Betting the Ranch – Some Peculiarities in Recent U.S Household Financial Behavior

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While Keynes described a macroeconomics where money, finance, and financial asset prices mattered deeply to real production and employment outcomes, much of the conventional macroeconomics developed since Keynes reverted to a more classical separation of monetary and real economic dynamics. From the original Neoclassical Synthesis to the more recent New Consensus Macroeconomics, the relevance of financial conditions to real economy results has been downplayed in various Wicksellian or Walrasian versions of Keynes. Here, Keynes' rich interplay of expectations of prospective money profit streams, the demand and supply prices of productive capital, financial market pricing in the face of fundamental uncertainty, and liquidity preferences with respect to portfolios of financial assets gets reduced to a natural or real interest rate term that is often tied to the marginal productivity of capital and the equilibration of real savings and real investment.

The difficult challenges of unwinding the various macrofinancial imbalances encouraged by asset bubbles over the past two decades has made plain the danger of ignoring Keynes' unique fusion of the real and the financial sides of macroeconomics.[1] Policy makers and practitioners increasingly cannot afford to ignore various wealth effects, stock/flow imbalances, and shifts in investor behavior when trying to understand, anticipate, and influence macrodynamics. This is especially so in post bubble environments, as perhaps the experience of Japan since 1989 most poignantly demonstrates.

In an attempt to reassert Keynes' original emphasis on a macroeconomics that allows the full range of monetary and financial conditions to influence real economic outcomes, the following paper examines some peculiar US household sector behavior in the aftermath of the late '90s US equity bubble. Surprisingly, and in marked contrast to the business sector, US households persisted on a path of deficit spending following the bursting of the equity bubble. In addition, household debt accumulation continued at a very rapid pace – even more rapid than was required to finance household deficit spending. In the aggregate, US households appear to have leveraged their real estate holdings in order to take positions in financial assets.

This unusual post bubble behavior by the household sector may reflect a gaming of the Fed's extremely accommodative response to the demise of the late '90s equity bubble. In examining the rationale for this accommodative response, Fed papers, speeches, and statements since the bubble burst offer a distinctly different view of the monetary policy transmission mechanism than that depicted in the New Consensus Macroeconomics. The current doctrine regarding asset bubbles requires no preventative measures by monetary authorities other than those relevant to output gap and inflation targeting considerations. In contrast, once an asset bubble

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[1] Throughout this paper, the terms financial balance and net savings will be used interchangeably. (This differs from the conventional usage of net savings to refer to gross savings minus depreciation). Both refer to the gap between gross nominal savings and investment or income and expenditures for a sector of the economy. As savings equals investment and income equals expenditure for the economy as a whole, the sum of the sector financial balances must net to zero.

has burst, current doctrine requires that the sharp jump in liquidity preferences by wealth owners and the consequent disarray in financial markets be met by a massive liquidity injection by the central bank in order to stabilize and then revive asset prices. Explicit reference is made by central bankers to the need to influence a broad array of financial asset prices well beyond short term policy interest rates in order to achieve the desired outcomes in the real economy. A similar orientation is advocated when the short term policy rate is approaching the zero nominal bound.

A close inspection of recent Federal Reserve statements suggests this financial market transmission mechanism is relevant not just under extreme conditions of a post bubble period or a near zero nominal short term policy rate, but under more normal conditions as well. Yet in New Consensus Macroeconomic models there is no room for nominal financial asset prices to determine real outcomes (short of their influence on variations in the indistinct stochastic shock terms).

Central bankers, under the pressure of facing asset bubbles and their consequent macrofinancial imbalances, may already have unwittingly evolved a set of practices that more closely reflect Keynes' insights regarding the importance of financial conditions for real outcomes. In effect, New Consensus Macroeconomics may already be old hat. Over the past five years, work on the integration of asset prices, credit growth, and sectoral financial balances considerations into monetary policy has begun in various financial stability departments within central banks (especially the Bank of England and the BIS). This suggests at least some wing within the current central banking establishment is well aware of the need to go beyond the New Consensus.

The apparent regime shift in the net saving position of US households, and their revealed preference for leveraging their portfolios, may mark a recognition of this shift in central bank practices towards a wider financial market transmission mechanism. If the household sector is gaming the use of this mechanism by the central bank, there may be some unintended consequences. First, the US current account deficit may remain fairly intractable if the US household sector continues on a deficit spending path. Second, the longer the household sector stays on a deficit spending/portfolio leveraging path, the more likely the US household sector may eventually face debt trap dynamics. Third, from a demographic perspective, the US household sector needs to be in a net saving position as the baby boomers approach retirement. Fourth, in the next recession, monetary authorities may need to execute unconventional policy responses either to cushion any attempt by deficit spending households to pull back from deficit spending or portfolio leveraging, or to encourage the US corporate sector to take the leading deficit spending position.

Financial balances and the recent post bubble adjustment

While fiscal deficits or current account imbalances get the attention of policy makers, investors, and economists, private sector financial balances tend to remain unexamined. However, just as the government sector can spend more money than it earns, and just as a current account deficit reveals an excess of national investment over national saving, so too can the private sector engage in an expenditure/income or saving/investment imbalance.

The notion of returning sectoral financial balances to center stage can be credited to Wynne Godley, although Hy Minsky was also exploring along similar lines in the early 1960's. The reason for placing emphasis on sector financial balances in macroeconomic analysis is to clarify the ways financial conditions may influence real economic outcomes.

Sectors that are running a positive financial balance (savings in excess of investment, or alternatively, income in excess of expenditures) are in a position to either accumulate financial assets or reduce financial liabilities. Conversely, sectors that are running a negative financial balance are either issuing liabilities or running down their holdings of financial assets. Sectors that run persistent flow imbalances will tend over time to find themselves facing balance sheet disequilibria.

A persistent deficit spending sector may eventually find its cumulative debt loads impair its ability to service existing liabilities in a timely fashion, or may find access to new credit prohibitively expensive as creditors require an adequate risk premium. A heavily indebted corporate sector, for example may find the cost of new financing too high relative to the present value of the stream of expected future profits of any of its prospective investment projects. An impaired pace of investment spending can, in turn, dampen economic growth prospects.

Both the propensity to spend of private sector agents and the willingness to employ credit to leverage spending power tend to rise during asset bubbles. Under the influence of rising financial asset prices, households and firms will tend to favor increased deficit spending.[2] If this ex ante position holds ex post, the private sector will tend to display a rapidly rising debt/income ratio through "balance sheet adventuring", as Hy Minsky described it. Ostensibly, the reverse should tend to hold true following the popping of an asset bubble.

In the course of the recent post bubble period, the US private sector financial balance improved by Q4 2003 to a 0.2% of nominal GDP surplus position from a -5.6% deficit achieved at the peak of the equity bubble roughly three years prior. A massive swing in the government financial balance combined with a collapse in business sector expenditures helped to reverse the unprecedented private sector deficit spending position. To continue on this path of restoring the private sector back to its historical average net saving position (roughly a surplus running at 2.0-2.5% of nominal GDP), the US current account deficit must be turned around at a pace faster than fiscal stimulus is reversed.[3] This challenge to the path of US financial

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[2] This will be true ex post as well as ex ante provided that the fiscal balance increases faster than current account balance. Such dynamics will tend to be the case in nations with flexible exchange rates, high income elasticities of import demand, progressive income tax rates, and fiscal expenditures geared towards automatic stabilizer objectives. This conclusion flows from the following variant of the financial balance identity: the private sector financial balance must equal the current account balance minus the general government balance. This identity must hold true if ex post, total savings equals total investment, since the sum of the net saving of all the sectors must be zero. A further examination of the conditions required for financial fragility to arise during asset bubbles can be found in my November 2001 paper entitled "The Economics of Euphoria: Financialization and the US Bubble" at the Political Economy Research Institute, http://www.umass.edu/peri/pdfs/parenteau.2.0.drft.pdf.

[3] Following Wynne Godley and Brian Reading, the simplifying assumption is made that the historical average financial balance is the appropriate target. Theories of the "optimal" sectoral net saving position are as yet, as far as I know, undeveloped in macroeconomics beyond some golden rules that have been devised for fiscal balances. In practice, an optimal net savings rate may not be very informative given the changing degrees of financial fragility (in the Minsky sense) an economy will tend to traverse both secularly and cyclically. In simplest terms, the government sector, as the monopoly issuer of fiat money, is the only sector in any position to persistently deficit spend (and even them may be limited at the points where tax resistance, inflation acceleration, or capital flight become destabilizing).

balances, while significant to the sustainability of any post bubble expansion, may be less important than resolving some anomalies remaining on the household side of the private sector.

