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Why Have Interest Rates Been So Low?

John A. Tatom

Abstract: This paper looks at interest rate developments in the US and argues that long-term real interest rates are at lows not seen in the past 50 years. It explores competing hypotheses that there is a global saving glut, there is conundrum or that global capital formation has slowed. The dominant view is a glut of saving, especially in China and Asia, that is depressing global real interest rates and boosting growth. While private sector capital formation remains at historic strong levels in the US, the same is not the case abroad. Unfortunately strong saving in China had not resulted in a boom in saving in Asia or globally. A decline in global capital formation is the proximate cause of depressed real interest rates. This is not a cyclical problem that is likely to go away with a rebound in economic activity in Asia or Europe. The implications for economic growth are dismal, despite notable exceptions in China and the US.

About the Author: John A. Tatom is the Director of Research at Networks Financial Institute, part of Indiana State University, and Associate Professor of Finance at Indiana State University. He has published widely on international and domestic monetary and fiscal policy issues, especially inflation, capital formation, productivity and growth; the macroeconomics of supply, especially oil and energy price shocks; the relationship of exchange rate movements to international competitiveness, capital flows, trade, and international economic policy; and on financial innovations and their effects on monetary policy and the economy, among other areas.

Keywords: interest rates, capital formation, saving

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Why Have Interest Rates Been So Low?

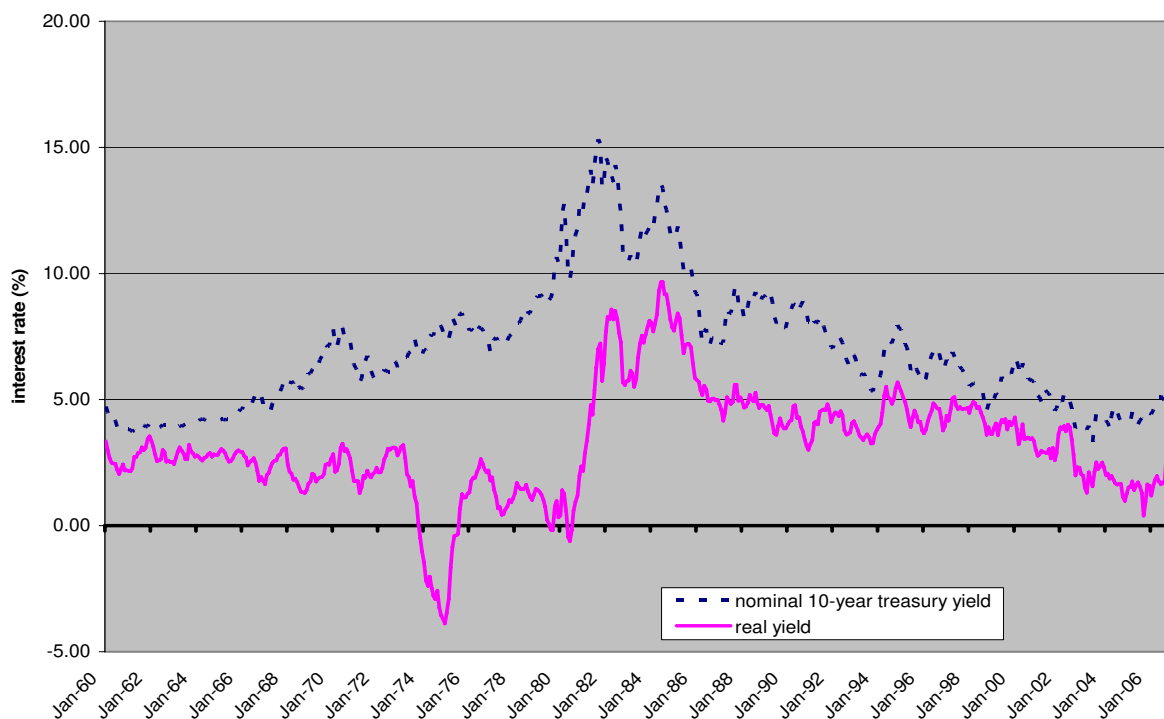
John A. Tatom

Interest rates are widely regarded to have been unusually low, at least since mid-2002, if not throughout this decade. Former Fed Chairman Alan Greenspan (2005) points to one aspect of this when he spoke of the “conundrum” that the Fed began tightening monetary policy in May 2004, yet longer-term interest rates fell. Since mid-2005, real interest rates have rebounded slightly, but remain relatively low, at least as measured using the 10-year US treasury yield and the personal consumption expenditure prices over the most recent past year.¹ Fed Chairman Ben Bernanke (2005) goes further, suggesting that interest rates were being depressed by a global excess of saving. Lawrence H. Summers, former President of Harvard and former Treasury Secretary, (2006) points to an excess of saving outside the US for the decline in world interest rates.

Chart 1

Interest rates are lower than they have been in decades

Long-term real interest rates generally have been declining



Source: Federal Reserve Bank of St. Louis, US Department of Commerce and NFI

¹ This article focuses on the long-term real rate and the rate of return to capital. Shorter term interest rates typically receive more attention because they are more closely linked to the federal funds rate, the policy instrument, and perhaps because analysts often assume that the term structure of interest rates is influenced mainly by movements at the short end, the federal funds rate. Short-term real rates, like the real three-month Treasury bill rate, beginning in mid-2004 contributing to the inversion of the yield curve.

This article looks at whether saving has been abundant or capital spending and its financing have been weak, possibly accounting for declining real interest rates. Lower interest rates could as readily result from low demand for new capital financing as from unusually large saving, however. It takes up the excess saving hypothesis first, looking at U.S. saving. The first section shows there has been no appreciable change in US saving since 2001, with an adjusted gross saving rate steadily hovering at the lowest levels since 1948, about 10 percent of GDP. The adjustment excludes from national saving so-called government saving that is used to pay for government capital formation. In effect adjusted saving of households, firms and government finances private sector domestic investment. But the same pattern is exhibited whether or not national saving is adjusted for government capital formation. At least for the US, it does not appear that excessive saving has depressed interest rates, especially not lately when the saving rate has not changed. The paper returns to the issue of a global saving excess later in the paper.

