

HOUSEHOLD DEBT AND THE RISE OF
FINANCIAL FRAGILITY

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INTRODUCTION

The recent collapse of financial markets in the United States and, as a consequence, throughout the world has compromised the capacity of the real economy to provide jobs and hence provide growing incomes to large segments of the working population. Unemployment rates are now growing rapidly throughout most sectors. While there are several causes of the financial crisis, the rapid expansion of household debt since 1993 is a prime symptom of a major imbalance in the financial side of the economy, which has real consequences, as we are now seeing, for everyday economic actors. For this reason, the rise in household debt, and the factors which underpinned it merit a detailed examination.

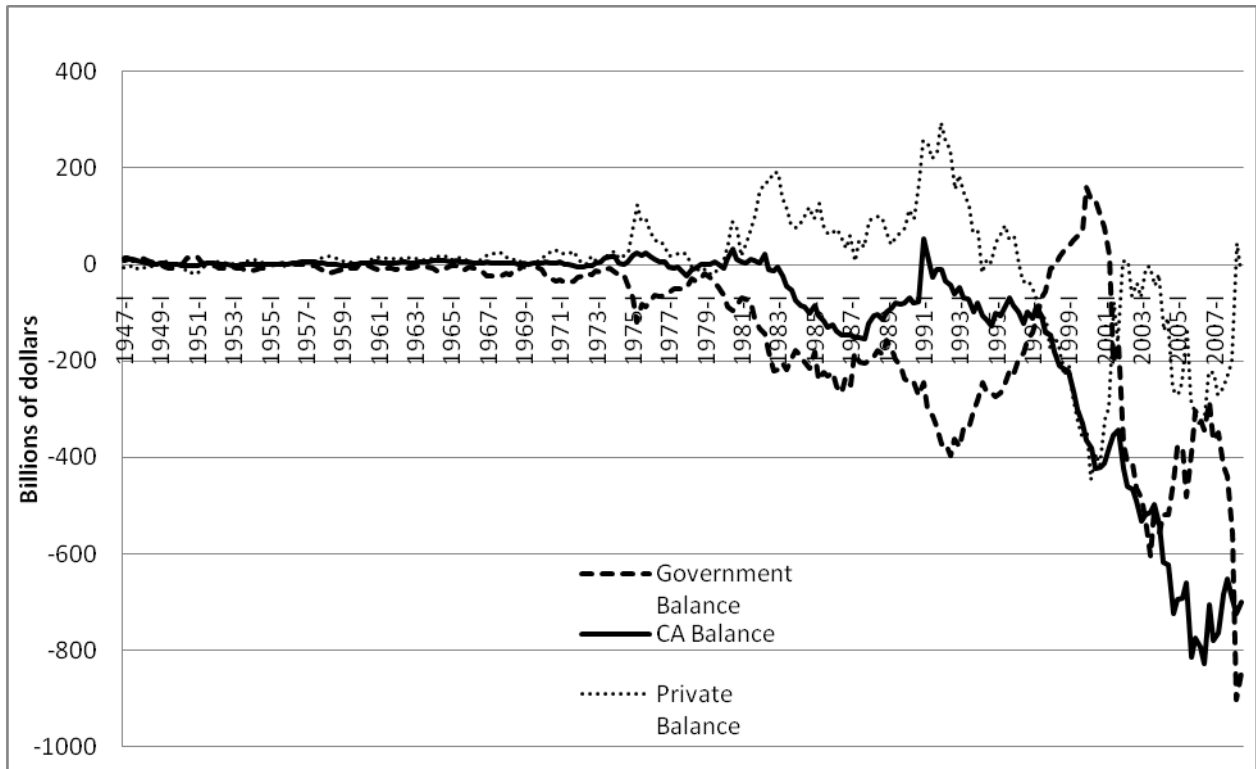
Our findings show that the move toward government surpluses since 1993, and the surpluses themselves, alongside growing spending on imports, were associated with a dramatic deterioration of household balance sheets. Another important factor is that real wage income in the US has fallen or stagnated since 1978. Growing levels of household debt are now associated with declines in household net worth, increases in the financial obligations ratio, and an increase in the number of non business bankruptcy filings. Higher household debt levels were facilitated by the easing in credit markets due to the development of new financial derivative instruments and new legislation. The solution to the devastating impact of the massive reduction in household spending is for the US government to increase deficit spending enough to restore households to a net asset position. The amount of deficit spending that would be required to restore households to a net asset position, like the one that they held before 1993 is approximately \$485 billion. Raising real wage income relative to increased productivity levels will help maintain this newly restored and more sustainable structure of finance.

HOUSEHOLD FINANCIAL SECTOR

The issue of rising household indebtedness has been apparent on the financial sector balances for quite some time. These balances are based on an accounting identity and once charted, display the distribution of net assets and liabilities for the government, external, and private sectors (c.f. Godley 2000, 6, Tobin 1963, Kalecki 1971). As is well known in finance, for each asset held, there must be a corresponding and equal liability.