At the heart of these anomalies remains the large disparity between the post bubble adaptations of household and business sector expenditure behavior. Businesses collapsed capital spending and reduced inventory stocks in response to the burst equity bubble, while the household sector only slowed its pace of expenditure growth. As a result, the household financial balance continued to decay in the post bubble period (albeit at a slower rate than during the bubble) towards a slightly deeper deficit (as a share of nominal GDP) than at the peak of the equity bubble. In contrast, the business sector financial balance rapidly returned to balance in just over a year after hitting a 4.3% deficit position in Q3 2000. By Q4 2004, the business sector had achieved a 2.8% surplus position, very near its historical high of 3.6% achieved in early 1993[4]. These are two very distinct and divergent private sector behavioral responses to the popping of the equity bubble that deserve further investigation.

Adding to the mystery, although the household sector has not changed the pace of its deficit spending that much since the bubble popped, household debt continued escalating at an extraordinarily rapid pace. This sharply contrasts with the path of nonfinancial corporate debt growth, which decidedly slowed in the post bubble period, and has only just begun to reaccelerate. It may simply indicate a greater share of intrasectoral debt issuance and placement within the household sector. It may also suggest household debt was accumulated for purposes beyond plugging the gap between income and expenditures. Investment portfolios may have been leveraged as well. Exploring these anomalies may lead us to some very important clues about the underlying dynamics of this recent post bubble adjustment.

These clues may in turn help better inform macrofinancial theory concerning asset bubbles, and so help pierce the inhibiting veil conventional macroeconomics places between real and financial/monetary economic dynamics. To foreshadow the conclusions of this analysis, the key to understanding these anomalies may lie with the asymmetric monetary policy response of the Fed to the late ‘90s asset bubble, and certain moral hazard behaviors that asymmetric response can encourage. If this asymmetric approach to bubbles becomes the received doctrine for central banks to address asset bubble episodes - as it appears well on its way to becoming - certain challenging side effects of the sort recently found in the US experience can be anticipated to arise again in the future.

<u>Peculiarities of the post bubble adjustment in the US private sector</u>

Sectors that climb their way back from a deep deficit spending position – that is, from showing a negative financial balance, a large financing gap, or a large borrowing requirement – usually do so by curtailing their expenditure growth, often to the point of actually reducing the level of

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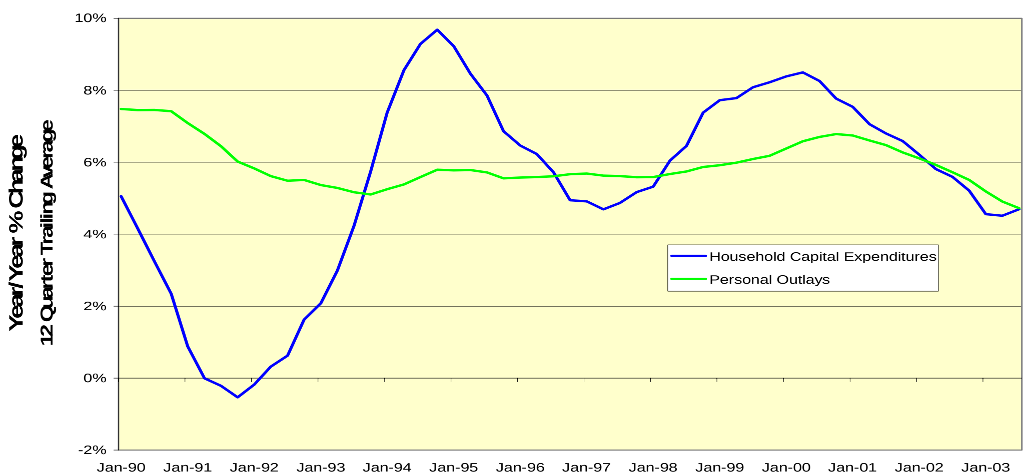
[4] The January 15, 2004 release of the Federal Reserve Flow of Funds accounts introduced significant revisions in the trajectory of household and business sector financial balances over the 2000-2003 period. Most notably, corporate profits were boosted as estimates of stock options exercised by the household sector were reduced (especially in 2002). This effectively shifted what was originally reported as household saving over to the business sector. What previously appeared to be a near return to zero net saving in the household sector by 2003 now appears as a persistent deficit near 2% of nominal GDP, while the corporate sector now appears to have moved much more decisively into surplus.

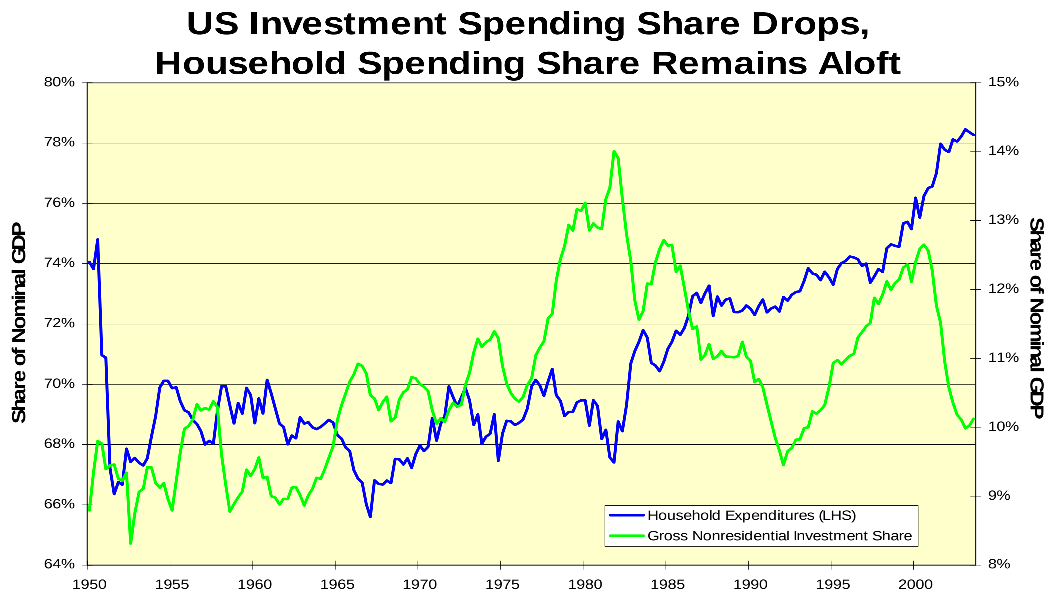
expenditure flows. The private sector financial balance has improved since 2000, but it has done so without the household sector having reduced its level of expenditures, in stark contrast to the business sector. The household sector has only reduced its rate of expenditure growth following the bursting of the late '90s bubble.

As displayed below, the slowdown in the pace of personal outlays growth (taken from the personal income report used in the National Income and Product Accounts) is about in line with that seen after the early '90s recession and subsequent recovery. Recall this recovery was dampened by various credit headwinds in the wake of the S&L crisis and excessive LBO lending. More striking is the resilience in household capital expenditure growth from the Flow of Funds report. This measure of household spending isolates residential investment, consumer durable goods, and nonprofit nonresidential spending. While the three-year rate of growth did fall in half after the peak in the equity bubble, household capital expenditures failed to fall in level terms as they did in 1991, despite the severity of the equity market correction from 2000-2.

Nominal Household Spending Growth



As a result of the divergent spending responses to the popped equity bubble within the private sector, household expenditures (personal consumption plus residential investment) have assumed a record share of nominal GDP, while the gross nonresidential share of nominal GDP is close to its historical lows.