Section II looks at U.S. and global investment. While U.S. capital investment has been relatively strong, at least until recently, this has not been the case in the rest of the world. Global investment has been weak by historical standards and this has probably reflected low rates of return to global investment, as well as significant changes in the prices of capital goods relative to other goods and services. The first reason is a serious threat to the world economy because, if it continues, world capital formation will be depressed and hold back advances in productivity and economic development. The second reason is more benign: the same pace of capital formation requires less financing because capital goods have been declining in relative price. Thus, a lower share of spending on capital goods has masked the highest levels of US real investment on record, but this is not the case in the rest of the world. Unfortunately the decline capital spending is probably too large to be explained by price developments. Instead it is likely that global real capital formation has slowed, falling short of the growth of real income and depressing global real interest rates.

I. Is the United States Saving Too Little or Too Much?

Saving has been a serious source of concern in recent months because of suggestions that the US is not saving at all, Chairman Bernanke has argued that interest rates are relatively low because saving is too large. Which is it? Or are both arguments questionable? The Chairman apparently has in mind unusually high foreign saving, not U.S. saving. But since U.S. national saving is one of the largest flows of funds in the world, it is useful to review whether it has been higher recently.

Personal saving has been low or even negative ...

The saving efforts of the country are often assessed by looking at the personal saving rate. Personal saving is measured in the national income and product accounts and it is the difference between personal disposable income and personal consumption expenditure, personal taxes and consumer interest payments. Personal disposable income is a measure of income that households have available to spend or save, including transfer payments that are not earned as income and excluding income that is not received, for example because of corporate income taxes or stockholder earnings that are retained and not distributed to the owners who earned it. Since the second quarter of 2005, personal saving has been negative, meaning that households spent more than they received in disposable

personal income. This was the first time, based on current records, this has occurred since the great depression of the 1930s.

Negative saving is problematic if people wish their wealth and standard of living to grow. Productivity growth depends on financing the innovation and new capital goods, including plant, equipment and software. Without saving, investment and productivity growth cannot occur. Negative saving is especially a concern because of the upcoming retirement of the baby boom who expect to receive large transfer payments from the nation's taxpayers to pay for their retirement and these payments can only be paid out of newly generated income or by transferring large amounts of existing income from workers. There are at least two reasons why concern over this development may not be warranted. The first is based on the track record of such developments and the second is that personal saving is a very poor indicator of the nation's saving.

It should be noted that personal saving might not be a useful indicator for some purposes, even if it were an excellent indicator of national saving. For example if one wanted to know whether future retirees were saving enough for retirement, one would have to focus on just this type of saving or on the group most concerned with future retirement. Consider an extreme example, which is surely hypothetical: Looking at personal saving would not tell us whether the older half of the population is saving, say, 50 percent of their income, increasing their wealth rapidly to prepare for their retirement while the other half is spending a like amount in excess of their income to engage in riotous living for a few years until they too will be forced to repay their debts and accumulate wealth for retirement. In this example total or personal saving would be zero and, more importantly, no investment, or real asset accumulation would take place so the nation's wealth would not change. But it might be that those most affected by pending retirement are saving an excessively large amount relative to their current income. Economists focus on national totals of saving because this is what is available to finance a wealth increase and a rise in the future standard of living.

...but is likely to be a measurement error

Personal saving has actually turned negative twice before in recent years based on initial measures that subsequently were revised substantially. Table 1 shows that in late-1998 to mid-1999 and again from mid-2000 through early 2001 personal saving was reported to be negative, but subsequent revisions in measures of income and consumer expenditure reversed this substantially so that today we know that personal saving was not negative at the time. In 1998-99 GDP, personal consumption and disposable income were all revised up in annual revisions to GDP that took place a few quarters later, but income was raised more than consumer expenditure resulting in a rise in personal saving to a positive level.

The next time that initial reports showed negative personal saving, the same reversal later occurred. In 2000-01, GDP and personal consumption expenditures were revised down a few quarters later, but personal disposable income was revised up substantially, resulting in a large swing in personal saving to a positive level. For 2005 and 2006, revisions that occurred in summer 2006 did not raise the personal saving rate as much, in particular the sign was not reversed. Moreover by early 2006 it became apparent that the II/2005

personal saving rate was not positive, but actually was the first negative in this sequence, currently –0.3 percent. Whether the 2007 or subsequent revisions will, as earlier, find the missing saving and restore a positive saving rate remains to be seen. The record suggests that personal saving will be revised to a positive level as it has been in the only two other times in almost 70 years when this has occurred.

Table 1
Initially Negative Personal Saving Rates and Latest Data :1948-2006*

Quarter of initial report	Initial saving rate	Latest measure of saving rate
IV/1998	-0.03 %	3.8 %
I/1999	-0.5	3.7
II/1999	-1.1	2.3
III/2000	-0.2	2.6
IV/2000	-0.8	1.9
I/2001	-1.0	1.9
III/2005	-1.1	-1.5
IV/2005	-0.4	-0.3
I/2006	-0.7	-0.3
II/2006	-1.5	-1.4
III/2006	-0.5	-1.2
IV/2006	-1.0	-1.0

*Data are from the Federal Reserve Bank of Philadelphia; initial data are as of the middle month of the quarter following each indicated quarter.

Personal saving is an unreliable measure of the saving of households for a variety of other reasons. For example a surge in consumer durable purchases, such as automobiles, depress personal saving even though, correctly measured, households may be foregoing consumption at the same time to accumulate assets. Personal saving also excludes capital gains so that it focuses only on wealth accumulation from current income or output.