Very new patterns of distribution between net assets and liabilities emerge around 1992. The following figure 1 shows the financial sector balances for the period 1947Q1 to 2008Q3.

FIGURE 1: FINANCIAL SECTOR BALANCES 1947Q1 – 2008Q3

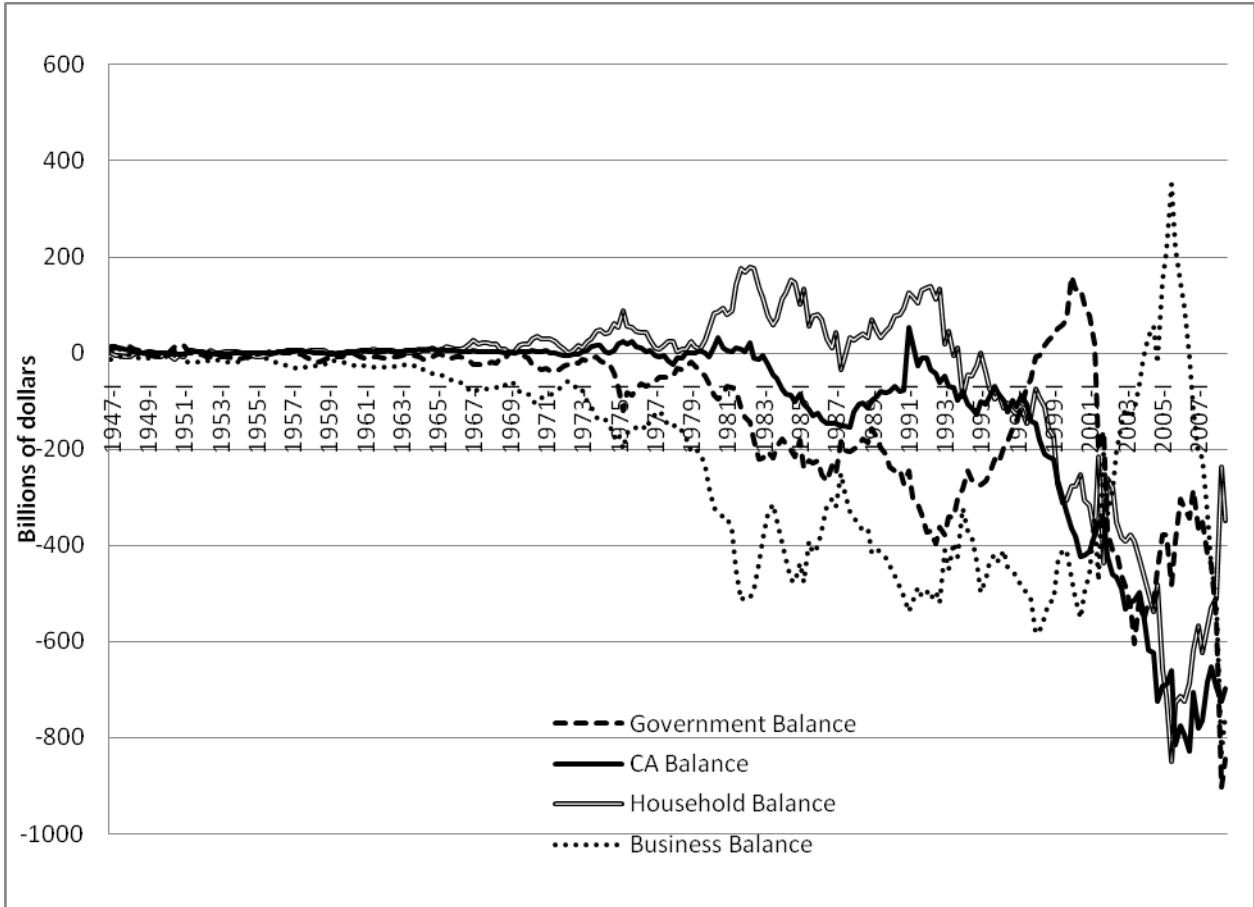


Source: BEA 2009, Table 5.1 and author's calculations, retrieved 01/21/09. <http://www.bea.gov>

Figure 1 shows that the external balance (CA Balance) falls dramatically into deficit from 1991 to the end of 1998. This indicates that US households were consuming greater and greater amounts of foreign goods and services. If we pay no attention to the CA Balance line, then it's easier to see that the government balance and private balance tend to mirror one another almost perfectly. When the government reduces its' deficit, or achieves a surplus, the private balance does the opposite. The private balance declines from 1992 to 2000 then struggles to regain a surplus position until the last part of 2008. At the same time, the government balance climbs into surplus until 2000, and falls into deficit until 2003. The deficit then is reduced until 2006, and grows again until 2008. Each movement in the government balance is mirrored by the private balance. After 2001, all sectors are in deficit, with compensatory movements between sectors not resulting in any net asset holding for any of the sectors, an unusual financial picture in the US.