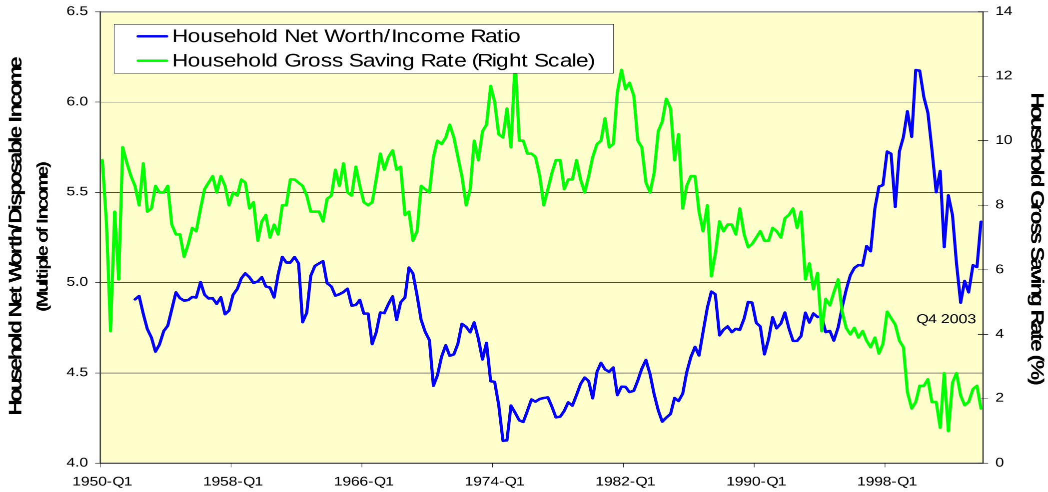


The last time the private sector tried to close a deep financial imbalance was in the early 50's. Then, in a fashion unlike the recent episode, household expenditures as a share of nominal GDP reversed quickly. The motivation for deficit spending then was hoarding and stockpiling of consumer goods on the eve of the Korean War, given the experience of consumer good rationing during WWII. Once it became clear that the Korean War was not going to require a prolonged rationing of consumer goods, hoarding behavior ceased and the deficit spending position reversed. In contrast, this time around, reduced business expenditures on capital equipment and inventories have driven nearly all of the private expenditure adjustment. Postwar US history only affords us two episodes of deep deficit spending by the private sector, but each of these episodes has quite distinct characteristics. In many ways, as Larry Summers and others have remarked, this last cycle more closely resembles 19th century investment driven cycles of the sort studied by Keynes and subsequently investigated by Minsky. However, what would especially confound Keynes (or at least the early Keynesians) this time around is the apparently perverse increase in the consumption multiplier in the face of a sharp investment spending contraction.

***COMMENT ON RECESSION DEPTH, LABOR MARKET CONTRACTION

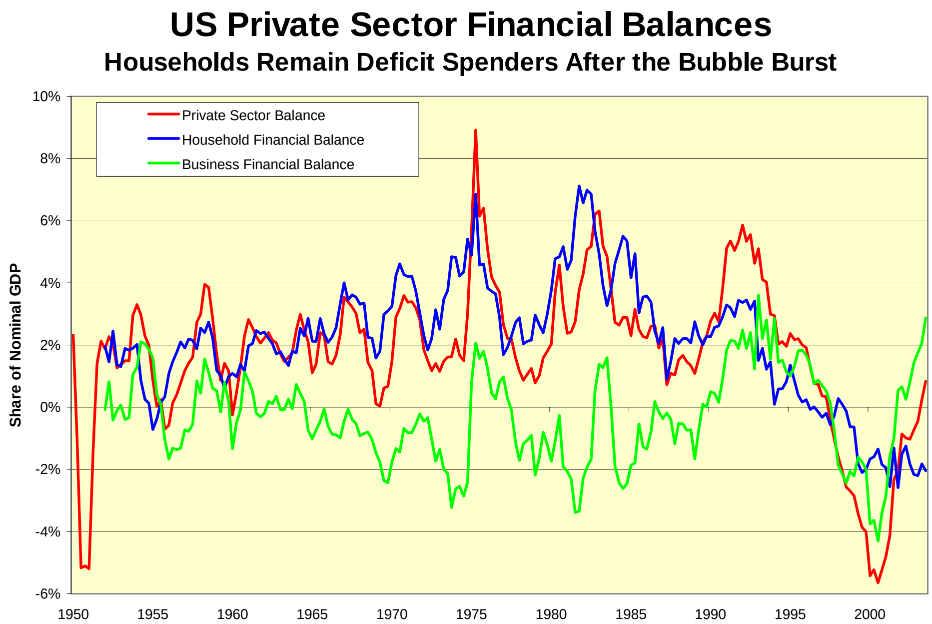
For the US household sector, both the gross saving rate and the net saving rate have been fairly stagnant in the post bubble period. This failure of the US household sector to return to its usual net surplus position is especially puzzling given the historical relationship between the gross saving rate and the ratio of net worth to disposable personal income. Wealth effects may operate in the household sector if asset appreciation is viewed as a partial substitute for saving out of income flows. When asset prices are appreciating, and household net worth is a rising share of disposable personal income, the gross household saving rate may tend to fall under this substitution effect interpretation. Conversely, falling asset prices and a declining net worth/income ratio may tend to be accompanied by a rising gross saving rate. Such a negative correlation is observed fairly consistent over the past half century, with the glaring exception of the most recent post bubble period. In this last episode, one of the sharpest drops in the net worth/income ratio that the US household sector has ever experienced yielded very little change at all in the gross saving rate.

The Wealth Effect on Household Saving



This represents the first puzzle – why did household gross saving depart from its historical relation with net worth? Why did household spending not adjust as dramatically as business sector spending? Since household spending levels have not collapsed, this curious post bubble stability in the gross and net savings rates could only be possible if household income growth has remained close to the pace of household expenditure growth. This can be achieved even when job growth is sub par (as firms cut their expenditures through labor shedding in addition to cutting inventory stocks and capital spending) if large tax cuts are used to boost disposable personal income growth. In other words, if the fiscal balance is run down through personal tax cuts, it is possible for the household financial balance to stabilize even without a dramatic reduction in household expenditure growth. Undoubtedly, in the recent episode, an aggressive and timely fiscal easing through personal tax cuts has helped cushion the household sector and helped prevent a sharp adjustment in the household sector financial balance. The monetary policy side of this puzzle may also hold some clues, which will be explored in more depth later.

***Use a much shorter time period

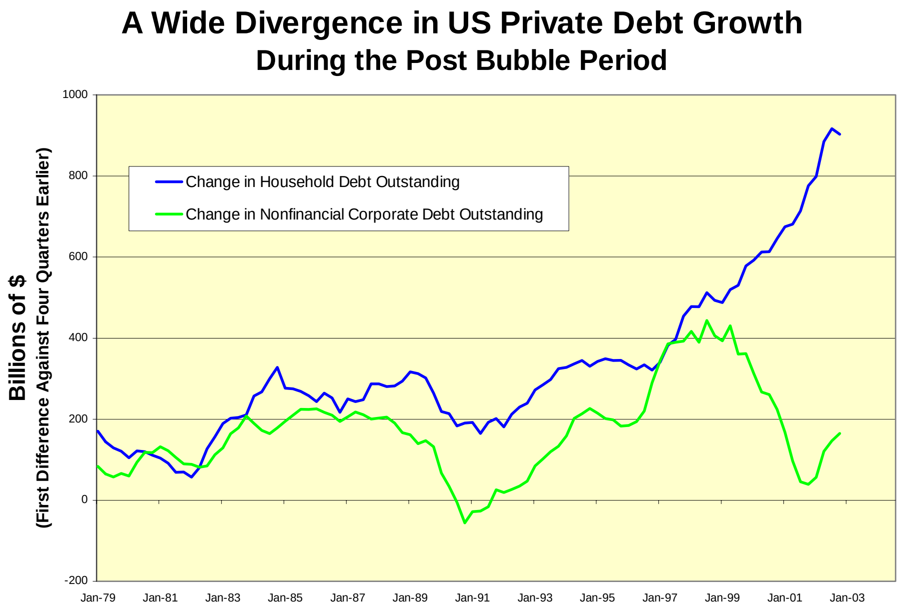


Households, recognizing they faced multi-year reductions in their tax rates, may reasonably have assumed any reduction in their post-bubble income flows would be at least partially cushioned by fiscal policy. The normal precautionary savings response to increased layoffs may be less necessary when such a multi-year fiscal response is anticipated. As a result, household expenditure cut backs that otherwise would have been planned following the bursting of the equity bubble may have been dampened by the recognition of this ongoing fiscal boost to household cash flows. However, households not only continued to spend a high proportion of their tax cut enhanced income flows, but they also continued to run up their leverage at the same time, and it here that we enter something of a mystery posed by the Federal Reserve's Flow of Funds data.

The puzzling surge in household debt

Recall the financial balance of any sector of the economy can be understood as free cash flow, or the difference between income and expenditures, or the difference between gross saving and investment (i.e. net saving) of the sector. When the financial balance of a sector is negative, the sector is deficit spending, it is spending more than it is earning, it is investing more than it is saving, and it is running a negative free cash flow position that requires external finance. Liabilities mount on the balance sheet (or assets are sold off, raising debt/net worth ratios anyway) until the financial balance of the sector turns positive.

