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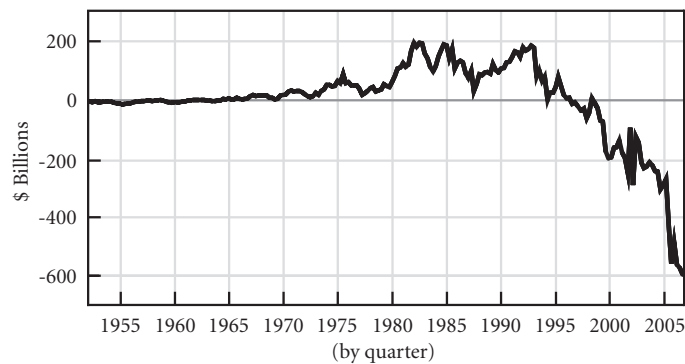
U.S. HOUSEHOLD DEFICIT SPENDING A Rendezvous with Reality

ROBERT W. PARENTEAU

U.S. Households Take the Plunge

As of the first quarter of 2006, the gap between household sector expenditure and income in the United States widened to an annualized deficit of approximately \$600 billion.¹ The deterioration in the household financial balance began in 1997, and the rate of decay has accelerated noticeably since early 2005 (Figure 1). In short, the household sector financial balance has been plunging.

Figure 1 U.S. Household Financial Balance



Source: Federal Reserve Flow of Funds

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Even as many economists decry government deficit spending, they turn a blind eye toward deficit spending in the private sector. Contemporary economists are trained to view household spending as the aggregation of millions of individual budgeting decisions based on intertemporal utility calculations; by definition, these calculations must produce rational consumption paths over time. The dramatic deepening of household deficit spending suggests that this view may be too complacent.

What Is Sustainable? The Apparent Necessity of Serial Asset Bubbles

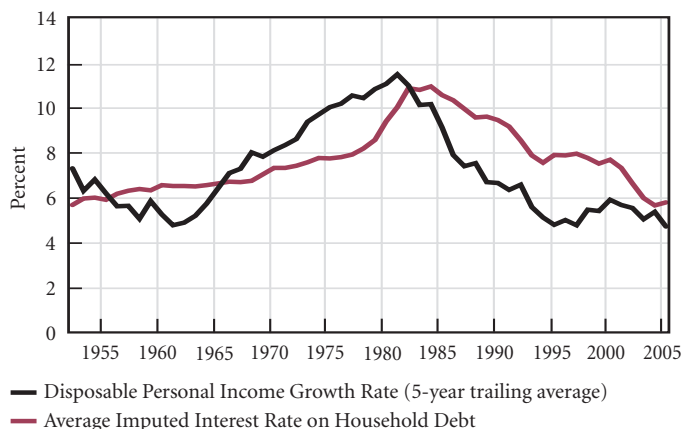
A popular view among bearishly predisposed economists says that such financial imbalances are clearly unsustainable. After nearly a decade of unprecedented deficit spending by U.S. households, this claim has worn a little thin, but the arithmetic of debt-sustainability conditions has been available for more than six decades—at least since the work Evsey Domar did on government-debt dynamics, during the time he was at the Federal Reserve (Fed).²

Borrowing from government sector or third world debt-trap equations, we know that persistently increasing private sector deficits can be sustained under three conditions at least. First, the long-run growth of private sector income must exceed the average interest rate on the debt owed by the sector. Second, the private sector may be deficit-spending, but its primary financial balance—excluding interest expense—must be in sufficient surplus. Third, if assets held by the private sector continue to appreciate in price at a sufficient rate, then it is possible that the growth in collateral values and capital gains will be sufficient to service existing debts and justify further lending, even to a sector that is rampantly deficit-spending.³

As a crude check of the first sustainability condition, we compare the conventional 30-year fixed mortgage loan rate with after-tax personal income growth on a five-year trailing basis (Figure 2). One crucial condition for avoiding debt-trap dynamics—income growth in excess of interest rates—has been consistently violated since the Volcker interest rate shock in 1979. Explosive debt-trap dynamics (i.e., an exponential increase in the ratio of household debt to income) are implied by the gap between the average interest rate level and the income growth rate in the household sector (Figure 3).