To gain a better understanding to the relative position of households within this larger scenario, the private balance can be broken down into the household balance and the business balance. Figure 2, which follows shows this breakdown in detail.

FIGURE 2: SECTOR BALANCES WITH HOUSEHOLDS AND BUSINESS 1947Q1 – 2008Q3



Source: BEA 2009, Tables 5.1 and 1.1.5 and author's calculations, retrieved 01/21/09. <http://www.bea.gov>

As shown on figure 2, households experienced a precipitous decline into deficit beginning in 1992 and ending in 2005. At the same time, the position of business fluctuated in a deficit position from 1992 to 2000 at values ranging from -\$320 billion, at its highest to -\$580 billion at its lowest (BEA 2009, Tables 5.1 and 1.1.5 and author's calculations). From late in 2000 to 2005, the business balance improves dramatically, reaching strong surplus positions from 2004 to 2006. However, from 2005 through early 2008, the business balance fell seriously back into deficit, reaching a value of -\$830 billion at its worst. Overall, as the government balance improved from 1992 to 2000, it was the household balance that provided the major offset. As the business balance improved from 2000 to 2005, again, the household balance sheet was the clearest offsetting factor. As the household balance sheet improved from 2005 to 2008, government and business balance sheets fell deeper into deficit. Thus, notwithstanding the worsening external balance, households suffered a double blow over the 1992 to 2005 period. The first incident was precipitated by the government balance, and the second by the business balance. To pull households back into a surplus position, such as the one that existed in 1992, there needs to be a considerable increase in the government or business deficits, or a combination of the two. The amount of the required stimulus, taking the values from 1992 and the 2008 would be to increase deficit spending (by businesses

and/or government) by at least an additional \$485 billion in 1 year (more if some of this spending is used to purchase foreign goods). So if the government undertakes to do this, its deficit in 2009 should reach \$1 330 billion (\$1.3 trillion) at least. This is what would be required just to stabilize the economy from the financial side, by focusing on households.

REAL WAGES STAGNANT

Net government spending provides households with assets that are essential to their financial health. When net government spending slows down, households must compensate for this reduction either by reducing their own spending equivalently to what the government spending provided in the past (either in kind or in money terms), or by increasing debt to maintain the same level of spending. A second element is important here as well. Real wage income in the US has fallen since 1978, and then remained flat up to 2008. Figure 3 below indicates how the average annual earnings of production workers¹, shown in constant 1982 dollars, fell substantially in 1978, and remained stagnant from 1982 to 2008 at an average value of \$14,107.93.

Workers' incomes are flat, yet their debt levels are growing. With real wages falling, workers today must, by definition, consume less than workers did in the 1960-70s, or increase their consumption through increased debt levels.

This fall and stagnation in incomes is not validated by changes in productivity levels. The productivity levels of workers has been generally increasing from 1964 to 2007. The percentage change in output per hour of non-farm business workers has been positive for the entire period, with the slight exceptions of 1974, 1979-1980, and 1982, as shown in figure 4 below².

Therefore, despite growing productivity levels, workers' real incomes have been falling or stagnant. This means that workers' incomes have not been keeping pace with increases in productivity. The returns to increases in productivity, because they are not attributable to workers, are likely to be a significant factor in the widening income distribution experienced over the post-war period, especially since the late 1970s.