As discussed above, the business sector pulled in its expenditures after the equity bubble popped, collapsing the levels (not just the growth rates) of capital spending and inventory holdings. So it is little surprise that nonfinancial corporate sector debt growth has ground to a halt (see chart below). But curiously enough, even though the household sector has stabilized its financing deficit near 2% of nominal GDP, household debt has been increasing exponentially. Something more than the disposable income cushion provided by fiscal stimulus has been influencing household behavior.



The clue to solving the discrepancy between the relatively stable household financing gap and the surge in household debt is to recall that net increases in liabilities can be used not only to meet financing gaps – gaps arising between income and expenditures in product markets - but they can also be used to fund the net acquisition of financial assets in financial markets. This would be analogous to a nonfinancial firm running a positive free cash flow position - the net of the cash from operations and investments segments of its cash flow statement - but running up debt on its balance by borrowing to purchase financial assets. Upon closer examination, it becomes apparent that in the aggregate, households have been issuing debt (mostly by leveraging their real estate holdings) in order to purchase financial assets.[5] The primary channel for this leverage has been through through equity cash out mortgage refinancings and home equity loans.

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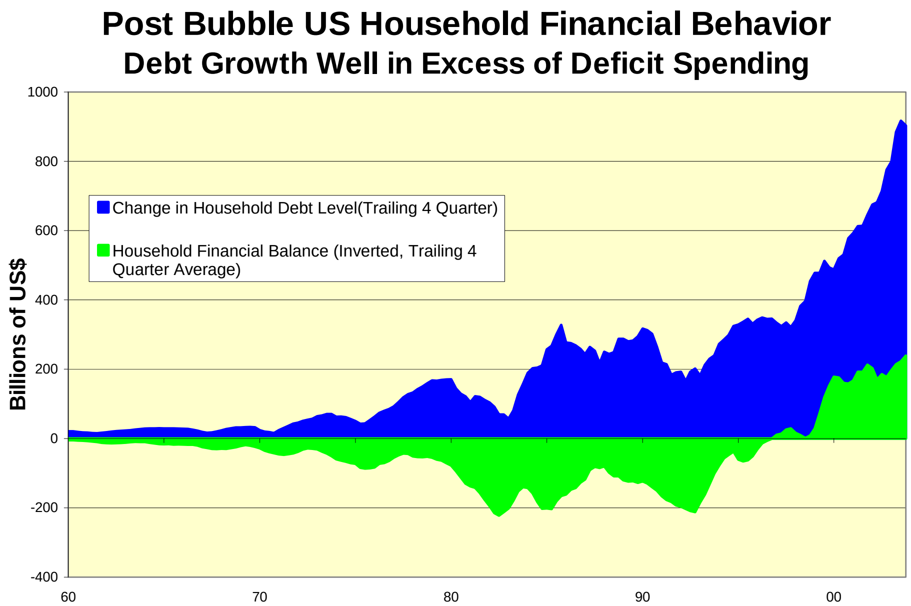
[5] This implies conventional public debt trap equations may need to be modified before they can be applied to the private sector (an example of this application, but without this modification, can be found in my chapter in the ****CORRECT CITATION***2002 Post-Keynesian Conference Volume edited by Randy Wray and Matthew Forstater, to be published Edward Elgar this year). As the government sector is unlikely to be positioning financial assets by issuing debt, this element does not enter into public debt trap equations. But since households do position financial asset with debt, more than just the household sector primary financial balance and the household interest rate/income growth gap matter to the trajectory of the household debt to income ratio. This is something Hy Minsky was quite aware of when depicting the dynamics of financial instability, but it remains to be formalized in a more complete household sector debt trap equation.



By itself, this is not such a big deal. It is what most financial intermediaries do (primary dealers in the bond market do it every day), and resembles a hedge fund operation, for example. It does add to the debt-servicing burden of households, as interest and principal payments increase in future years. But given the fairly liquid nature of the financial assets households may have bought on margin as it were (to be examined next), the increased default risk this position appears to pose to creditors this time around may appear fairly low. Financial assets of relatively stable value should, in theory at least, be easily sold close to par if there ever is a need for creditors to liquidate the debt taken on to accumulate these positions.

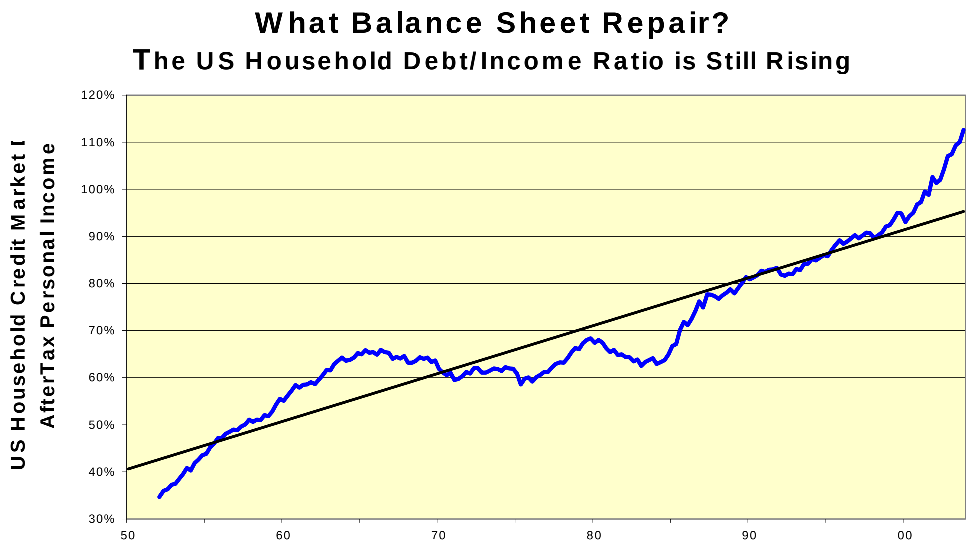
***NEED TO STAGE HH Fin BEHAVIOR OUT

What makes this aggregate household hedge fund operation – essentially shorting real estate holdings to take long positions in other financial assets – so strange is given the highly liquid financial assets households accumulated, and the low nominal short term interest rates encouraged on these instruments by the Fed, households appear to have borrowed money at a higher interest rate than the yield they are receiving on nearly 60% of their new financial investments.

For example, accompanying the $1,638b increase in mortgage debt by the household sector from 2000 to 2003 is a $788b increase in time and savings deposits, and another $194b increase in municipal bonds.[6] Done in volume, and over time, the negative arbitrage between, for example, 5.5% mortgage rates and 2% yields on savings or time deposits (or municipal bonds yielding close to 3.25% 10 year US Treasury yields on an after basis) could drive the

[6] Q4 2003 is the last available data point as of this writing, so the average of the four quarters available for 2003 is used to represent for the full year level. In addition, Jan Hatzius at Goldman Sachs has kindly pointed out to me that mathematically, the largest swing in household net financial asset accumulation is in fact to be found in the net purchases of directly held equities. But with exception of a quarter early in 2003, these remain negative, and what we are trying to identify is where leverage may have been used to position increases in financial assets by households. In this sense, less selling of an asset class is not very helpful to solving our puzzle.

household sector into bankruptcy. The cost of carry is larger than the yield earned on the financial assets purchased. From this perspective, while we may have arrived at one explanation of why household debt growth remained strong despite a fairly stable household financing gap, we are left with little explanation for why such a negative carry trade has been put in place over the past few years by the household sector, at least in aggregate.



Many policymakers and practitioners assert that the household sector has already repaired its balance sheet. The above analysis indicates where these assertions may fall flat.[7] While it is true the household financing gap has stabilized, this has not stopped the household debt to income ratio from continuing to surge, as displayed above. Alarmingly, while household leverage took off as the equity bubble began to seriously inflate, it has never stopped climbing in post bubble period. Interestingly enough, the first acceleration in home equity lending began in 2000 when the equity bubble peaked. Rapid Fed easing in quarters following the peak in equity prices no doubt encouraged mounting mortgage refinancing waves, many involving home equity cash outs. In the aggregate at least, the household sector appears to be leveraging itself not only to finance continued deficit spending, but also to put on a portfolio position which may come with a negative cost of carry.