Personal saving is a small part of private saving and is not dragging it down

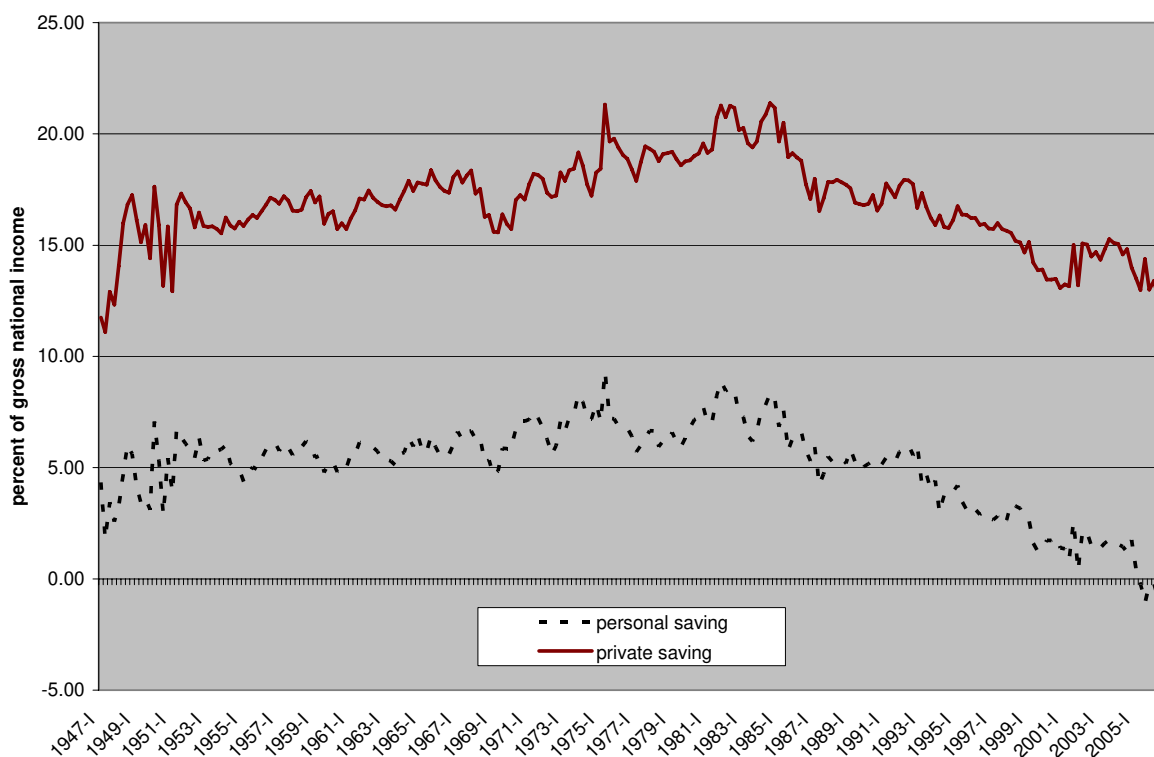
The second and more important reason for not being overly concerned with negative personal saving is that it is only part of private sector saving that is available to finance capital and wealth accumulation, and a small part at that. Overall private saving includes retained corporate earnings, a sort of saving at the office instead of at home, and the cash flow from depreciation expenses that also can be used to finance new capital formation. Note that personal saving as a percent of GNI has always been a small part of overall gross private saving.

Private saving declined until mid-2001, but has generally been higher since then. So does this mean that the country is saving enough? Determining what is enough is always problematic. Certainly economic growth requires investment and investment must be financed, but economic growth in the past few years has not been weak compared with its own past or the anemic performance in much of the rest of the world. Over the past three years real GDP has expanded at a 3.5 percent annual rate, above the post-World War II average of 3.4 percent. According to the Organization of Cooperation and Development

(OECD), growth in the Euro area has averaged only a 1.3 percent rate over the same period and Japan had a 2.2 percent rate. Thus the US economy does not appear to be exhibiting signs of deficient saving.

Chart 2
Is there too little saving? Personal vs. private saving

Personal saving has turned negative, but is a small part of private saving



Another sign of deficient saving would be if the marketplace placed a premium on a shortage of saving by bidding up interest rates on scarce saving. Yet interest rates were declining as personal saving appeared to fall into negative territory. The real interest rate here is the difference between the yield on the 10-year treasury yield and expected inflation, measured by the rate of increase of the personal consumption expenditure deflator over the past 12 months. The decline in the treasury yield is an example of former Chairman Alan Greenspan’s (2005) famous “conundrum” that long-term interest rates fell after the Fed began to tighten monetary policy in June 2004 and have continued to be lower since then.² Thus interest rates do not appear to signal deficient saving. Greenspan’s successor, Ben Bernanke, has even used these interest rate developments to argue that saving must be excessive, pushing interest rates down.

² See Alan Greenspan, “Testimony,” *Monetary Policy Report to Congress*, February 16, 2005.

Have other sources of U.S. saving become more abundant?

There has not been a rise in private saving that could push down interest rates in the US, but perhaps someone else is saving too much. It is not the US government, which could save and add to domestic financing of investment by running budget surpluses.

Government has been running large and growing deficits from 2000 until early 2004.

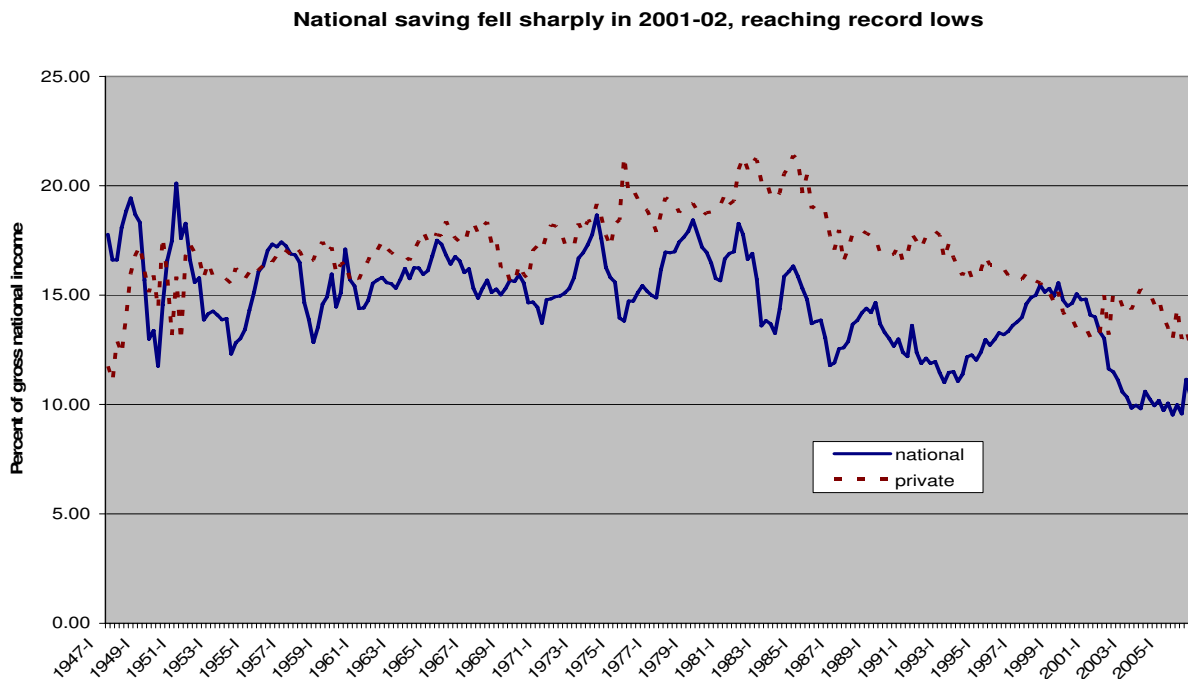
While budget deficits have been declining for over a year, overall national saving, the total of private and government saving has not risen relative to Gross National Income (GNI).