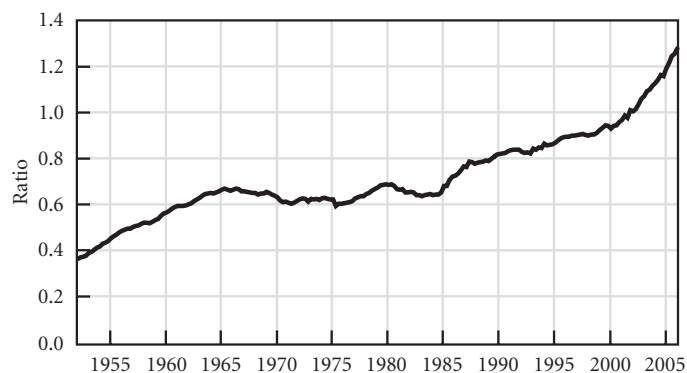
After a period of relative stability from the mid 1960s to the mid 1980s, the household debt-to-income ratio has risen

Figure 2 Key Elements in the Household Debt-Trap Equation



Sources: BEA and Federal Reserve Board

Figure 3 Household Debt-to-Income Ratio

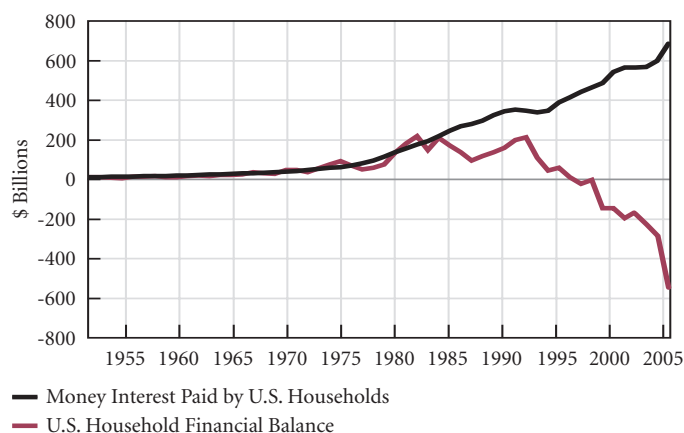


Source: Federal Reserve Board

persistently, and over the past half decade, it has risen at an accelerating rate. This means that the sustainability of U.S. household deficit spending has been highly dependent upon either the maintenance of a primary financial surplus or the rapid appreciation of asset prices, especially in the key asset classes held by U.S. households.

The primary financial balance reflects a surplus for most of the past half century (Figure 4). In fact, the household primary surplus peaked in 1982 at 12 percent of nominal GDP and fell to 3.8 percent at the height of the New Economy bubble in 1999 and to 1.2 percent in 2005. Today, the odds are that the primary household financial balance is barely in a surplus position. This means that the prior cushion against an explosive trajectory of household debt to income has been exhausted.

Figure 4 Elements of the Primary U.S. Household Financial Balance



Sources: Department of Commerce and Federal Reserve Board

These results leave households with one last loophole through which to escape the eventual constraints of explosive debt-trap dynamics: sufficient and sustained appreciation in the assets they hold. To achieve a rate of asset price appreciation high enough to sustain household deficit spending, asset prices will have to increasingly depart from fundamentals. On the analysis presented above, serial asset bubbles will need to be engineered in order to keep household deficit spending on a steep trajectory.

A Rendezvous with Reality: Some Implications

In other words, the U.S. household sector may be engaging in what the late economist Hyman P. Minsky would recognize as a form of Ponzi finance, in which household borrowing against the value of existing assets is required to sustain rampant deficit spending and service prior debt commitments (principal and interest). Without a suitable and swift “euthanasia of the rentier,”⁴ such that interest rates fall below long-run household income growth, sustaining U.S. household deficit spending is predicated on sustaining asset bubbles.