****INTRODUCE FED'S FINANCIAL OBLIGATIONS RATIO, AND PLACE FOOTNOTE 8 IN MAIN TEXT

But has household investment behavior really been that warped?[8] From the average household's perspective, the trade may look as follows. Mortgage rates have rarely been lower

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[7] This is not to belittle the 2001 Q4 peak in the household debt service burden kept by the Fed at 13.3% of disposable personal income. However, as of Q3 2003 level, the level has dropped only to 13.1%. This recent peak has everything to do with historically low current interest rates, and nothing to do with a reduction of household debt, a decline in the household debt to income ratio, or a decline in debt/net worth. In fact, all three have surged over the past three years. For example, despite the fact we are at near 40 year lows in current mortgage rates, the debt service burden remains at a level unsurpassed in all but 8 of the past 95 quarters of its recorded history.

[8] Those who find this financial behavior implausible should consider a visit the NASD website, where the following March 15, 2004 Investor Alert will be found posted as follows:

in most adult lifetimes. Mortgage rates are therefore, from a backward looking perspective, not very likely to go much lower. Real home price inflation has already achieved peaks only seen during prior housing bubbles. Why not, to paraphrase Janis Joplin, get it while you can? Why not extract some home equity when mortgage rates are at lifetime lows? Why not simply inventory the proceeds from these home equity cash outs in cash and near cash instruments until more attractive returns become attainable in other less liquid financial asset classes? Isn't that portfolio diversification? Isn't that simply replicating in the real estate market what smart insiders who cashed out early on their stock options managed to do in the equity market?

The trade may look upside down for a couple of quarters, maybe even a couple of years, but on the bet that equities will return to their historical 10% annual average return, then what is so wrong with that trade? In other words, once we move from a short run to an intermediate term investing horizon, and we assume households have not lost their belief in the long run returns available in some less liquid asset classes like equities[9], it may become possible to make some sense of this negative carry trade.

Note low mortgage rates, encouraged by dramatic Fed lowering of the fed funds rate to 1%, plus a resilient conviction in the eventual reversion to long run mean returns in the equity market provide the basis for this trade. That is not to suggest the Fed intended to provoke households to increase their leverage in order to position financial assets, but rather to highlight the possible centrality of monetary policy, not just fiscal policy, in both perpetuating household deficit spending, and encouraging increased household leverage. Without the sharp reduction in the fed funds rate induced by the Fed, the arbitraging of the yield curve that encouraged lower 10 year US Treasury yields, and the attendant decline in mortgage rates, it is doubtful households would have embarked on this post bubble leverage.[10]

"Betting the Ranch: Risking Your Home to Buy Securities

With a rising stock market, record low interest rates, and large gains in home value, some investors have taken out new mortgages, refinanced, or obtained line-of-credits secured by their homes for the specific purpose of investing in securities. The hope is that the investment will not only pay the mortgage, but also generate additional income. Unfortunately, it doesn't always work out that way.

NASD is issuing this alert because we are concerned that investors who must rely on investment returns to make their mortgage payments could end up defaulting on their home loans if their investments decline and they are unable to meet their monthly mortgage payments. In short, investors who bet the ranch could lose it. "

[9] The March 2004 UBS/Gallup poll shows individual investors expect to achieve a 12.7% return on their equity portfolios over the next year, which is below the December 1999 level of 18.4%, but well above the 6.3% low achieved in March 2003. Given long run S&P 500 returns closer to 10-12%, this reading hardly suggests households gave up hope on equities.

[10] A strong positive feedback loop between Treasury yields and mortgage rates may have played an important role in the Fed's transmission mechanism during the recent post bubble episode. Low Treasury yields encourage mortgage refinancing, which in turn lowers the effective duration of bond portfolios holding mortgages and mortgage related debt as higher yielding mortgages are called away. Portfolio managers are then forced to try to extend duration by purchasing longer duration Treasuries, or by affecting a similar result in the swaps market. Bids for Treasuries thereby lower mortgage rates priced off of them, setting off further refinancing activity. Overshooting of Treasury yields and rapid compression of mortgage rates can be the result of this dynamic.

The above interpretation assumes either very naïve or very sophisticated portfolio behavior on the part of households, and so may stretch credulity. A second interpretation does not require such extreme assumptions about investor behavior. This alternative view suggests a framing error may be committed when analyzing the household sector in aggregate. As rich as the financial balance approach may be, it may also introduce blinders on macroeconomic analysis by directing attention away from intrasector financial flows. Rather, what may have transpired during the post bubble period is a sharp upward shift in the savings rate of high income households, coupled with a very large increase in the debt reliance of middle class homeowners as the latter group tried to preserve a continually rising standard of living in the face of a weak job market, falling equity wealth, and low real wage and salary income growth.[11]

Trapping this intrasectoral transfer of savings is not very easy with the available data. High income household savings rates did decay the most during the equity bubble. Since equity ownership is also concentrated in the highest income brackets, a plausible argument can be made in favor of this alternative interpretation. Household ownership is less concentrated than equity ownership, while debt/income ratios are heavily skewed toward the lower income deciles, so again the alternative explanation of simultaneous surging debt and liquid financial asset accumulation in the household sector appears plausible. Unfortunately, the last Survey of Consumer Finances (SCG) provided by the Fed is from 2001 interviews. Interviewing for the 2004 Survey is due to begin in the second half of 2004, and results will not be publicly released before the first quarter of 2006. Conversations with Dean Maki, a former Fed staffer who has specialized in parsing the SCF data set with other sources to derive a clearer picture of intrasectoral household flows across income deciles, suggest there is no easy way to assess the alternative hypothesis presented above.

However, as a very quick and dirty cross check, the $1.64 trillion increase in mortgage debt from 2000-3 is quite substantial in relation to what has been a $1.25 trillion increase in the flow of annualized disposable personal income between Q1 2001 and Q4 2003. The increase in the marginal savings rate of high income households required to make this surge in mortgage debt merely an intrasectoral flow is quite daunting. Canvassing financial professionals that service or advise high net worth individuals may be the only way of getting a better grasp on the intrasector financing hypothesis, at least until the next Survey of Consumer Finance is released.

The Fed's role in upholding household spending propensities

It is conceivable the Fed realized it would face a stiff policy challenge once the equity market tumbled, taking capital spending with it, even with the fortuitous easing of fiscal policy. Alternatively, the Fed may have quickly recognized the nature of the challenge once the data confirmed the sharpness of the business spending contraction underway. Given the Greenspan Fed's revealed aversion to sustained fiscal deficit spending and rising public debt/income ratios, the only policy option to prevent an income deflation that looked favorable to the Fed must have been to drop the fed funds rate quickly in the hope of preventing

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Research by the Fed on this topic suggests they have a good understanding of this endogenous overshoot mechanism now operating in the bond market.

[11] I am indebted to Frank Veneroso for originally suggesting this alternative intrasectoral interpretation of household financial behavior.

household expenditures from collapsing. More indirectly, the Fed may have hoped to influence the dollar exchange rate, with a lower fed funds rate fueling a depreciation (ostensibly via international interest rate arbitrage) that in turn might reverse the trade deficit. If this latter channel was indeed part of their intention, the effort must be judged to have largely failed, as net exports have continued to decay. Given the household expenditure share of nominal GDP relative to either the export or the import share, it is much more likely that the Fed's first priority was to keep households in a deficit spending position. From the Fed's perspective, this may have appeared as the least worst option, and the only feasible way to prevent a nominal income contraction in the US, with all the debt deflation dynamics that might entail.

To perform this feat, not only did the Fed need to lower the cost of borrowing to the household sector, but with equities deflating in value on household balance sheets, the Fed arguably needed to try to reflate another asset held by households. Only by reflating another portion of household balance sheets could the Fed hope to insure sufficient offsetting wealth effects on household spending. With equity prices falling, sufficient collateral for households to borrow against could only be secured if another asset held by households rose in value. The most obvious asset, given its relative share of household portfolios and its high interest elasticity, must have been real estate.

A comment by Charles Goodhart on Barry Eichengreen's BIS Working Paper No. 137, "The Great Depression as a Credit Boom Gone Wrong" may depict the central thrust of such an operation quite clearly:

> "Perhaps a more useful question is how to respond when such an asset/credit boom does collapse. The current answer seems to be that, should one asset market, in this case the stock market, collapse, then the right response is to recreate another asset price/credit boom in another market, in this case the housing market. The hope is that, by the time the housing market does subside, taking consumption down with it, business confidence and investment will have recovered."

While Goodhart's characterization of the monetary policy response to asset bubbles may seem cavalier, Chairman Greenspan may have corroborated the general thrust of Goodhart's position during his AEA speech on January 3, 2004, entitled "Risk and Uncertainty in Monetary Policy".