The adjusted national saving rate, which subtracts government investment spending from government and gross saving to more fully capture the budget deficit in both measures and to reflect national saving available for private sector investment, has remained at about 10 percent since 2001, the lowest level since 1948, despite increases and subsequent decreases in government budget deficits. If the official measure of gross saving were used instead of the adjusted national saving measure here, there would be no difference in pattern. At least in the US, national saving is not excessive and not so excessive as to push down interest rates. The national saving rate has not declined since 2001, however, so that the combined figure does not support the most recent round of concern that saving has fallen either.

Another source of saving that is available to finance US investment is foreign saving that is channeled through US financial markets. Foreigners have found investment in the US very attractive for most of the past 25 years, flooding capital markets with foreign saving and forcing the US into a current account deficit, periodically with a rising value of the dollar.

Chart 3

Adjusted national saving is low, but has been steady since 2003



Since the US current account deficit has been rising since 1992, reaching \$856.7 billion or 6.5 percent of GDP in 2006, according to preliminary data, one might argue that foreigners are saving too much, with the excess spilling over to the US. But the rest of the world has a lower income per capita than the US, especially emerging market economies. It is impossible to catch up without saving and investing, whether at home or in the US. So there is something hypocritical about faulting poor foreign countries for saving more and more, if they are actually doing so.

The problem with concluding that foreigners are saving more, simply because the US current account deficit is growing, is that the foreign flow of capital into the US is the difference between their overall national saving and their pace of domestic capital formation, or investment. Thus, the US current account can rise either because foreigners save more or because foreigners invest less at home and make more of their saving available to US financial markets. Either way the current account rises, or foreigners are making more of their saving available to the US, but they may be saving more overall or they may be investing less at home.

It makes a great deal of difference whether the US current account deficit is rising because foreign saving is rising or because investment is declining. When global saving and investment are rising, wealth, income and the standard of living are likely to be rising, but when investment is declining these increases are in doubt or at least more limited. Weak investment suggests that the return to new investments depressed, perhaps because of increased barriers such as taxation or risk. While the evidence above suggests that the US economy is performing well, the long-term consequences of weak global investment would be ominous. Weak investment and low returns to capital threaten the prospects for innovation and growth.

There is one good reason why foreign saving might have accelerated, foreign investment might have weakened and interest rates were depressed since 2004..That factor is the explosion in oil and energy prices in 2002-03 and that began in earnest in 2004. Note that in the mid-1970s and late-1970s and early-1980s, when oil and energy prices rose more and faster, real interests also fell sharply, holding down nominal interest rates. Eventually capital stocks and wealth will adjust to higher oil prices and investment and real returns to capital will return to normal higher levels. The extra saving generated by heightened oil trade and capital flows from oil- exporting states will dissipate into greater imports into those countries. Firms will find that the higher cost of operating capital equipment and structures will be offset by lower real wage costs and higher gross returns to capital, providing a renewed incentive to resume higher investment. Even in the earlier episodes, it was not clear whether the dominant problem in world capital market was the recycling of “petrodollars,” the large accumulation of profits of oil exporters, or whether it was the decline in the real return to capital from lowered productivity associated with capital obsolescence and higher operating costs of capital goods.

Summary: the United States is not saving too much

It is hard to argue that the US has recently reduced or boosted its saving too much. The personal saving rate has been very low, even negative since 2005. For a variety of reasons this is not a reason to be concerned that the US is saving too little, however, but broader measures also indicate that the US is not saving more than it did in the 1990s. It is also unlikely that world saving is too high either. While foreigners are investing increasing amounts in the US, this does not appear to reflect excessive or even higher saving abroad. Instead, global capital formation, discussed in the next section, appears to be relatively weak suggesting that the global return to capital and global growth are at risk.