In the New Economy bubble, rapid equity price appreciation supported the onset of U.S. household deficit spending. After the equity bubble burst, household deficit spending was supported by large multiyear tax cuts, which buttressed after-tax income growth, and rapid price appreciation of residential real estate, as the Fed lowered its funds rate to 1 percent and mortgage rates dropped to lifetime lows for most households.

At the moment, appreciation of house prices has cooled considerably, and the rallies in U.S. equity prices and U.S. bonds are unlikely to produce sufficient wealth effects for U.S. households.⁵ If asset-price appreciation remains subdued or erodes, it stands to reason that household spending growth will decline toward household income growth. Real disposable income growth is currently in the range of 2.5 to 3 percent on a year-to-year basis, while personal consumption expenditure growth had previously increased in the range of 3.5 to 4 percent. If the above analysis is correct, that pace of consumer spending is no longer possible unless, of course, sufficiently strong bubble dynamics can be regenerated in assets held by households.

The downshift in U.S. consumer spending has profound implications for export-led economies, such as those in Brazil, Russia, India, and China, and for professional investors who have waded into commodity markets. U.S. consumer spending is roughly 20 percent of global GDP, while Japan and Germany tend to run trade surpluses.

Relevant Counterviews

Two counterviews to the above analysis, popular among some Wall Street economists, are worth examining.

First Counterview

The first counterview is that U.S. households have acquired net financial assets at a pace that well exceeds personal savings out of income flows; thus, household saving must be much larger than reported, and any measure of the household financial balance that is based on erroneous personal-saving measures must be biased to the downside.

A problem of macroeconomic coherency arises with this view. Financial balances must balance at the aggregate level: if one sector is running a large financial surplus or net-saving position, another sector must be running an offsetting financial deficit position. If household savings are as large as this counterview asserts, then the financial balance approach requires that some combination of the following must also be true:

- Corporate free cash flow is much lower than currently reported
- The trade deficit is not nearly as bad as currently reported
- The fiscal deficit is much deeper than currently reported

This is a distortion on the order of \$1 trillion dollars per year in the three adjoining puzzle pieces bulleted above (i.e., the

average net acquisition of financial assets by households over the past three years).

It is true that the pace of net financial asset acquisitions by U.S. households has well exceeded the flow of personal saving and has become particularly sharp since the bursting of the New Economy bubble (Figure 5). The personal saving flow is now negative, which would seem to imply that households are in no position to accumulate financial assets. The household sector as a whole, however, has been borrowing and accumulating financial assets, so the period with the maximum divergence between personal saving flows and net financial asset acquisitions by households is also the period with the most rapid increase in household liabilities, particularly mortgage debt (Figure 6).

Household debt has increased well in excess of the amount required to plug the gap between household income and expenditures. The household financial balance has averaged \$564 billion over the past four quarters, while the total increase in household sector liabilities has been \$1,204 billion. Moreover, the household sector has been increasing its acquisition of financial assets by assuming debt, and so the flow of personal saving has not constrained the acquisition of financial assets by the household sector.

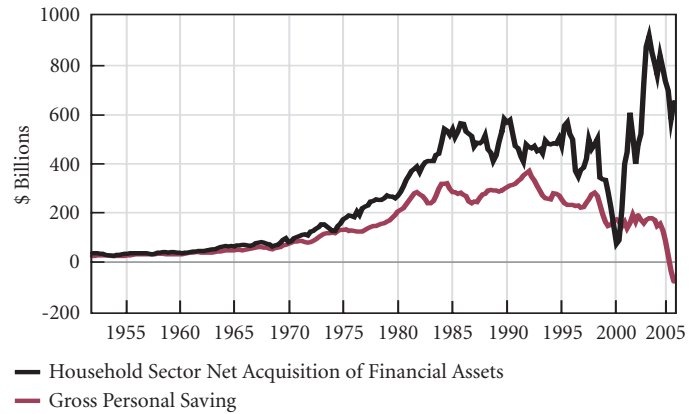
Extracting mortgage equity from real estate holdings became an easy and popular financial practice in U.S. households over the past six years. On the asset side of the household balance sheet, the majority of financial asset acquisitions occurred via time and savings deposits.

