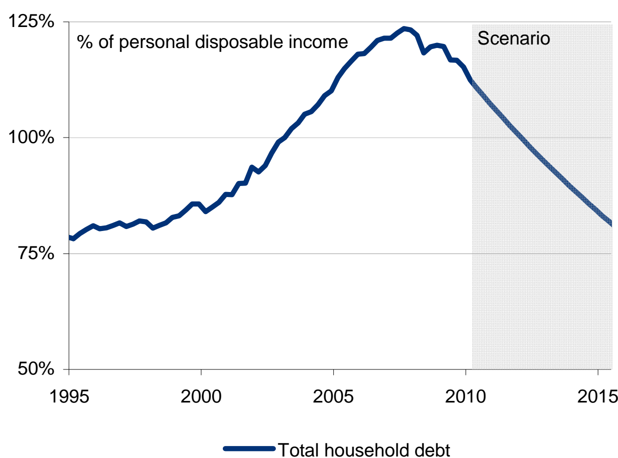
[1] Carmen M. Reinhart & Vincent R. Reinhart, *After the fall*, NBER working paper no. 16334.

impact of deleveraging in the coming years, we present two scenarios. In the first scenario, we assume debt reduction is fully accomplished by charge-offs. In the second scenario, we assume that households actively pay down debt, further reducing their financial leeway.

Scenario 1: Deleveraging by default

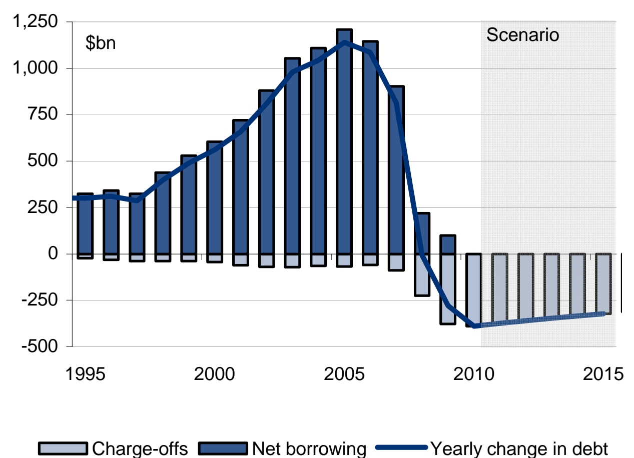
In this scenario, we assume that charge-off rates for both mortgages and consumer credit remain at current levels. We furthermore assume zero net borrowing by households. While individual households may take out a new mortgage to buy a home, this is compensated by other households paying down their mortgage. As a result, total household debt decreases from its current US$12.5tn to US$10.6tn by year end 2015. Assuming a 3% yearly increase in DPI, this would be about 80% of DPI. This is still considerably above levels that prevailed up to the 1990s (see Figure 1). But at 80% of DPI, the credit bubble could definitely be declared deflated.

Fig 4 US household debt, scenario 1



Source: Ecowin, ING calculations.

Fig 5 US household net borrowing, scenario 1



Assumed charge-off rates in scenario: 2.4% for mortgages and 6.1% for consumer credit. DPI-growth 3% per year, debt to DPI 80% by 2015.

Source: Ecowin, ING calculations.

This scenario shows that the household sector need not actually pay back debt, to reduce debt to more sustainable levels. Deleveraging by default and debt forgiveness could do the trick. But this process is by no means painless: it involves people losing their home (and good credit ratings) for years. It also involves lenders taking a cumulative US$1.9tn of credit losses over the coming years. To put this into perspective: Loss provisions in the financial sector worldwide have amounted to US$1.6tn up to now, which includes provisions for expected losses that have yet to materialise. If lenders have to take substantial additional losses, this would push lending spreads up and depress credit growth. This would weigh on business investment, especially for smaller firms.

Austerity points to weak growth for years

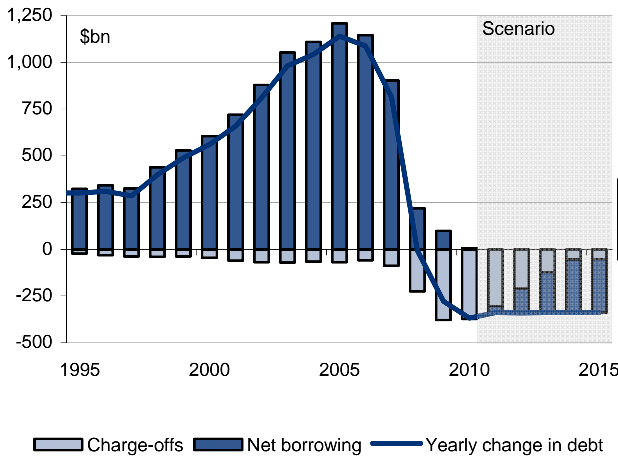
Household sector net borrowing remains zero in this scenario. This means that households have to maintain their current austerity. Residential investment and consumption could grow in line with disposable personal income, but only if net investment in financial assets remains significantly below its long-term average. In the first half of 2010, net investment in financial assets was 4% of DPI, versus a long-term average of 10%. This means lower household wealth accumulation, which in turn depresses income and consumption in the long run. All in all, economic growth remains weak in this scenario, with growth-depressing effects probably extending beyond the 2015 scenario horizon.