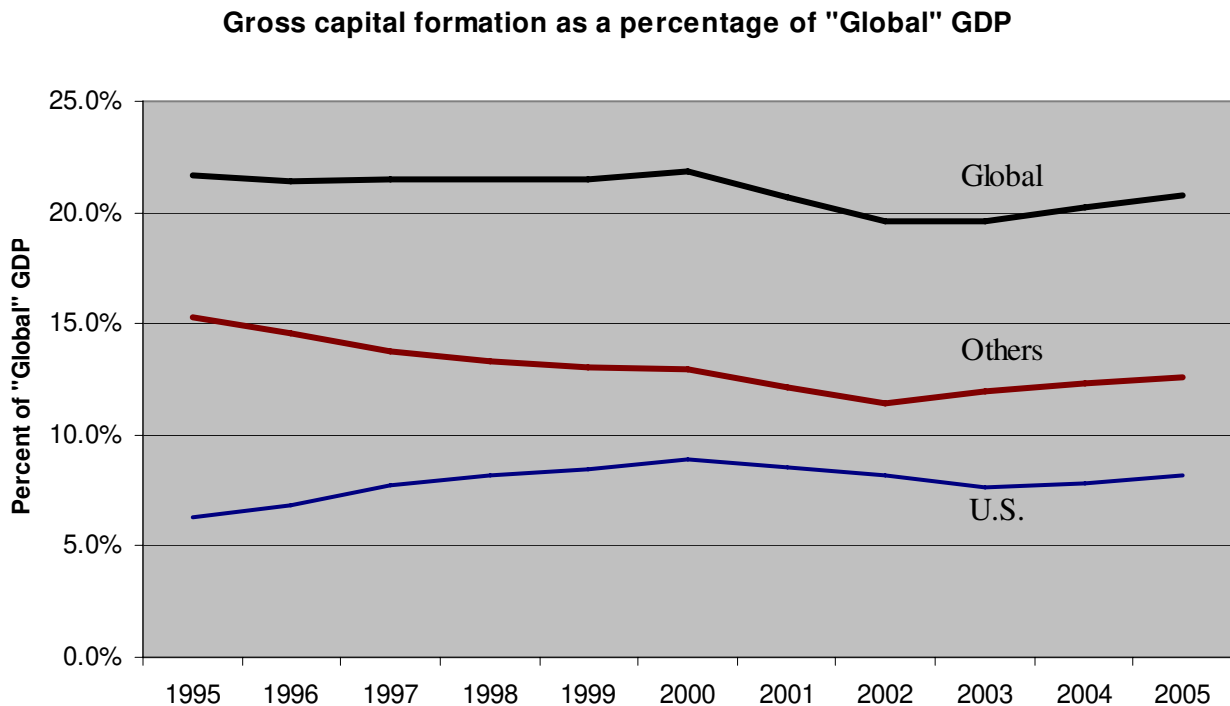
It is clear that U.S. overall national saving is near the lowest levels in over 50 years, however. The point here is that this has been the case for several years so that nothing has really changed in this regard. It may be more understandable that US saving is low because interest rates and expected returns from other investments in the US appear to be relatively low. In such an environment one might expect US investors to invest more abroad to seek higher returns. The fact that the net flow of global financial investment continues to move toward the US may suggest that investment opportunities abroad are shrinking relative to the US. This would be a serious problem for global growth. A continuing rapid expansion in the US could boost US and global investment and raise overall returns to capital globally, but a rebound in investment opportunities abroad would be as important, if not more so, for world growth prospects.

II. Global Capital Spending Has Weakened over the Past Decade, Despite the U.S. Boom

Chart 4 shows that global gross capital formation has declined relative to GDP since 2000 for 27 countries, including the European Union, the US and Japan. These 28 countries account for most of world GDP and are referred to as the “global” total here. Global gross capital formation was fairly steady at about 21.5 percent of GDP from 1995 to 2000, but then fell, reaching a low of 19.6 percent in 2002-03 and recovering slightly in 2003-05. By 2005, it was about 1.1 percent of GDP lower than it had been in 2000, the equivalent of about \$335 billion.

This decline is not so apparent in the US because, as the chart shows, gross capital formation has not been as weak here. Indeed, US gross capital formation rose from about 6.3 percent of global GDP to a peak of 8.9 percent in 2000, then fell to about 7.7 percent in 2003 and rebounded to 8.2 percent of global GDP in 2005. In every year since 2000, except for 2003, US gross capital formation was larger than its new economy (1995-2000) average of 7.7 percent of global GDP. In contrast, the rest of the world’s gross capital formation fell until 2000 and then fell even more until 2003. There has been a rebound in 2004-05, but in the rest of the world, gross capital formation has been lower in every year since 2000 than it was in 2000 and even lower than its 1995-2000 level. Thus it is not surprising that the decline in capital formation is less noticeable in the US: it is a smaller decline and leaves the US at a near record pace of capital formation. For the world as a whole, however, gross capital formation has been lower for the past five years than in the earlier six years.

Chart 4
Global capital spending is lower since 2000



"Global" includes the 25 members of the European Union, the United States and Japan
 Source: Eurostat, Bureau of Economic Analysis

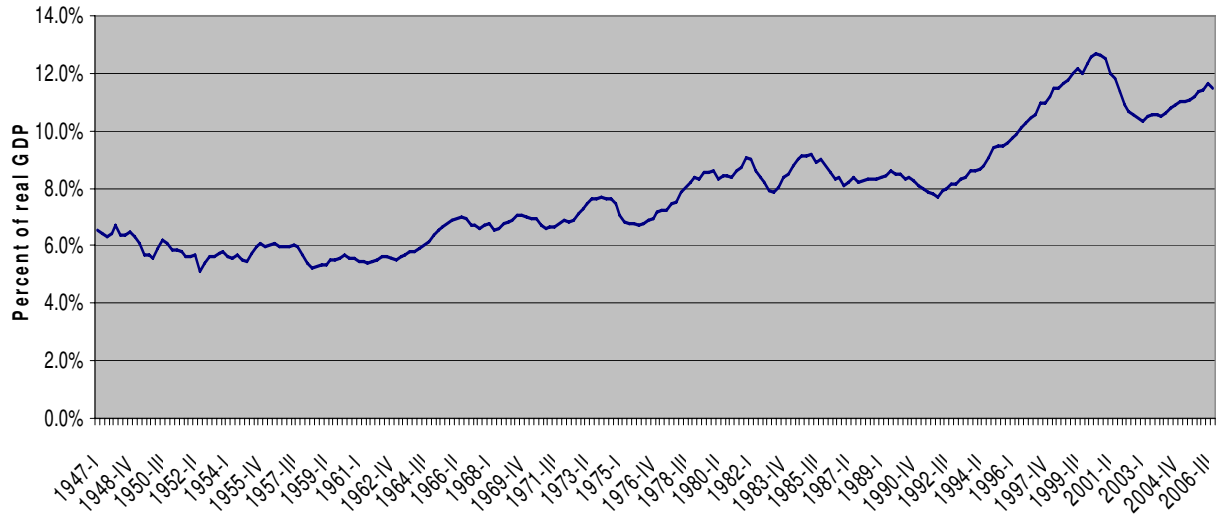
Gross capital formation is a nominal measure and so it measures spending, not units of capital or capital services. This is the appropriate measure because this is what has to be financed and the measure that influences interest rates. Underlying both observed interest rates and spending, however, are real measures of capital formation and it is the real measures that influence the productivity of capital, and the real component of interest rates. Since the relative price of capital goods has been falling, a given share of GDP spent on gross capital formation can buy more capital goods than otherwise so that real spending is higher relative to real GDP than the nominal measure indicates. For the US, this makes a great deal of difference. Real private fixed investment has remained unusually high in the US during this decade (Chart 5). Even at its lowest level in 2003 it was higher than in any year from 1947-96 as a percent of real GDP and in late-2005 it was more than 50 percent larger than the 1947-96 average.