> "There appears to be enough evidence, at least tentatively, to conclude that our strategy of addressing the bubble's consequences rather than the bubble itself has been successful…. The 1998 liquidity crisis and the crises associated with the stock market crash of 1987 and the terrorism of September 2001 prompted the type of massive ease that has been the historic mandate of a central bank. Such crises are precipitated by the efforts of market participants to convert illiquid assets into cash. When confronted with uncertainty, especially Knightian uncertainty, human beings invariably attempt to disengage from medium to long-term commitments in favor of safety and liquidity. Because economies, of necessity, are net long--that is, have net real assets--attempts to flee these assets cause prices of equity assets to fall, in some cases dramatically. In the crisis that emerged in the autumn of 1998, pressures extended beyond equity

markets. Credit-risk spreads widened materially and investors put a particularly high value on liquidity, as evidenced by the extraordinarily wide yield gaps that emerged between on-the-run and off-the-run U.S. Treasuries.

> The immediate response on the part of the central bank to such financial implosions must be to inject large quantities of liquidity…"

In a third quote from Governor Bernanke's paper with Vincent Reinhart of the same day, the Fed's modus operandi, and its resemblance to Goodhart's allegation, becomes even clearer:

> "Monetary policy works for the most part through financial markets. Central bank actions are designed in the first instance to influence asset prices and yields, which in turn affect economic decisions and thus the evolution of the economy."

Athanasios Orphanides elaborates on this policy orientation further in his December 2003 Fed Board of Governors paper, "Monetary Policy in Deflation: The Liquidity Trap in History and in Practice". The Fed's strategizing for a possible zero nominal fed funds rate environment appears to have clarified the importance of the financial asset price/private spending link in the monetary transmission mechanism. Orphanides writes on p.19 of this paper:

> "when short term interest rates are near zero, there is no obvious limit to the degree of monetary expansion that a central bank can still pursue. As long as there are assets in the economy that the central bank can purchase with money…monetary expansion can continue. Additional monetary expansion continues to have some bite because the prices and yields of all assets, not merely 'the' short term nominal rate of interest, jointly determine aggregate demand. Monetary expansions can influence prices of longer term bonds and other assets, including prices of equities and foreign exchange, because none of these prices is determined solely by today's short term rate of interest."

The view that the Fed's main policy transmission mechanism today is through their influence on financial asset prices, which in turn engender expectations and wealth values that inform private sector portfolio preferences and spending propensities, can be found elaborated in numerous Fed speeches of the past few years.[12] This suggests the Fed suffers few illusions about the separation of real and financial dynamics found in contemporary macroeconomics.

To concisely summarize the current doctrine towards asset bubbles, when a bubble pops, a liquidity infusion by the central bank is called for at once. The objective of this liquidity infusion must be to lower financial asset yields and raise financial asset prices. Bubbles are not to be intentionally popped by monetary policy makers. But once they do pop, they are to be cushioned by liquidity provision with the intention of stabilizing and possibly inflating asset prices. The purpose of raising asset prices is to affect economic decisions, namely private

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[12] Section 4 of "The Economics of Euphoria" describes how the Fed's drift towards an asymmetric stance on bubbles may have begun to emerge in the '80s as then Chairman Volcker faced the rising political clout of Wall Street and was dissuaded from interrupting the LBO boom. Under Chairman Greenspan, starting with his trial by fire during the October 1987 crash, movement toward this doctrine accelerated and as demonstrated above, has now been made fairly explicit.

sector portfolio preferences and propensities to spend on produced goods and services.[13] This purpose, however, is not be confused with the notion that central banks somehow target asset prices.

In a rather defensive speech of April 1, 2004 entitled "Monetary Policy and Imbalances", Governor Donald Kohn was fairly explicit about the central role of financial markets in transmitting the Fed's monetary policy to the real economy. In interpreting recent circumstances, Governor Kohn stated,

> "Some observers worry the recent Federal Reserve policy, by keeping short term rates at very low levels for an extended period, has encouraged investors to 'reach for yield' – that is, to shift their portfolios toward riskier and longer term securities…They also worry about the effects of a related behavior in which financial intermediaries borrow at low short term-term interest rates to lend at higher long term rates – the so-called 'carry trade' – and about the effects of low interest rates on the prices of houses. To a considerable extent, these processes are part of the efficient functioning of markets…Indeed, behaviors of this sort transmit accommodative monetary policy through financial markets to accomplish its intended effect of stimulating demand. The issue is whether this process has gone too far – that is, whether investors are failing to take adequate account of the risks of those alternative investments.

On Governor Kohn's question of "whether this process has gone too far", Leon G. Cooperman, head of Omega Advisors hedge fund and former Goldman Sachs partner, attributes his 60% plus performance in 2003 as follows in the March 12th, 2004 issue of Welling @ Weeden:

> "The third thing that we did was make a judgment early on in the year that our government wanted us to own stocks - and that we would heed that message and keep only a very modest short position. What I mean by the government wanting us to own stocks...is we were running a half a trillion dollar deficit designed to stimulate economic growth and, obviously, corporate profits. We had what Steve [Einhorn] referred to as the Fed's open mouth policy. Not only running very low interest rates, but every other day some Fed official was quoted promising low interest rates for an extended period. So, the Fed was on your side. And government tax policy had become probably the most favorable toward

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13 There is a remarkable contrast between the precepts of what Arestis and Sawyer identify as "New Consensus Macroeconomics" – with no role for the money stock, and preservation of the neutrality of money, at least with respect to equilibrium values of real variables – and the doctrine being applied by the Fed to post bubble episodes or near deflation periods. Either the "New Consensus" brokered by the New Keynesians as a replacement for the defunct Neoclassical Synthesis, has already become old hat under the pressure of practical experience with disruptive financial events, or there is a certain degree of cognitive dissonance within Fed thinking. This contradiction deserves further exploration and elaboration. It is possible the New Consensus view takes cover through a money neutrality in the long run stance. Upon close examination, however, there is literally no room in their equations, at least as Arestis and Sawyer condense them, for any of the monetary/financial/real economy interactions described in the Fed quotes directly above. It may be argued by some that the Fed relies on the asset prices as a central transmission mechanism only during extreme situations – near a zero nominal interest rate barrier, for example, or following a burst asset bubble – but that is certainly not how many of the above comments by Governors Bernanke and Kohn read.

> equity ownership that we're going to have in our lifetimes...But last year, all government policies were geared toward favoring equity ownership."

Steve Einhorn, former Goldman Sach investment strategist and a partner in Cooperman's Omega Advisors hedge fund, is even more direct about what he perceives as the Fed's intentional generation of "mini-bubbles" - something highlighted by Charles Goodhart above. More importantly, Einhorn makes very clear his understanding of the vulnerability of Greenspan's Faustian bargain. The longer it takes for wage income and employment growth to return to a more normal recovery path, the longer the Fed must keep an abnormally low interest rate policy in place. The longer low interest rates are kept in place, the more extended various asset prices will become relative to their underlying fundamentals, and the more disruptive it will be the day the Fed must depart from a 1% fed funds rate. Comments by Fed Governors Mark Olson, Susan Bies and Jack Guynn, along with references in the last FOMC minutes, confirm this is a risk may be partially recognized by the Fed as well.

Einhorn noted in the interview by Kate Welling:

> "Greenspan, though he wouldn't say it, knows full well, and knew full well, that heightened productivity would bring with it slower employment growth and wage growth than is typical in a recovery...But what he's done by keeping rates low is inflate asset prices - that's how he encouraged the economy to grow, knowing he didn't have the traditional underpinnings of employment growth and wage growth. Keeping rates low inflates stock prices, home prices, commodity prices, bond prices, - Greenspan has basically had them substituting for employment and income growth to keep the economy growing until the traditional drivers take over. Now, clearly, the risk is that they don't take over. Greenspan keeps rate this low indefinitely, and he creates a series of mini-bubbles in all the various asset classes. That, I think, is a policy risk that the market is getting more sensitive to than it was six months ago."

