

HOW TO PREDICT THE NEXT FINANCIAL CRISIS

By Steve Clemons and Richard Vague

The U.S. and much of the rest of the world are still struggling under very high private debt levels.

While economists have closely studied the total federal debt and money supply and their impact on the economy, there has not been as much focus on total private debt and its consequences. We suggest that such a focus can yield useful insights, and in this paper we use one approach to this study of private debt. Some of what we share here has built on the work of others, but much of the data that follows and potential policy implications are new or underrepresented in contemporary discussions.

We used the ratio of debt — consumer, business and government — to GDP, and believe that this approach adds a useful dimension to other portals of analysis. In our review of private credit data using that ratio — particularly data related to the Great Recession, the Great Depression, and Japan's Lost Decade — certain themes become evident:

1. The Great Recession was the result of a massive increase in consumer mortgage loans — 98 percent growth in six years. Although economists have pointed to post-crisis deleveraging, total private debt declined only 3 percent, is now level to increasing, and is re-approaching the pre-crisis level.
2. The Great Depression and the Great Recession were the only two periods in the past century that had a ratio of over 150 percent total private debt-to-GDP and had very high growth in the private debt-to-GDP ratio in the preceding period — 45 percent from 1920 to 1930 and 40 percent from 1997 to 2007. We believe that the combination of this 'red line' level of total private debt combining with large surges in the private debt-to-GDP level can be viewed as predictive. The US today remains well above that 150 percent private debt-to-GDP level.
3. The initial crisis of the Great Depression, like the Great Recession, was caused primarily by a massive private debt buildup. The unprecedented 45 percent nominal GDP contraction that came with it was caused in large part by a huge 22 percent reduction in nominal private debt — since paying down debt uses money that would otherwise be used for spending or investment. Stated in dollars, a roughly \$35 billion contraction in loans brought a roughly \$45 billion contraction in GDP. We recognize that *cause* is a strong term to use in this context because ours is not an explanation that has been advanced by others in the countless explanations of the Depression over the last eighty years. We nevertheless suggest that it be considered, especially in light of the cause of the Great Recession.
4. Because of its sheer size relative to other factors, private debt may be a more important determinant of economic trends than the money supply, government debt, trade, tax, reserve requirements, and other factors.
5. High debt in a given country — private debt or public debt or both — appears to be a GDP growth suppressant. It may also constitute a competitive disadvantage for one country versus others.
6. The private sector cannot lead the US current economy to truly strong growth until it has lower leverage, but it has not de-levered meaningfully. We are between Scylla and Charybdis — renewed vigor in lending will bring growth but take us to even more precarious levels of debt to GDP, while de-levering through pay down suppresses GDP. An alternative for reducing debt levels — without the contraction caused by pay down and stressed asset sales — is the restructuring and reduction of the principal of distressed loans. Dollar for dollar, a restructuring of distressed loans — with appropriate moral hazard consequences intact and without using government funds — would provide as much or more stimulus than government spending, without the

longer-term growth suppressing effect of additional government debt. A trillion dollars of private debt restructuring of loans could provide as much stimulus as a trillion dollars of government spending. The political moment for restructuring may have passed, the complexity of large-scale restructuring may be too daunting, and the moral hazard and redistribution issues may be too controversial — but that does not change the fact that with the current record high levels of debt, the private sector is not positioned to lead the US toward strong growth.

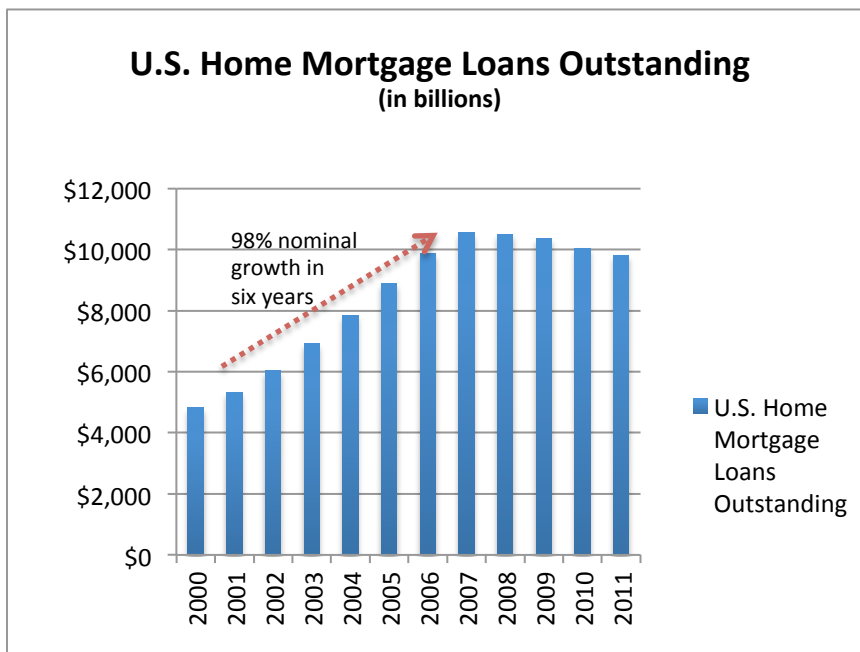
An additional comment regarding current discussions of debt levels is that current low interest rates create a false sense of comfort. Paying 5.7 percent interest on US federal debt, the average rate paid over the last twenty years, instead of the current 2.5 percent, would increase current federal interest costs by \$800 billion annually.