Some economists object to computing a ratio of any component of real spending to real GDP because the real components of spending do not add up to the total of real GDP. Since real GDP is a measure of real production and real domestic income in an economy and real investment is a measure of the quantity of investment goods purchased, their ratio is a meaningful measure of the extent of capital formation relative to the output of the economy. It is correct to say that the ratio is not an accurate measure of the share of output devoted to investment, but it is also correct that it is the correct measure of the gross

change in the capital stock relative to real product. It is no less meaningful that measuring the output per worker of a country by dividing its real GDP by the number of workers, or other similar efforts of assessing resources relative to output.

Chart 5
US real private fixed investment is at near record levels

US Business Investment Is Relatively High and Rising
 (Real Nonresidential Private Fixed Investment as a Percentage of Real GDP)

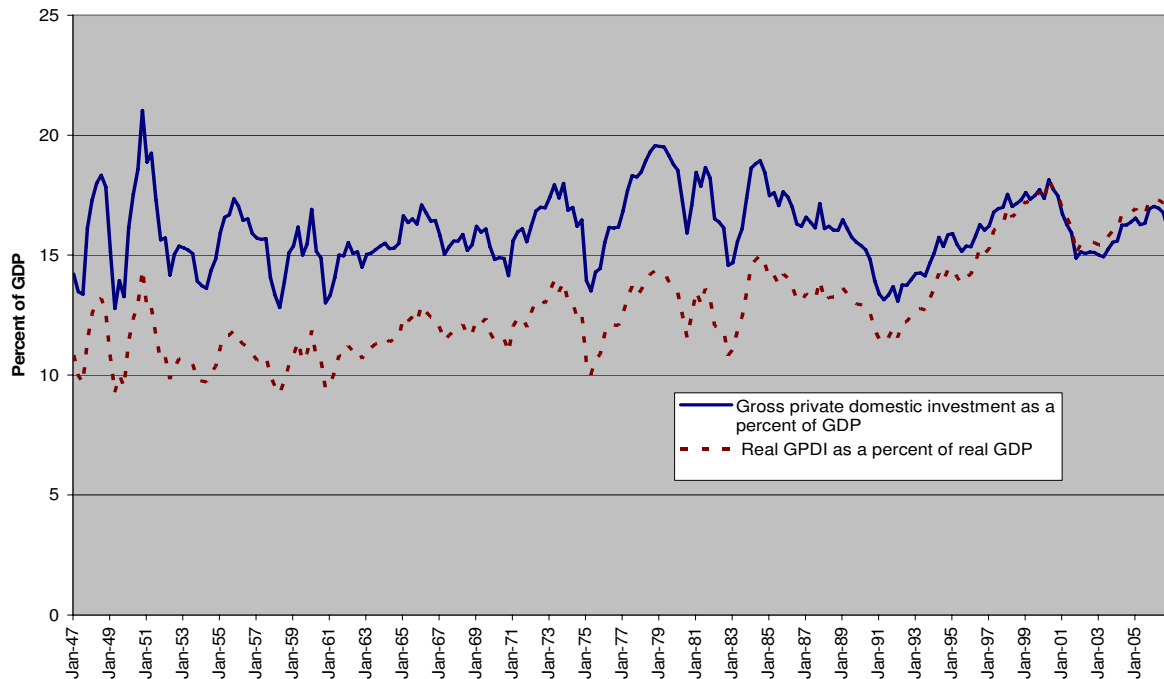


The strength of U.S. real private capital formation relative to nominal measures can also be seen in a quarterly context. In Chart 6 both nominal and real gross private domestic investment relative to its GDP counterpart are shown. Again one can see that the nominal share in the United States is not unusually strong, but the real share, despite a recession related fall in 2000-01, has consistently been higher during this decade than at any time since 1947 except for the boom years of the late 1990s. The average ratio for the past seven years has been 16.5 percent, far above the average for the previous seven years of 15.1 percent, and is only slightly below the average for the previous three-year period of booming investment (16.7 percent). Despite the recession, it is difficult to argue that US capital formation slowed in this decade, at least in real terms. The nominal share did not perform as well, however. For the past seven years private gross private domestic investment averaged 16.2 percent of GDP, about the same as the 16.1 percent average for the previous seven years, but well below the 17.1 percent average of the previous three year period, 1997-99.