HOUSEHOLD DEBT AND INCOME

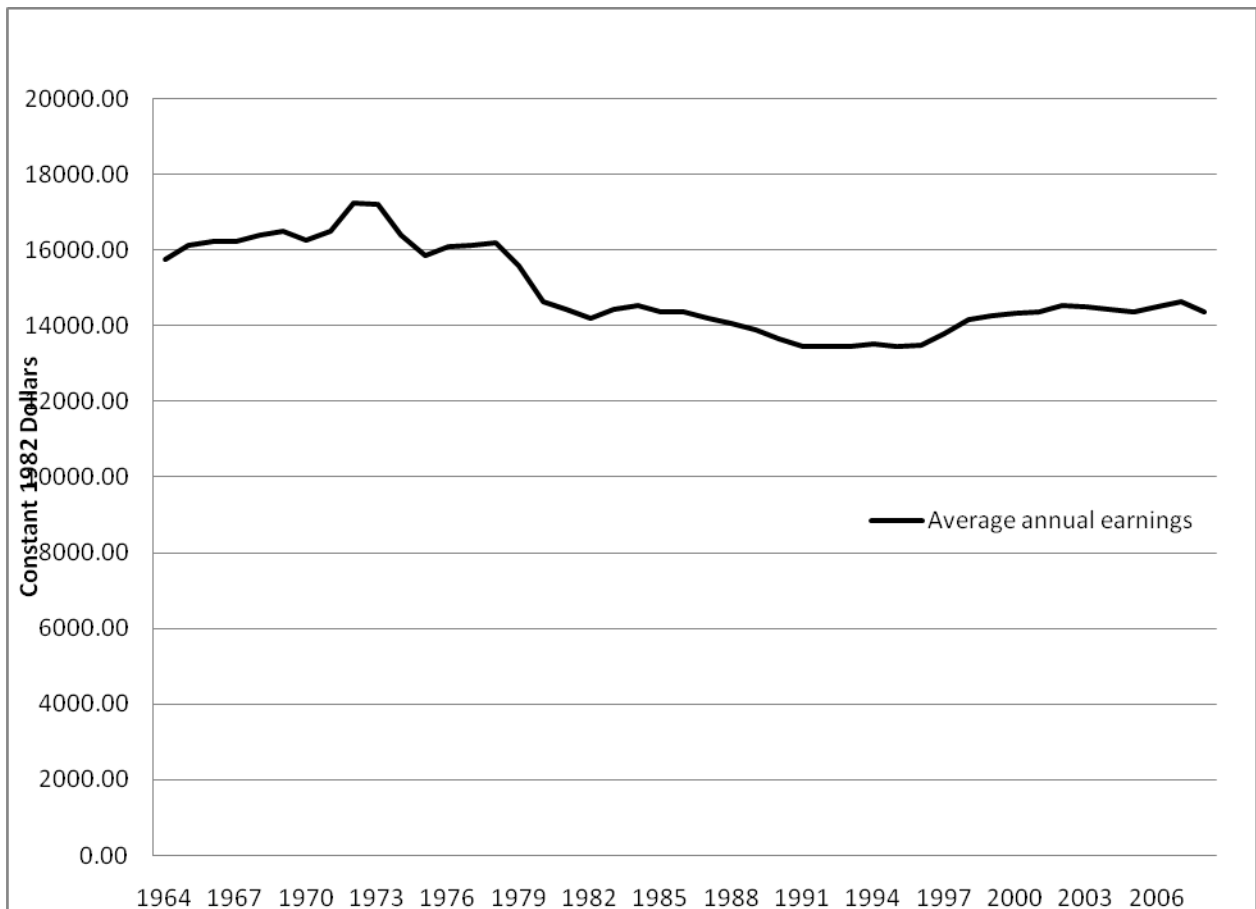
Real wage and productivity data are provided in real terms and provide some insight into what factors have been influencing the household decision-making process over the course of the last half century. Up to this point, it has been argued that households have

¹ Average earnings of production workers seems to be the longest series currently available at the BLS.

² The non-farm business output per hour data in figure 4 are not perfectly compatible with the production workers data provided in figure 3. However, given the SOC classification system and the lack of data on manufacturing sector workers output per hour data prior to 1988 available at the BLS at the time of writing, non-farm business was considered to be the most comparable data available.

increased their indebtedness, relative to other sectors of the economy, partly because government spending has been reduced from 1992 to 2008, and because real wages have fallen and then stagnated since the 1970s. Increases in productivity levels have not been attributed to workers, further retrenching the position of households who depend on wage income for their consumption decisions. Returning to nominal values, the total amount of household debt has increased at a faster rate than income or outlays. This trend, while sustainable under certain conditions, can, when those conditions do not hold, lead to increases in general financial fragility. Figure 5 shows the patterns of growth for household debt, personal income and outlays from 1952Q1 to 2008Q3³.