These observations all cohere. When individuals execute an equity cash-out mortgage refinancing, their mortgage liabilities increase and they are credited with an increase in the cash balance of their bank account. The surge in net financial assets tells us only that households have been acquiring financial assets—primarily bank deposits—by issuing liabilities against their non-financial (namely, real estate) asset holdings.

Second Counterview

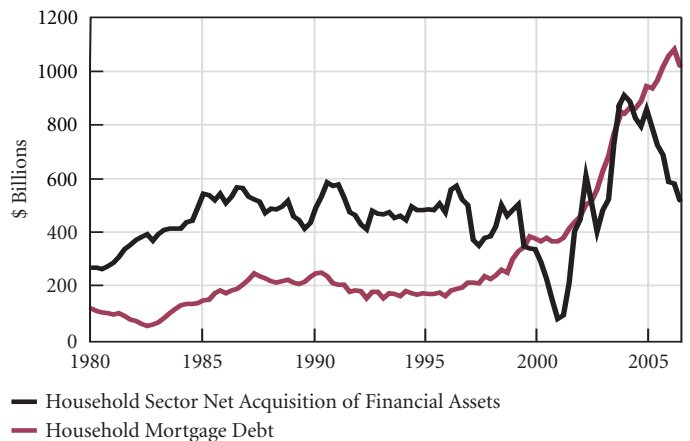
The second and more valid counterview is that by focusing simply on the liability side of household balance sheets, bearishly inclined economists are bound to come away with a distorted picture. In fact, household net worth, scaled by personal after-tax income, has again approached the New Economy bubble highs. On this basis, it is argued that households have sufficient equity cushions in their portfolios, not only to weather

Figure 5 Household Saving Does Not Constrain the Acquisition of Financial Assets



Source: Federal Reserve Board

Figure 6 The Household Sector Can Borrow to Accumulate Financial Assets



Source: Federal Reserve Board

any storm, but also to continue deepening the pace of deficit spending.

Some economists at the Fed and elsewhere have argued that the key signal encouraging households to borrow and deficit spend has been the persistently strong and positive labor productivity shocks that raise consumer expectations of robust, real, personal income growth rates in the future (despite a decline in the trailing five-year real disposable income growth rate that has approached the lows of the early 1980s and early 1990s). Two challenges arise to the view that household net worth provides a reliable cushion for continued deficit spend-

ing by U.S. households: first, the relationship between net worth and the gross savings rate, which is already far from the historical norm; and second, the tendency of lenders to form risk perceptions in a procyclical fashion.

First, households tend to view increases in net worth from asset-price appreciation as a substitute for saving out of income flows. However, the household gross-savings rate has overshot to the downside, even at the current elevated ratio of net worth to disposable income. History suggests that the saving rate should be close to 2.5 percent when the ratio of household net worth to disposable personal income is at 5.6, as was the case in the first quarter of 2006. The latest reading for the savings rate is minus 0.5 percent (Figure 7).

Smooth Transition?

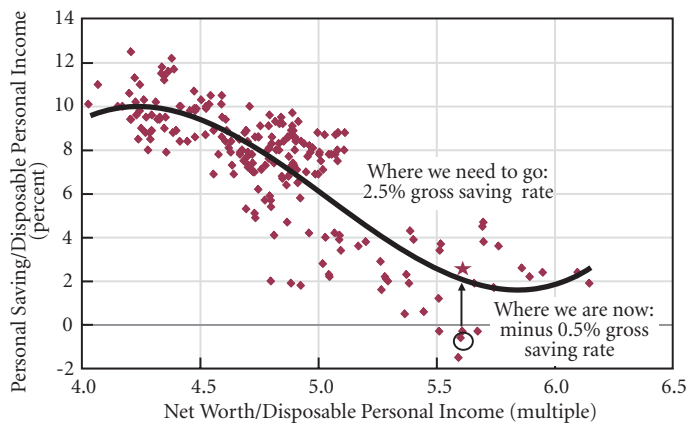
Let's make two very generous assumptions: the ratio of net worth to disposable income stays constant for the next year, and the nominal growth rate of household disposable income remains steady at 4.5 percent. If the gross rate of household saving migrates back to 2.5 percent—where it should be already, as argued above—what is the implied rate of consumer spending in one year?