Chart 6

U.S. investment is relatively high, especially in real terms

US investment has been relatively high in this decade

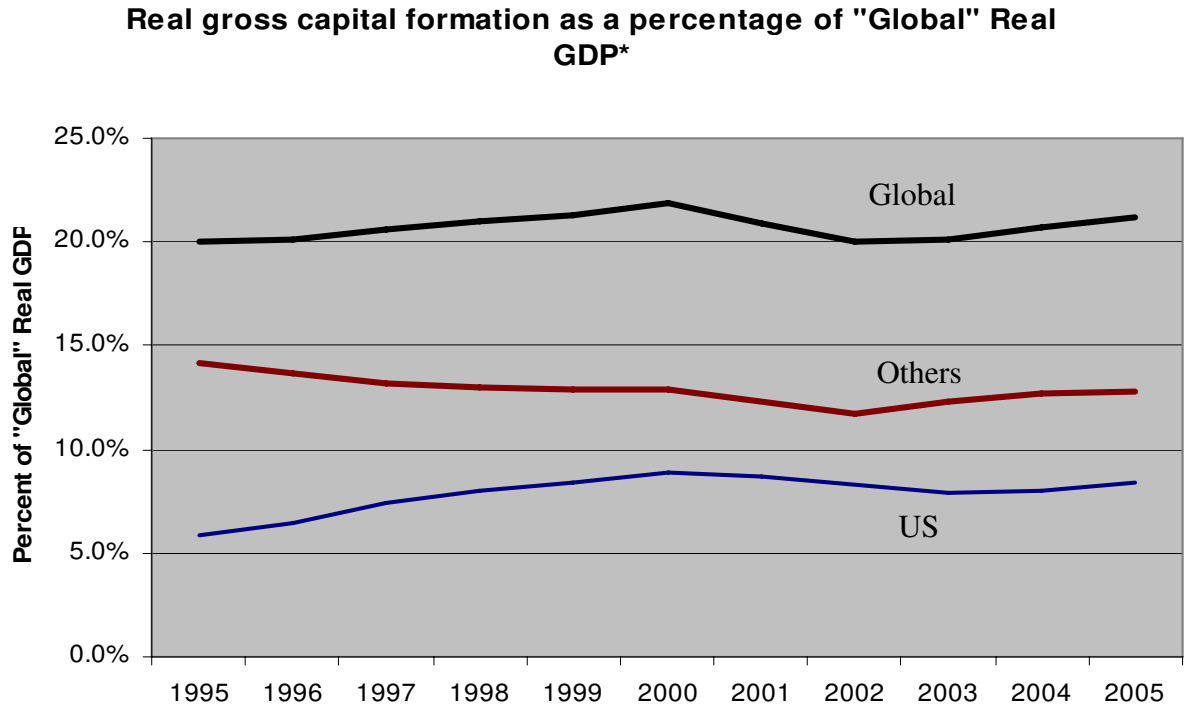


An indication of the quantity of capital formation relative to real GDP can be found by adjusting the nominal shares in Chart 4 by the relative price of capital goods. Unfortunately these prices are not available for the data used here, so the relative implicit price deflator for gross capital goods in the US is used for all three groups in Chart 4. When this is done, none of the key conclusions above are altered, although the magnitude of the weakness abroad and globally is reduced (Chart 7). Nonetheless, at least part of weakness in global investment spending has apparently been due to the decline in the relative price of capital goods at least to the extent that those prices elsewhere mirror the declines experienced in the US. In effect part of the decline in capital spending is likely due to the fact that capital goods have become cheaper, so more real investment can be financed at a lower price.

Another factor that could be important is that the gross capital spending measures used in the chart are for both private and government capital spending. The latter is relatively larger in the rest of the world than in the US as a share of GDP. More important, government capital formation does not directly affect capital productivity and real interest rates, nor does it directly affect changes in productivity or the standard of living. It would be desirable to take public spending out of the ratios shown in the charts.

Chart 7

Real global capital formation has been lower since 2000



"Global" includes the 25 members of the European Union, the United States and Japan

Source: Eurostat, Bureau of Economic Analysis

*Based on the U.S. relative price of capital goods. (Year 2000 equals 100)

Interest rates have been relatively low over the past few years because the financing demands for new capital goods have declined relative to GDP. In part, this may reflect new technologies that have lowered the relative price of capital goods so that the same capital goods require less expenditure and financing relative to GDP. Unfortunately, it also appears that a real decline in investment relative to GDP accounts for low real interest rates. Such low rates of return and low investment, if they persist, will slow productivity growth and economic development.

Is China the answer?

As noted above, Chairman Bernanke, Laurence Summers and others believe that an excess of saving explains the decline in interest rates, in particular the growth of saving in China. Saving has risen rapidly in China both because of rapid GDP growth and also because of sharp increases in the saving rate by enterprises (essentially retained earnings and cash flow from depreciation). Similarly gross capital formation is a large share of GDP. However, China's economy is only large in terms of population and growth; the levels of GDP, investment and saving, especially per capita, are very low. Actual saving has been estimated by Louis Kuijs of the World Bank, The saving rate and its composition show that enterprise saving has risen most, pushing the overall saving rate from 37.4 percent of

GDP in 2000 to 43.8 percent of GDP in 2005. The increase in Chinese saving added an extra \$142.4 billion to the pre-revision estimate. This is only 1.1 percent of US GDP and 0.4 percent of global GDP above adding in China. Thus the estimated rise in saving in China due to rapid growth in income would not appreciably offset the picture for saving in the US or have much effect on the overall pattern for global saving. Saving appears to have declined after 2000 and then stabilized after about 2001 as a share of GDP.³

China's gross capital formation is also a relatively large share of its GDP, so inclusion of China in the analysis could potentially affect those results. New official estimates of capital formation in China only extend to 2004. When China is added in to the data in Chart 4 the patterns are little affected. In particular the global share of capital formation for the 28 countries still peaks in 2000 at 22.5 percent of GDP and falls off subsequently. From 2001 to 2004, the latest data available including China, the share of gross capital formation in the 28 countries is 21.5 percent, 20.6 percent 20.8 percent and 21.5 percent, respectively, or an average of 21.1 percent. The decline from 2000 to 2004 is one percent of global GDP, which for the broader group is about \$301.6 billion in 2004. Thus, including China in the global totals does not change the patterns or the totals computed above excluding China. Global capital formation declined in the first five years after this century began. And it appears that this has led to a sharp fall in real interest rates.