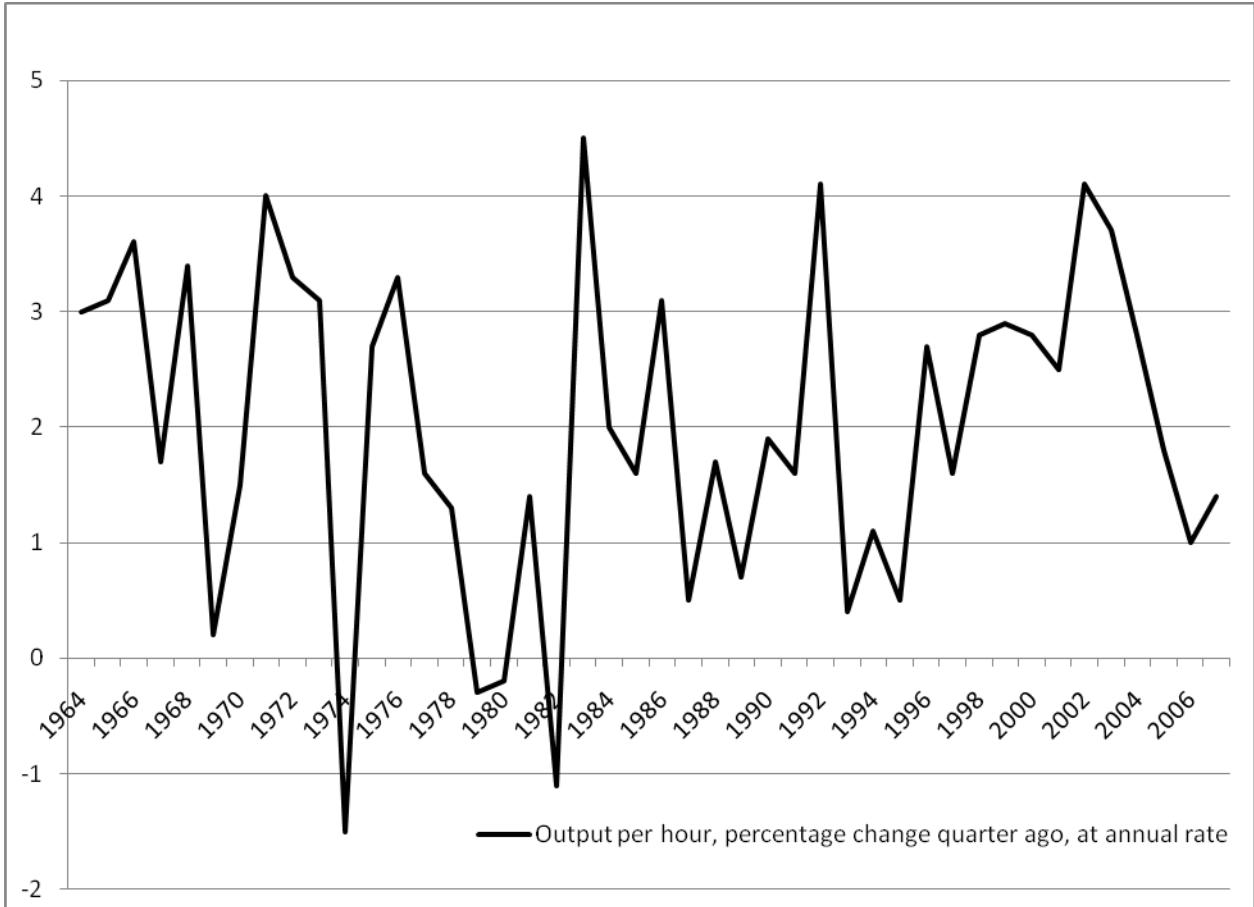
FIGURE 3: AVERAGE ANNUAL EARNINGS OF PRODUCTION WORKERS 1964-2008



Source: BLS 2009, Tables CES0500000032, CEU0500000007, and author's calculations, retrieved 01/29/09. <http://www.bls.gov>

³ Debt is tabulated per household while income and outlays are calculated on a personal basis. This could present some inconsistencies, but since here aggregate data is used, the sum of household income is considered to be comparable to the sum of personal income.