If we are to get the necessary adjustment in the gross rate of household saving, nominal personal outlays can advance only at a 1.4 percent pace over the year ending in August 2007. This means very low revenue growth over the next year for companies that sell to U.S. consumers. It implies a real consumer spending drop, on the order of 1.0 to 1.5 percent, assuming generous inflation relief over the next year—a pace rarely seen outside of recession. Keep in mind that this spending response is predicated on very favorable assumptions for income growth and household net worth, and that the gross saving rate has already overshot to the downside.

Or Not So Smooth Transition?

Banks and other creditors consistently reveal procyclical risk perceptions and risk preferences. Criteria for creditworthiness have a tendency to loosen over the course of business cycle expansions, and competition between financial institutions also has a way of eroding credit standards cyclically. Nowhere have these processes been more evident than in the innovative home loan financing created during the recent expansion.

Figure 7 Is the Personal Saving Rate in Line with the Net Worth/Disposable Personal Income Ratio?



Source: Bureau of Economic Analysis

However, a quick look at key lines of credit extended to the household sector suggests that household credit growth is already slowing. Home equity lending by commercial banks and the sale of existing homes, two of the primary conduits of mortgage equity withdrawal, have come to a full stop. Another credit conduit—consumer bank loans that are not related to real estate—has all but dried up in the past year. Furthermore, credit card usage has stepped down over the past three quarters. Thus, four key credit conduits to the U.S. household sector have shown a noticeable slowdown.

According to Federal Reserve calculations as of the second quarter of 2006, the pace of net mortgage equity withdrawal was \$374 billion lower (at an annualized rate) than during its peak, in the third quarter of 2005. The Fed's flow of funds data show that the pace of net increase in household liabilities dropped by \$226 billion (at an annualized rate) over the same period.

Based on these observations, the proposition that creditors will be eager to finance a \$600 billion or more annual pace of household deficit spending predicated on a position of strong household net worth looks questionable at best. More likely, most of the slower growth of household credit has been a demand-side response to slower appreciation in house prices, and credit restrictions (which are supply-side driven and tend to be much more abrupt and disruptive) have yet to appear on the scene. Should a credit crunch or credit headwind appear from the supply side, however, the above scenarios for a slowdown of consumer spending will prove overly optimistic.

Summary and Conclusion

U.S. household deficit spending has achieved an alarming trajectory. So, too, has the ratio of household debt to income. While debt-trap equations are frequently employed to analyze the sustainability of European fiscal deficits or Latin American external deficits, rarely are such analytical tools applied to deficit spending in the private sector.

When a conventional debt-trap equation is applied to the U.S. household sector, we find an explosive trajectory of household debt to income. The primary financial surplus is nearly exhausted, and long-run household income growth remains below the prevailing interest rate on household debt. Accordingly, continued household deficit spending has become increasingly dependent upon sustained asset-price appreciation in a Ponzi-like fashion. Under this dynamic, an explosive household debt-to-income trajectory can be sustained only by an equally explosive asset-price appreciation that lifts asset prices far from fundamentals. Central bankers may feel compelled to allow serial asset bubbles in order to avoid violating the lower threshold of their inflation target zones.⁶

Even under optimistic assumptions, the trajectory of U.S. household spending growth is likely to slow further. With the end of the housing boom, various major lines of household credit have already slowed dramatically, and a credit crunch could sharply curtail household credit growth. These events would force a dramatic reversal of household deficit spending.⁷

A stock-flow coherent macroeconomic model becomes especially useful for tracing the implications of any significant change in the financial balance of the U.S. household sector.⁸ The Levy Economics Institute of Bard College, building on the work done by Wynne Godley over the past decade, has simulated a number of possible paths for the U.S. economy under different plausible assumptions about financial balances by sector.⁹

A stock-flow coherent approach reveals that a deceleration of consumer deficit spending that is not offset by a combined acceleration of capital spending, export growth, or fiscal stimulus will jeopardize U.S. profit and economic growth, and the growth of countries dependent upon export-led development strategies. Based on the analysis and evidence presented in this brief, the financial-balance scenarios developed by researchers at the Levy Institute deserve serious examination by policymakers, investors, and business leaders.