Given this framework referenced in numerous Fed statements, recognized by central bank advisors like Goodhart, and equally acknowledged by professional investors like Cooperman and Einhorn, it is no stretch of the imagination to conclude the Fed's central policy goal during the post bubble period has been to dissuade the household sector from changing its behavior in response to the popped equity bubble. The Fed needed to prevent households from lowering their spending path in reaction to the popped equity bubble: any serious attempted to reverse their deficit spending and to reduce their debt loads would have insured a nominal income contraction in the US given the retrenchment in capital spending and inventory accumulation by the business sector. By rapidly taking the fed funds rate down to 1%, real after tax yields on liquid assets became negative, and mortgage rates dropped to 40-5 year lows. The persistent net deficit spending of the household sector, which stands in contrast to the return to a surplus position by the business sector, and the enormous surge in household leverage are open testimony to the Fed's apparent success in managing the post bubble adjustment. The success of forestalling the household spending and balance sheet adjustment in the short term, however, may not come without a significant price in future periods.[14]

[14] The unusual stridency of critiques of the Fed's persistent 1% fed funds rate stance by the BIS, the IMF, and other policy bodies suggests there may be some validity to this concern, at least in the minds of peers of the Fed.

Implications of the two household sector anomalies

In addition, with an increasing share of liquid financial assets on household balance sheets, if household liquidity preferences can be reduced over time (as the prior section suggest was an objective of the Fed), more liquid funds will be available to bid for equities and corporate bonds down the road. This last possibility – the dry powder element of household liquid asset accumulation – requires effective Fed expectations management operations. Investor risk and return perceptions must be influenced by Fed rhetoric or policy moves in the right direction.

In overly simplistic terms, for monetary policy to work in the recent post bubble environment, the Fed needed households to increase their planned deficit spending in response to monetary ease. With business planned deficit spending curtailed, this was one way to fuel economic growth. In addition, the Fed needed households to eventually increase the desired share of less liquid financial assets in their portfolios, thereby boosting the prices of less liquid assets. This channel helped indirectly fuel economic growth through several mechanisms: the wealth effects of rising financial asset prices on the marginal propensity of households to spend; and through Tobin's q, credit channel, and cost of capital effects on the marginal propensity of firms to invest in capital equipment.

Policy makers have had some success with the first channel by keeping household expenditure growth from collapsing, while keeping household income and cash flow growing through tax cuts and equity cash out mortgage refis. Policy makers are still trying to finesse the second channel. By delivering historically low mortgage rates, they have succeeded in encouraging households to act as hedge funds.[15] Households are effectively short selling their real estate equity in order to inventory cash until more lucrative returns can be earned in less liquid financial assets. As revealed in the following ICI based charts, US households have been net redeemers of money market funds, and were avid buyers of bond funds going into

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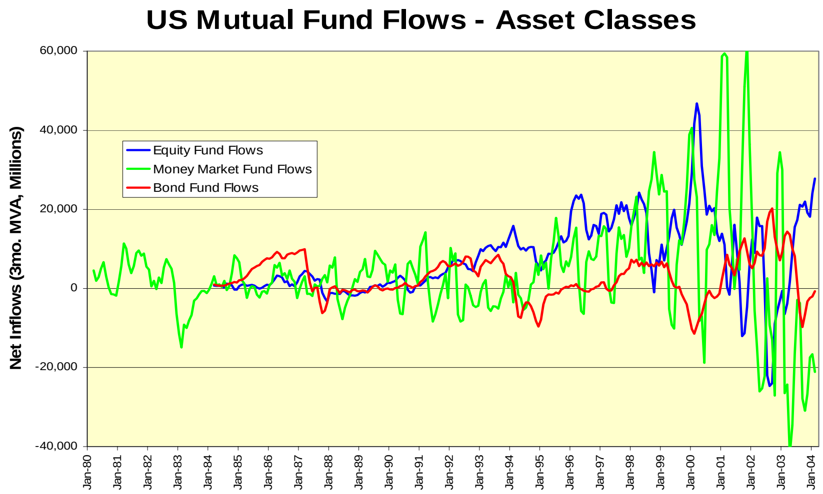
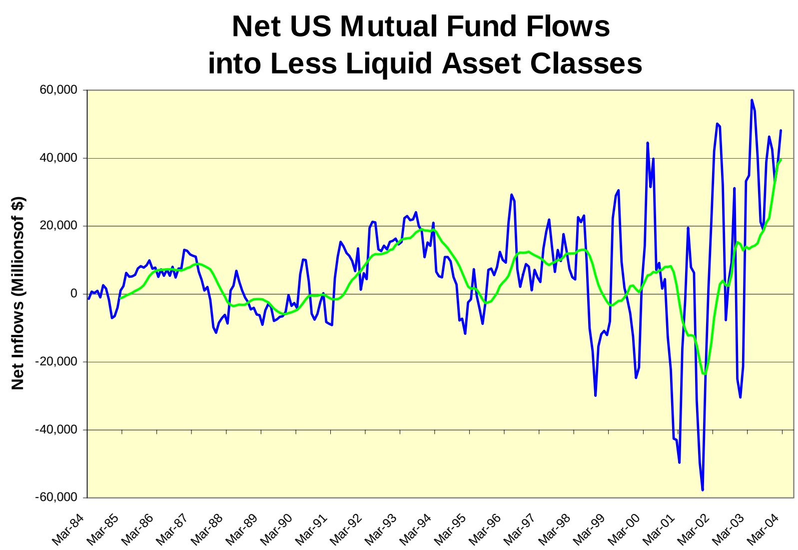
The IMF's April 2004 Global Financial Stability Report has some particularly potent passages worth reviewing (the full document can be found at http://www.imf.org/external/pubs/ft/GFSR/2004/01/index.htm). Governor Kohn, to his credit, was careful in his April 1, 2004 defense of the Fed's 1% fed funds rate stance to state quite openly, "I cannot rule out the possibility that destabilizing imbalances are building…Households with high debt loads need to take account of the fact that interest payments on their floating rate loans will increase…Households and those that lend to them also cannot count on large increases in house prices persisting." Such statements may reveal a growing awareness within the Fed about the difficulties of exiting from its abnormally low fed funds rate position in a smooth fashion.

[15] That some factions within the Fed are uncomfortable with this leveraged negative carry trade result may have been signaled in Governor Donald Kohn's comments on June 10th, 2003 at the 48th Economic Conference at the Boston Fed. While reviewing a paper applying behavioral finance precepts to policy making, Governor Kohn remarked as follows (emphasis added): "If people do such things as overweight the near term…ignore reversion to the mean, and pay too much attention to recent changes…they may be likely to overreact to current interest rates and asset prices and extend recent trends inappropriately. That response would tend to result in increasingly serious misallocations of resources…a major deviation of interest rates from long run equilibrium levels, *which might be called for to forcefully counter economic weakness*…could then have some side effects that needed to be taken into account." It does not take much reading between the lines of Governor Kohn's commentary to realize the applicability of his concern to the Q2 2003 bond market overshoot as unconventional monetary policy measures were advertised with increasing frequency after the late March 2003 speech by Fed Secretary Reinhart. Also note this view is quite a contrast to the "hundreds of thousands of investors cannot be that wrong" line Chairman Greenspan took repeatedly during the equity bubble.

the June 2003 lows on the Fed's unconventional policy bluff, while becoming increasingly active buyers of equity funds since the March 2003 lows.



In fact, if money market fund flows are subtracted from the sum of equity and bond mutual fund flows as a proxy for changing household liquidity preferences, it can be argued households are displaying an even greater preference for less liquid financial assets than they were at the peak of the equity bubble. Of course, this is a very crude measure, but the Fed has made some headway in encouraging households to change their portfolio preferences.



The great leveraged negative carry trade of the US household sector has taken on in the post bubble period may actually have improved the odds of the Fed achieving its higher financial asset price goal. However, if at any point the Fed fails in its efforts to encourage reduced household liquidity preferences, and so fails to keep less liquid financial asset price appreciating, the household sector will be left holding a leveraged negative carry trade that it could not reasonably have intended to keep in place for so long an interval. Alternatively, should the Fed successfully encourage households to move back into the equity market to the point that another equity bubble develops and eventually pops, the leveraged trade by household will go horribly wrong. Should the household sector ever decide to unwind this carry trade by paying back mortgage debt with its liquid asset holdings, banks will lose their one source of loan growth, bank deposits will shrink, and the Fed could very well face a blocked channel in its transmission mechanism, if not outright liquidity trap dynamics.