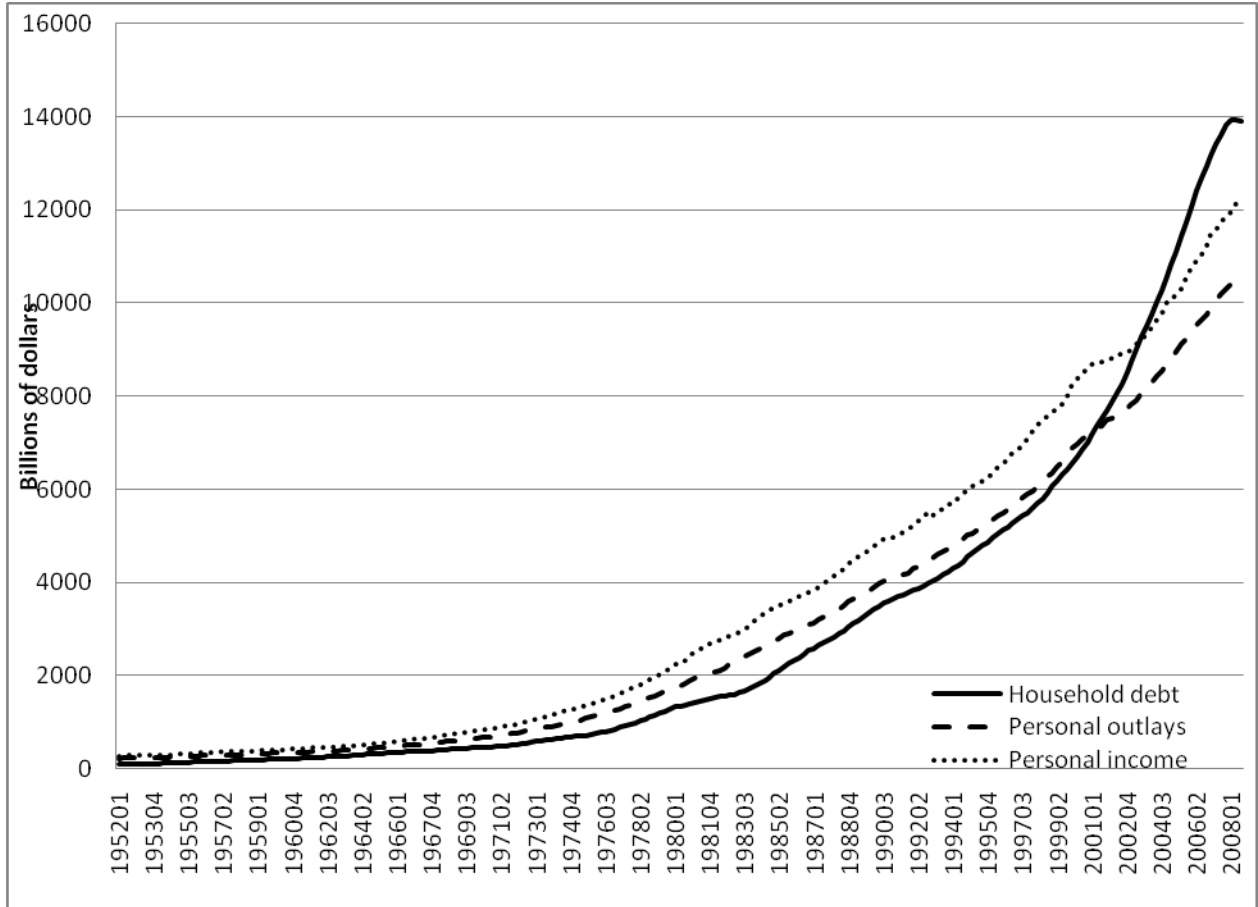
FIGURE 4: PERCENTAGE CHANGE IN PRODUCTIVITY, NON-FARM BUSINESS, 1964-2007



Source: BLS 2009, Tables PRS85006092, retrieved 02/03/2009. <http://www.bls.gov>

Household debt is a stock while income and outlays are flows. The rate of increase of household debt is greater than the rate of increase of personal income or outlays. Higher levels of household debt may sustain higher levels of household assets. This increase in rate of accumulation of household debt is indicative of easier access to credit for households, and, is not necessarily unsustainable as long as interest payments are easily met through income. What is interesting is that until the last quarter of 2000, household debt totals always fell below personal income and outlays. In 2001, household debt levels exceeded personal outlays for the first time (at least since 1952Q1) and in 2003, they also exceeded personal income. To reiterate, the fact that debt is greater than income or outlays is not a problem unless household income cannot at once provide for debt payments and other necessities. The debt to income ratio for households has exceeded 1 since 2003. In 2008Q3, it was 1.144 (Flow of Funds 2009, Table D.3, BEA 2009, Table 2.1, and author's calculations).

FIGURE 5: HOUSEHOLD DEBT, PERSONAL INCOME AND OUTLAYS 1952Q1-2008Q3



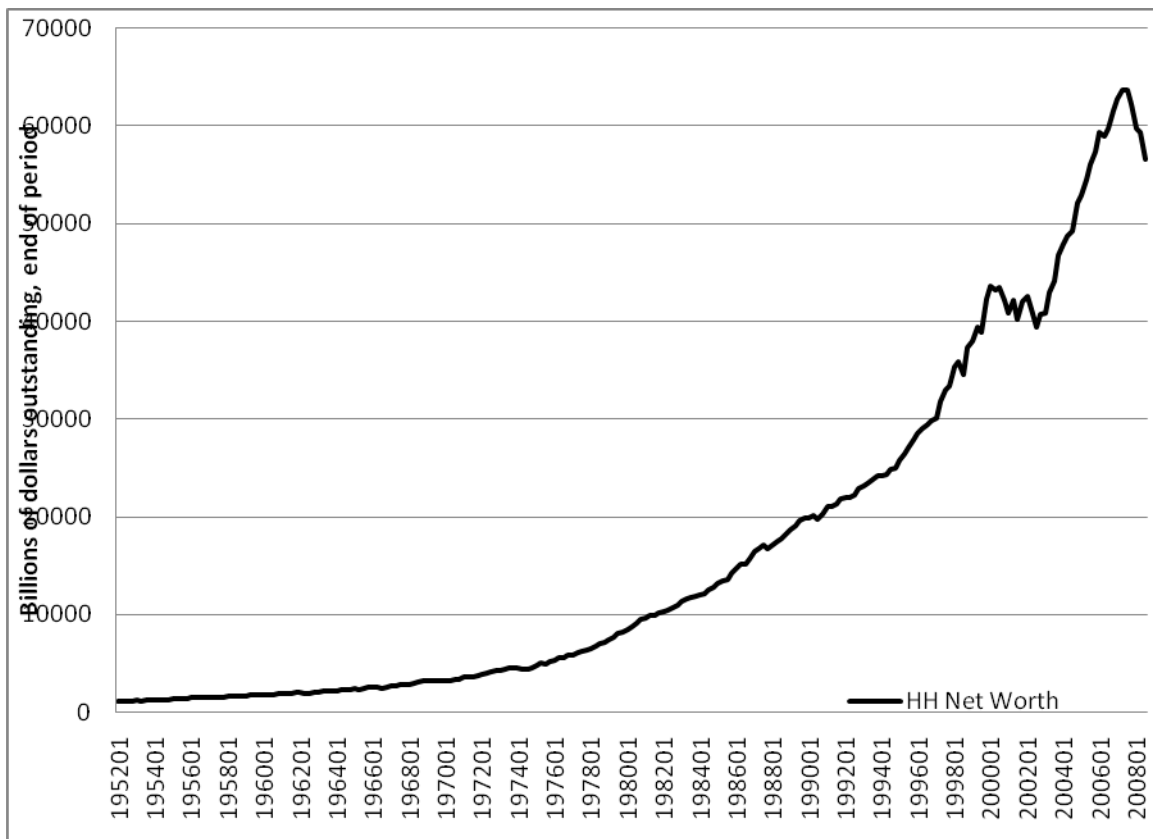
Source: Flow of Funds 2009, Table D.3, BEA 2009, Table 2.1, retrieved 01/27/09.
<http://www.federalreserve.gov>, <http://www.bea.gov>