Notes

1. The definition of the U.S. household financial balance used in this analysis is derived from Table F.100 in the Federal Reserve Flow of Funds Accounts of the United States. I take the difference between line 10 (gross saving and net capital transfers) and line 12 (capital expenditures). Some prefer to use the difference between line 5 (gross personal saving) and line 13 (residential investment) to avoid possible distortions that may arise from relying on government estimates of depreciation of household durable assets. The latter variant yields a first-quarter 2006 financing deficit of \$806 billion. The definition of the household financial balance that I use in the above analysis is the less alarming of the two. I also chose to place the entire value of the statistical discrepancy between the income and expenditure sides of the GDP accounts into the financial-balance calculation for the business sector, rather than split it between the business and household sectors. Since revisions to estimates of profit income frequently swamp those of household sector income, this treatment seems sensible.
2. Most debt-trap equations used by the International Monetary Fund, European Central Bank, and others to identify the sustainability of deficit spending and debt accumulation derive from E. D. Domar (1944). Ironically, the austerity policies usually recommended by contemporary users of debt-trap equations are at odds with the conclusions that Domar arrived at while he was exploring public finance questions as an economist at the Fed.
3. From a sectoral financial-balance perspective, capital gains can be realized in order to service debt only if the household sector can sell appreciated assets to another sector. Unrealized capital gains can still, however, provide the basis for the collateral needed to borrow more from banks, and these borrowings can in turn be used in a Ponzi-finance fashion to service prior debt obligations. When the portfolio preferences of foreign investors strongly favor U.S. dollar-denominated assets, or when the U.S. business sector is aggressively repurchasing equities or retiring corporate debt, the realized capital gains loophole from standard debt-trap equations will be available to the U.S. household sector. Notably, both of these conditions have been in place during recent quarters.
4. Keynes (1936) coined this phrase while ruminating on possible long-run outcomes. Keynes's monetary theory of

interest rate determination, and his understanding of the monetary policy strategies available to central banks that are not chained to a fixed exchange-rate regime, led him to believe that lower interest rates could be managed over time. To Keynes's credit, during World War II, both the United Kingdom and the United States validated his view. However, with the surge in household sector debt service obligations as a percent of disposable income (despite historically low nominal interest rates), a renaissance of the rentier, rather than the predicted euthanasia, appears to have played out in subsequent decades.

5. It is not clear that any plausible bond rally would be sufficient to offset home-price weakness, given the relative concentration of bond holdings versus real estate holdings in the household sector. After all, the distribution of wealth in various asset classes also matters when assessing the effects of wealth on spending propensities. Assets that are concentrated primarily in the top 1 percent of the income distribution are likely to generate weaker wealth effects than more widely owned assets (like real estate), if there is a lower marginal propensity to consume at higher income levels.
6. In Epstein (2005), I provide a chapter describing the slippery slope the Fed may have tread in this direction under former chairman Alan Greenspan.
7. Note that none of this requires foreign private investors or foreign central banks to boycott U.S. dollar-denominated assets or otherwise dump existing holdings of U.S. dollar-denominated assets, which is the prevailing scare story circulated in discussions of the resolution of U.S. financial imbalances.
8. For one recent example of what macroeconomics looks like when it is grounded in coherent stock-flow modeling with reasonable behavioral assumptions, see Levy Institute Working Paper no. 421 by C. H. Dos Santos and G. Zezza (2005). Lance Taylor, of the New School for Social Research, also has a long-standing tradition of working with compact social accounting matrixes to develop his structuralist macroeconomics along stock-flow coherent lines.
9. See Papadimitriou et al. (2006) for a recent example of this financial balance-based scenario work.

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