More active deleveraging would cut even deeper into consumption, residential and financial investment…

Scenario 2: Deleveraging by repaying debt

In this scenario, we assume that charge-off rates peak in 2010 and revert to historical levels by 2014. By assumption, the deleveraging cycle completes in 2015. As charge-offs now only account for US$900bn of debt reduction, households have to pay down the remaining US$1trn. Compared with the current situation, households will have to allocate an additional 1.3% of DPI to debt reduction. Unless households divest more financial assets, they will have to cut back either residential investment or consumption. The additional direct negative effect on top of the already bleak outlook of scenario 1 would be -1.0% of GDP. This would be mitigated somewhat by lower losses for lenders (Figure 6).

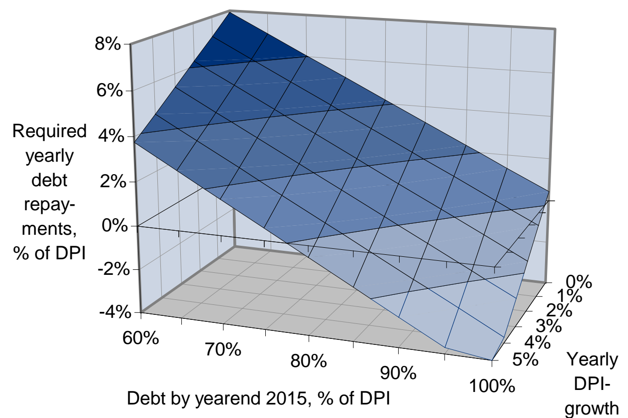
Fig 6 US household net borrowing, scenario 2



Charge-off rates assumed to revert to historical levels by 2014. DPI-growth 3% per year, debt to DPI 80% by 2015.

Source: Ecowin, ING calculations.

Fig 7 Alternative repaying scenarios



Vertical axis shows yearly debt repayments by households required to achieve a certain debt ratio, given a certain growth rate of DPI. Negative repayments means households can actually increase their debt.

Source: ING calculations.

…which could knock several percentage points off GDP

To get a feel for the possible magnitude of deleveraging effects, Figure 7 presents a range of similar scenarios, with yearly DPI growth ranging from 0% to 5% and a post-deleveraging debt ratio ranging from 60% to 100% of DPI. Required debt repayments are quite sensitive to DPI-growth and the debt-to-DPI target ratio. For example, when income increases 4% per year, and debt-to-DPI reaches 90% in 2015, required repayments are negative. This means that households can actually increase their debt by a cumulative US$1.1tn (0.7% of DPI per year, see Figure 7). Charge-offs are enough to reduce the debt-to-DPI-ratio. But when income increases only 2%, and the debt-to-DPI comes down to 75% by 2015, households need to repay a cumulative US$2,200bn, or 3.3% of DPI per year. Note that 2% DPI-growth is low, but not unthinkable in a low inflation, high unemployment and rising taxes environment. Also note that negative feedback effects are not included in these scenarios: when consumption and investment are lower due to debt repayment, this slows down GDP-growth and with it DPI-growth, which in turn makes it harder to bring down the debt to DPI-ratio. Reduced investment in financial assets also takes it toll, reducing interest and dividend income over time. The negative effects shown here are therefore likely to be an underestimation.

It may not get worse in the coming years, but it won't get much better either

The seven lean years

The US household sector has been adapting to life with zero net borrowing over the past two years. They have reduced housing investment, financial investment and consumption, with an estimated direct negative demand-effect of 5.5% of GDP. Until now, household debt has been reduced mainly through charge-offs, with investors taking the losses. In previous post-financial crisis deleveraging cycles, deleveraging typically lasted seven years. In the US case, going back to pre-bubble debt-to-income ratios means a further reduction in household debt of c.US$2tn by 2015. Even if losses continue to be borne mainly by investors, the room for consumption, residential and financial investment

by households will be very limited in the coming years. Reinhart & Reinhart find that the “median post-financial crisis GDP growth decline in advanced economies is about 1 percent”, and we have no reason to think the US will be doing better than this.

Fig 8 Financial markets movements

	05/10/10	%WoW	%MoM
US 3-mth LIBOR	0.291	0.1	-0.4
US 2-year	0.403	-3.1	-9.4
US 10-year	2.451	-5.4	-17.4
US 30-year	3.689	0.4	-2.6
EU13 3-mth LIBOR	0.893	5.8	6.4
2-year bund	0.812	2.7	19.7
10-year bund	2.233	-0.7	-5.0
Japan 3-mth LIBOR	0.240	0.000	-0.008
2-year JGB	0.121	-0.022	-0.009
10-year JGB	0.900	-15.1	-21.9

As at 0900 BST, 5 October 2010.

Source: Bloomberg

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