The Fed's moral hazard gamble

> "Federal Reserve lender of last resort actions, directly or indirectly, set floors under the prices of assets or ceilings on financing terms, thus socializing some of the risks involved in speculative finance…such socialization of risks in financial markets encourages risk taking in financing positions in capital assets, which, in turn increases the potential for instability*" (Minsky, Stabilizing and Unstable Economy, p. 43)*

The household sector's abandonment of its historical net saving position during the course of the last equity bubble is unprecedented in the postwar period. Nevertheless, given the size and duration of the '90s equity bubble, and the length of the last business cycle expansion, it is possible to make sense of this departure from the norm if one is willing to recognize financial market developments can influence real economy outcomes. The persistence of household deficit spending following the rupture of the equity bubble is also unprecedented, but perhaps can be made sensible by considering the size and rapidity of fiscal and monetary policy initiatives during the post bubble period. However, the subsequent surge of household debt accumulation in excess of the income/expenditure gap indicates a more pathological set of behaviors may have taken root, perhaps along the lines Minsky anticipated in the quote above.

Along similar lines, commercial banks have added over $1.3 trillion in financial assets since 2000. Since the corporate sector has been paying down its bank loans while the household sector has been leaning heavily on mortgage debt, the portfolio mix of commercial banks has changed. $596b of the asset growth was from mortgage loans, while another $278b was Agency security purchases by banks, so that the share of commercial bank portfolios exposed to the risk of rising mortgage rates has gone from 36.8% in 2000 to 41.7% as of Q4 2003. While we must keep in mind a variety of sophisticated hedging strategies are employed by banks, our own bank analyst estimates it would take only a 15% loss on mortgage backed securities to expose banks to the risk of losing one year's worth or earnings (15% of their capital base).

The explicit risk introduced by a forceful policy response to prevent a post bubble income collapse is quite visible. By encouraging households to continue deficit spending, debt trap dynamics must be accelerated for the household sector. By encouraging households to borrow in excess of their financing requirements – to leverage their real estate holdings in order to position other financial assets – debt trap dynamics are even further turbocharged. While no one knows in advance what debt/income level will trigger credit rationing because lender perceptions, not just debt trap algebra, are involved in setting any ceiling to household debt accumulation, the notion of finessing a post bubble period by exacerbating household financial imbalances is somewhat perverse at best.

In addition, as household expenditures represent an unprecedented 78% of nominal GDP, taking the economy off policy steroids may prove to be a delicate operation. It is not well recognized by the consensus that interest rates do not need to rise to cool the pace of household spending (and leveraged investing). All that is required is that mortgage rates fail to fall any further below their recent 40-5 year lows. Without further declines in mortgage rates, mortgage refinancing activity will dry up, and so too will the mortgage equity withdrawal effect on household spending.

The implicit risk introduced by the post bubble policy response, and particularly the now openly stated central bank stance toward bubbles, is more alarming, and foreshadowed in Minsky's statement above. The household sector, through what is referred to in the literature as "adaptive learning", may be gaming both the financial system and the Fed. Recognizing that significant financial market disruptions are met by Fed induced liquidity surges designed to reduce downside risk for financial assets, and that even during normal periods financial markets are being used as the main transmission mechanism of monetary policy, household financial behavior may have gone through a regime shift. Realizing the Fed has placed itself on the hook for financial stability during numerous episodes of the past decade and a half, households may have adopted financially destabilizing behavior. Households may now be engaged in a persistent deficit spending mode, with a proclivity to place leveraged bets in asset markets, at least until creditors get sufficiently burned by this behavior. The Fed's bubble doctrine may be a Faustian bargain meant to prevent income contractions during the short run post bubble period, and hence avoid an outbreak of debt deflation dynamics. But in the longer run, this approach may be provoking a strident recklessness in household financial behavior. Stability, to paraphrase Minsky (who reportedly picked it up from Lerner) may indeed be destabilizing.

At a minimum, it is worth considering the position policy makers will face entering the next recession. After a period of prolonged deficit spending, household debt/income ratios will be even higher. Given the fiscal orthodoxy that still prevails, unless the fiscal deficit has been sufficiently reversed in the course of the current expansion, there will more political resistance to using tax cuts or government expenditures to cushion private income flows in the next recession. In addition, unless the fed funds rate has been sufficiently "normalized" during the course of the current expansion, the more leveraged position of US households may make a conventional monetary policy response to the next recession less effective. The Fed is more likely to be pushed into unconventional policy responses – yield pegging and the like – to secure financial market stability. The price of finessing the post bubble period by promoting household deficit spending and financial leveraging may indeed prove to be a large one. We may be approaching the end game of the moral hazard gambit which Minsky so clearly identified early on.

Summary and Conclusions

Household financial behavior during the recent post bubble period has proven anomalous in two respects. First, households have persisted in a pattern of deficit spending, even though historically the household sector has been a net saving sector, and recessions have typically marked a period when households achieve an increase, not a decrease, in their net saving position. Second, in the aggregate, the household sector has borrowed more debt than required to plug the gap between their income and expenditures. In the aggregate, the proceeds from equity cash outs in mortgage refinancing activity appear to have been utilized in part to position financial assets.

The outsized and rapid fiscal and monetary policy responses in the post bubble period may help explain this anomalous household behavior. But it may be the longer pattern of monetary policy responses to financial market disruptions – a pattern that has now been made more explicit in the Fed's stated preferred approach towards asset bubbles - that has led households to game the financial system. In addition, an unusual contradiction appears between the "New Consensus" macroeconomics espoused by central bankers and their academic advisors, and the principles and transmission mechanisms informing the Fed's asset bubble policy and its anti-deflation policy. Close examination of statement by some Fed Governors suggest the financial market transmission mechanism is not reserved for unusual or extreme situations, like a near zero nominal interest rate environment, but are in fact considered the main channel of influence even in more conventional macroeconomic environments. Money and finance clearly matters to real outcomes in this transmission mechanism, while financial conditions beyond the short term policy rate remains isolated from the real economy in most New Consensus models.

The repercussions of modifying household financial behavior in order to finesse the post bubble period may not become apparent until the economy comes off policy steroids. One obvious side effect of continued household deficit spending that has become increasingly apparent to investors and policy makers is the persistent deepening of the US current account deficit. As suggested by the chart below, the true twin of the current account deficit may not be the fiscal deficit, but rather the drive toward deficit spending by the household sector.[16] After three years of real exchange rate depreciation, the lack of response of the current account deficit suggests household spending propensities may need to be altered before the trade deficit can be turned around.

Alternatively, the next recession may prove more challenging to contain if household debt/income ratios are allowed to continue soaring. As of this writing, both the Australian and British housing booms have come off the boil on a rather limited set of central bank tightenings. Deceleration in household spending is following the decline in mortgage approvals and slipping home prices. While it is the avowed policy of at least the Bank of England to shift to an easier stance should real estate weakness prove a sufficient drag on the economy, it remains to be seen whether the UK economic momentum can be reignited so readily after such a housing boom. Either way, the recent post equity bubble approach of encouraging households to continue deficit spending and to leverage portfolios may prove to be a very Faustian bargain indeed.

At a minimum, a deeper investigation into household behavior during the post bubble behavior should be pursued through the next release of the Fed's Survey of Consumer Finances, and any other data sets that can be mustered from the financial services industry. An examination of the possible side effects of the current asymmetric approach espoused by many central banks towards asset bubbles is warranted, with an emphasis on recrafting central bank central

[16] To take the position that the fiscal deficit is the near Siamese twin of the trade deficit requires believing that a change in the fiscal stance will leave the private financial balance unchanged. This follows from the simple financial balance accounting identity, where the private sector financial balance equals the current account balance minus the government financial balance. One need not be a follower of Keynes to realize the implausibility of such a view – empirically, there is little evidence the private sector financial balance remains relatively unchanged during most periods of variation in the fiscal balance, and logically, unless the government deficit spends, it is impossible for the domestic and foreign private sectors to net save. Finally, the clear contradiction between the conventional twin deficits (fiscal and trade) view and prevailing Ricardian equivalence views (where budget deficits are quickly offset by increased household saving to service future tax bills) never seems to be noticed. For the US at least, it may make more sense to speak of triplets rather than twins: the US current account deficit primarily reveals a thrust toward deficit spending by the US household sector and an increasing net saving preference by our trading partners.

bank objective functions to include not just inflation stability, but financial stability considerations as well. The work of Claudio Borio at the BIS in this regard is particularly worth encouraging. Finally, to the extent a New Consensus has arrived in macroeconomics, its core equations leave little or no room for some of the central transmission mechanisms of monetary policy that various Fed Governors and others have openly identified in recent years. In this sense, conventional theory may need to catch up with actual central banking practice. Given the increasing frequency of financial disruptions and financial instability over the past two decades, and the increasing influence financial dynamics appear to have on macroeconomic outcomes, the time is overdue to dissolve the artificial theoretical barrier often imposed between finance and the real economy – a barrier Keynes would have found nonsensical.