On the other hand, the household’s financial position becomes precarious if interest payments become too large a proportion of income, or, if asset values fall relative to liabilities. For most households, if employment income falls, this also impedes their ability make payments on liabilities, and again, increases the sector’s financial fragility. Since 1980Q1, the financial obligations ratio has increased from 16 percent to 19 percent in 2008Q3 (Federal Reserve 2009, Financial Obligations Ratio, retrieved 01/27/09). For renters, the financial obligations ratio has increased 0.015 percent per quarter on average , while for homeowners, it has increased more than twice as much, with an average change per quarter valued at 0.034 percent for the same 1980Q1 to 2008Q3 period (Federal Reserve 2009 (ibid.), and author’s calculations). The pattern of increase is troubling because it provides an indication that household debt payments are squeezing other types of consumption and/or possibly reducing saving. Moreover, increased financial obligations ratios are growing more dramatically for homeowners than for renters.

The sustainability of growing household debt levels, relative to incomes, is dependent on debt payments being made without imposing too great a burden with respect to other

types of consumption and/or saving. As the financial obligations ratio for households grows, so too does the burden of higher levels of debt for households. A second element that influences the sustainability question is whether or not higher household debt levels are used to support higher levels of assets. If the rate of growth of assets exceeds the rate of growth of debt, then households are accumulating a growing amount of net worth and potentially favorably improving their financial situation. As indicated in figure 6, household net worth grew between 1952 and 2001, and, from 2002 to 2007. From 2001 to 2002, and from 2007 to 2008, household net worth fell. Households' positions can become precarious when a reduction in the value of assets undermines the basis on which debt was issued. In certain cases, debts will exceed asset values, leading to household insolvencies.

FIGURE 6: HOUSEHOLD NET WORTH 1952Q1-2008Q3



Source: Flow of Funds 2009, Table B. 100, retrieved 01/27/09. <http://www.federalreserve.gov>

Recently, as household net worth has fallen, the number of bankruptcies has increased. Non-business bankruptcy filings increased by 225 000 from 2006 to 2007 (US Courts 2009, Bankruptcy Statistics and author's calculations). Most of these bankruptcies are likely to be closely related to the dramatic decline in the value of assets, concentrated in real estate (Flow of Funds 2009, Table R. 100, line 10, retrieved 02/03/09). Thus, the situation of households has become increasingly precarious due to the reduction in asset

values given high levels of household debt, combined with higher financial obligations ratios, stagnant real incomes, and lower relative levels of government spending.

CONSUMPTION SPENDING

From the perspective of the household, increasing debt levels was considered a better option than reducing spending. Far from being frivolous, households focused their consumption from income and debt on basic living expenses, medical expenses, house and car repairs. Debt was accumulated in the form of mortgages and home equity lines of credit, with credit cards being used to cover expenses when incomes fell short. Instead of saving, households used the equity in their homes to make debt payments. Now, given the marked slowdown in household spending, it is clear that household debt levels are too high relative to incomes, and that their level of consumption is no longer sustainable.

The evidence suggests that households, homeowners specifically, increased their debt levels for a variety of reasons. The most convincing reason is that incomes, apart from capital gains, did not grow in line with consumer prices. According Brown et al.: “the average household has experienced stagnant or slow-growing incomes that no longer keep pace with the rising costs of housing, health care and other basic expenses (Brown et al., 2005, 4, see also above p. 4-6).” Estimates suggest that fully 26 to 33 percent of home equity loans are used for debt consolidation (Canner, Dynan, and Passmore 2002, 473, Greenspan and Kennedy 2007, 8). By interviewing a sample of low and middle-income American households (representative of 50% of US households), Brown et al. show convincingly that the majority of low and middle-income households hold high levels of credit card debt. Credit cards are used by these households to cover basic expenses. They state: “Seven of out of ten low- and middle-income households reported using their credit cards to pay for car repairs, basic living expenses, medical expenses or house repairs (Brown et al. 2005, 10).” Their findings indicate that 40 percent of interviewed households (representative of 20% of all US households) used new mortgage debt to pay down credit card debt (Brown et al 2005, 14).