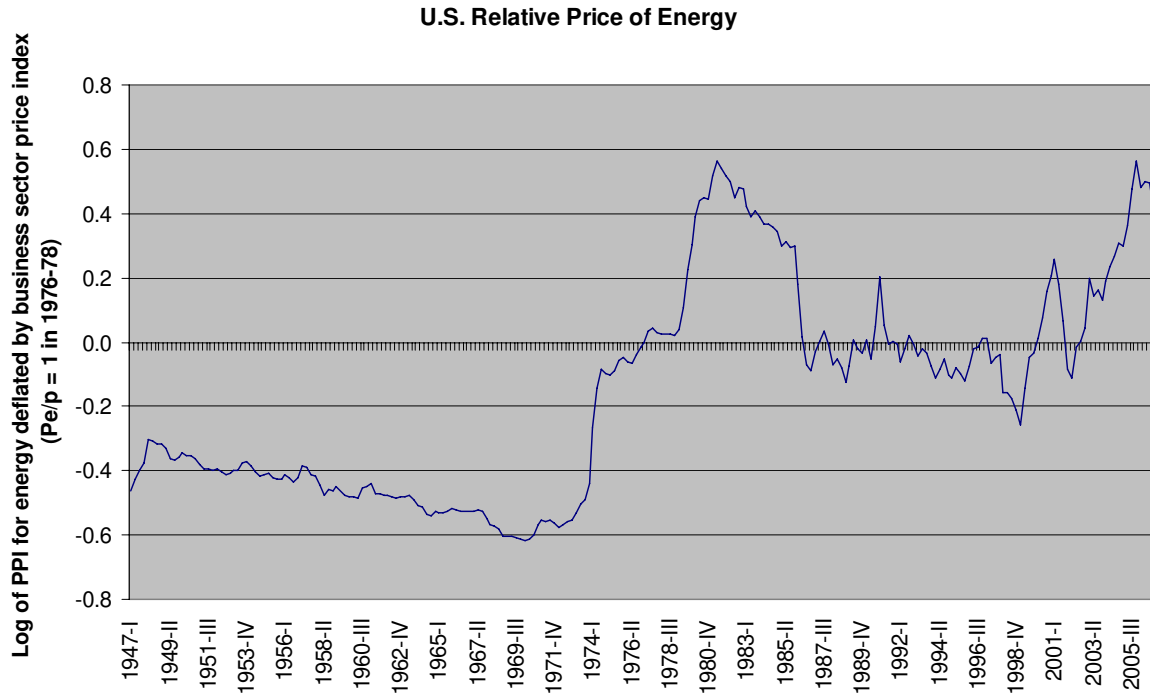
III. The Question Remains: Why Did Capital Formation Decline Abroad?

There are several potential explanations for why real investment in the rest of the world has weakened sufficiently to drag down the global pace of investment. Globally energy prices began to rise sharply in 2000 and then again in 2002-05 (Chart 8). By raising the cost of operating capital goods the rate of return to capital was depressed, lowering investment and interest rates, just as happened earlier in 1973-74 and 1979-81.⁴

³ Ferguson and Schularick (2007) attribute the decline in global real rates to Chinese saving in a fanciful tale that plays on all the current China myths, suggesting, for example, that China is also an exporter of capital to the US, which would be true if one included the purchases of US securities by the State Bank of China, but these purchases are a balancing item to offset the large capital *inflows* to China and the current account surplus. So it is not total Chinese saving that has pushed down the real rate, but rather just the central bank purchases that currently total about \$200 billion per year, which is large relative to Chinese GDP or domestic saving and investment, but small relative to US saving and investment and miniscule relative to global totals. Their story urges one to "Think of a single Sino-American economy, which is lowering real rates." In their view, "The single defining feature of the current world economy is not an excess of liquidity or a shortage of assets, but the gap between company profits and the level of real interest rates." They also view this as unusual and unsustainable in the long run, though it is more unusual in the short run where both measures are driven more by the business cycle and in the same direction, and not unusual at all in the long run.

⁴ The effects of higher energy prices on the capital-labor ratio is discussed I Tatom (1981) and evidence of the negative effect of higher energy prices on the real interest rate can be found in Wilcox (1983)..

Chart 8
The relative price of energy rose in 2002-05



Regulatory and tax factors are among the usual suspects for any decline in investment incentives. In the US, tax rate cuts on income from capital lowered interest rates in the US and redirected capital formation toward the US. This was the case in the 1980s and the Bush tax cuts on income, including interest income, in 2001 are likely to have done so again. Lowering the tax wedge on investors' income from capital should lead investors to bid up asset prices for assets offering higher after-tax returns. The 2001 tax rate cuts, which largely were implemented in 2002 and 2003, also raised the after-tax return on all capital assets, including fixed income assets, boosting the supply of financial capital and lowering market interest rates. The extent to which this explains the relative decline in capital formation is not known, but overall such tax cuts would be expected to boost overall capital formation, not depress it.

Some have argued that the tech-boom in the late-1990s also resulted in some gold-plating of capital or the building of excess capacity. This could be expected to result in a subsequent drop in capital investment as firms worked off the excessive stock of capital assets. Finally, monetary policy may have played a role in lowering real interest rates. If market participants find the Fed has a credible policy to reduce future inflation, policy risk declines and so do risk premiums built into real interest rates. This is not likely to be the main source of the decline in real rates, however, because such a reduction in the supply price of capital would be expected to boost capital formation. Whatever the reason, global investment has been depressed and this has contributed to a lower real interest rates.

The outlook for real interest rates

Some of the reasons for a reduction in real interest rates suggest that the decline could be reversed. This is true of the excess capacity hypothesis, for example, but one would not expect the weakness in capital formation or in the real rate to have persisted so long if this were the source. It is also true of the energy price hypothesis. A depressed demand for capital eventually is removed by relatively weak investment. After the capital–labor ratio adjusts to a lower desired level, long-term factors afflicting capital and investment can be expected to reassert their dominance and the real rate of return to capital and the real rate of interest would likely be restored. The cuts in US taxation of capital income are likely to be the principal reason to expect some reversal. The 2001 tax cuts were scheduled to end after 2008. As political sentiment for making those changes permanent wanes, it is likely that market pressures will push up the real interest rate and reallocate capital abroad. Of course, making those cuts permanent could postpone or eliminate any reversal of the decline in real rates.

Can economic policy boost the real interest rate?

Economic policy could boost the real interest rate, but how and why depend on a correct diagnosis of any perceived problem. Policy analysts that blame an excess of saving for the decline in interest rates would be quick to suggest that global saving should be reduced by boosting government spending and using large tax give away to run larger budget deficits in the rest of the world. This is precisely the wrong thing to do if the problem is a lack of investment, as shown here, because it would lead to a crowding-out of productive investment, further lowering investment and economic growth. Tax cuts that stimulate investment would help, but other tax cuts or spending increases would worsen the problem. Lower real interest rates that reflect a greater supply of investible funds are difficult to perceive as a problem, at least from an economic viewpoint, though lower real interest rates arising from a reduction of investment incentives certainly is a problem. Just as in other areas, getting the diagnosis right is the first step in doing no harm. .

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