The fact that a large proportion of households have been relying on new debt to finance consumption is disconcerting. Consumption expenditures generally account from approximately 70 percent of total GDP. As households reduce consumption, both from new debt and from income due to job losses, the growth rate of aggregate output will certainly continue to decline, until new sources of household income are created.

CREDIT MARKET EASING

The source of new levels of household debt came, at least in part, from the creation of new financial instruments and from changes in legislation. New financial instruments such as collateralized debt obligations (CDOs), including collateralized mortgage obligations (CMOs), reduced the burden of holding mortgages for banks, and in turn, facilitated the creation of greater levels of debt available to homeowners especially. Legislation such as the 1986 Tax Reform Act and the 1999 Gramm-Leach Bliley Act created an incentive structure that made home mortgages and similar types of loans

whose values depended on homes the preferred form of debt for homeowners, and made financial firms more likely to lend to households. A large part of new debt can be accounted for by increases coming from mortgage refinancing or home equity loans (Dynan and Kohn 2007, 13). Estimates of the percentage of the wealth effect of housing on consumption⁴ range from 3 to 10 cents per dollar (see Greenspan and Kennedy, 2007, 4, 5, Roubini 2008, 2, Dynan and Kohn 2007, 16, Davis and Palumbo 2001, 33). These data call our attention to the dramatic potential impact of a slowdown, even a small one, in the pace of mortgage refinancing, and, home equity withdrawal (see also Debelle 2004, 27, Wray, 2007, 43-44). Given falling home prices, a credit crunch, and widespread job loss, the consequences for GDP of a drop off in consumption spending, are likely to be very severe.

Of course, increases in consumption spending for the past 10 years have not solely been determined by mortgage equity withdrawals and new mortgages, but if even a small percentage of new consumption was financed in this way, the elimination of this new channel will compound the effects of income losses due to falling employment levels. Hence, the flow of consumption and income are likely to be seriously affected by both job losses and by the credit crunch, in particular the crunch in mortgage markets open to households. At the same time, falling home values will have a negative effect on households wishing to sell in the current environment. The latter are likely to incur capital losses because in many cases the value of home mortgages and associated loans exceeds the value of the homes they are trying to sell. Moreover, households suffer in another way, their net wealth is reduced by the sale of a home whose price has fallen, but also, by the reduced value of their financial wealth held in the form of stocks, bonds and other financial instruments (Debelle 2004, 23). The latter is due to the recent fall in the value of financial market instruments, including CDOs, the derivatives held in part by large pension funds, whose value derived from the value of appreciating home prices.

Part of the reason for the run-up of mortgage debt, in lieu of other forms of potential debt, was changes in legislation. In 1986, the Tax Reform Act eliminated the tax deductibility of interest payments on debt other than that secured by mortgage debt (Debelle 2004, 17, Brown 2007, 447, Christen and Morgan 2005, 164). Thus, the majority of those who increased their consumption as a result of refinancing a mortgage, or withdrawing home equity, were homeowners. Another reason why debt is concentrated among homeowners is that mortgage debt also had much lower rates of interest. These rates were based on the false assumption that home prices would appreciate indefinitely, and the ease with which mortgage and associated debt could be bundled and sold off, partly as a result of Gramm-Leach-Bliley (1999). Thus, mortgage debt was considered the most attractive option for home-owning households.

CONCLUSION

Household deficit spending, which sustained US and foreign firms, is no longer sustainable. Given the current recessionary conditions, this channel must be replaced by

⁴ Households borrowed against growing housing wealth in part for consumption purposes.

another sector's deficit spending. As the financial sector balances show, there are only two possibilities. The first is that the federal government increase spending dramatically, or, that foreigners start buying many more US goods and services. Foreign economies have designed their growth policies such that they depend heavily on US economic growth for their own expansion. By way of consequence, they are suffering recessions themselves due to the decline of US income. Therefore, it is highly unlikely that foreigners will be in a position to increase their spending on US goods and services. The only alternative, as mentioned, is for government deficit spending to increase. The amount of fiscal stimulus needed is approximately \$485 billion (see above p. 3-4), in addition to the amount spent in 2008Q3 (\$845.4 billion), which makes a grand total government deficit for 2009 of \$1330 billion or \$1.3 trillion. The current stimulus package is valued at \$787 billion but is not likely to be spent in 2009 alone. If the bill creates opportunities for future income growth targeted at households, then it seems the large amount may be justified because just pulling households to a positive balance sheet position is not enough. This new position needs to be sustained. Increased incomes would be the ideal way to maintain this new positive balance sheet position, especially if incomes are earned in productive ways. An additional measure that would help sustain growth in real incomes and at the same time reduce growing income disparity would be to link wages and salaries to increases in productivity.

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