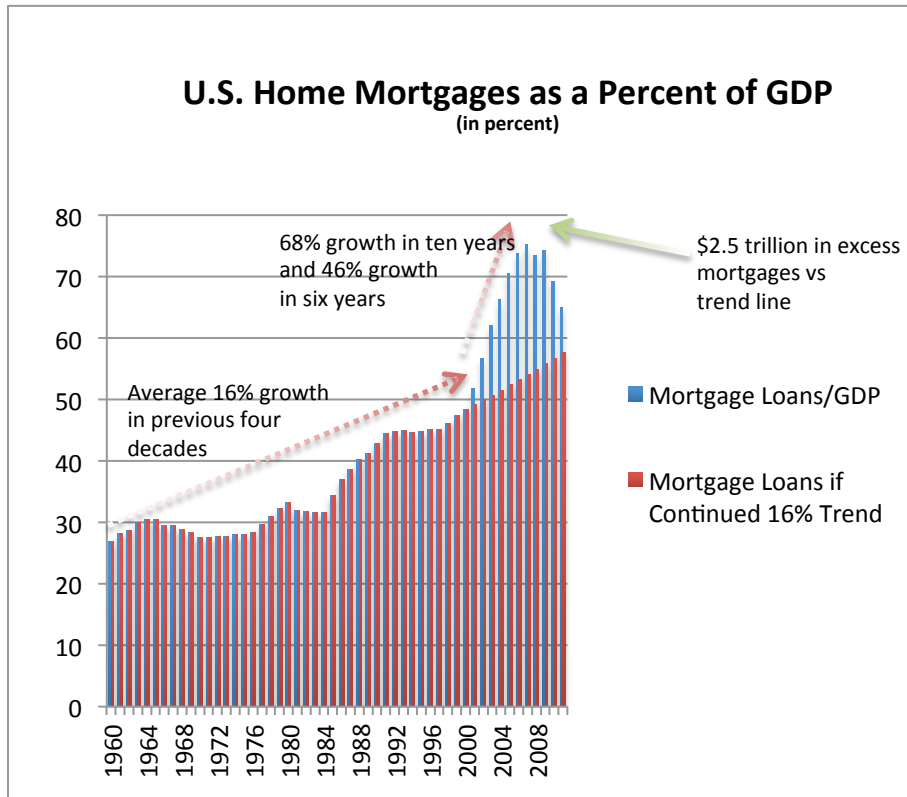
Further, some economists invoke inflation or strong growth as the solution to America’s high debt challenge, but using even the most optimistic assumptions on both growth and inflation, the correction needed would require a generation or more. These tactics just don’t get the country very far when the total debt overhangs are so large.

OUR ANALYSIS

From different vantage points, one from a policy perch in a Washington think tank and the other leading a significant banking and credit card operation in the United States, we thought during the mid 2000s that mortgage loan levels were growing at unprecedented levels and would trigger an economic event, potentially a serious crisis. Many economists and financiers disagreed, citing the improved net worth of consumers and the argument that all debt had offsetting assets. Then the financial crash hit.

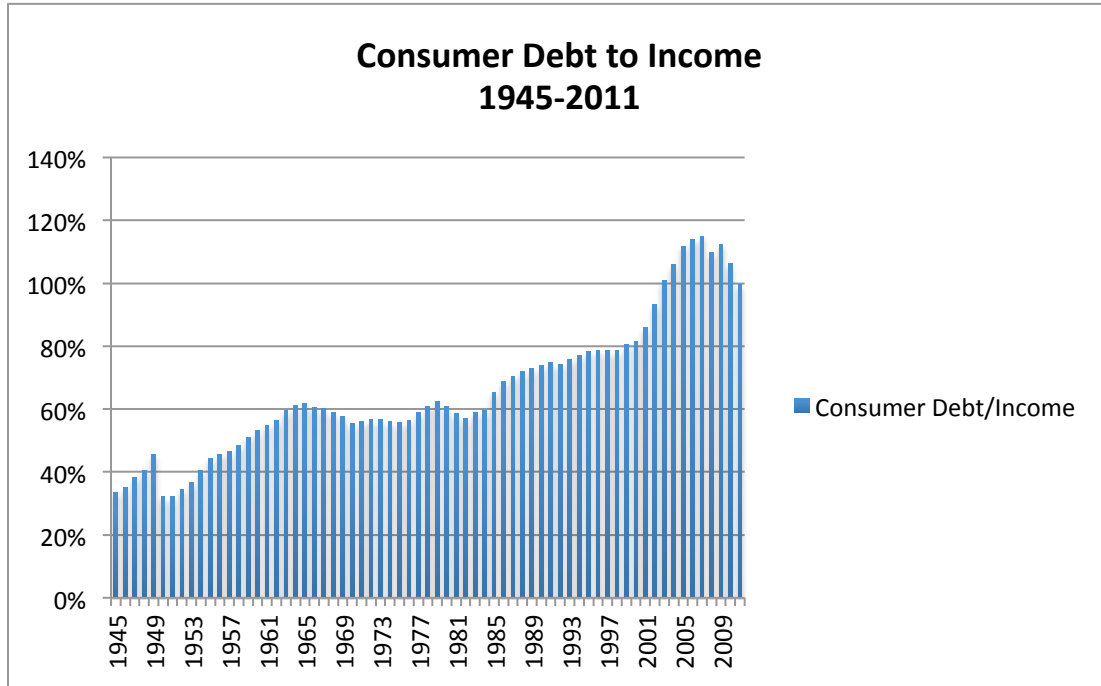
Tables 1a and 1b: Mortgage Loan Growth in the 2000s





Some have dismissed the relevance of debt as an economic driver, suggesting debt is “money we owe ourselves.” But borrowers and lenders are not evenly distributed across the economy, and borrowers tend to be the very actors who drive the majority of consumption in the economy, so when their spending is constrained by excessive debt levels it directly and negatively impacts the economy. Very high levels of aggregate debt typically means that the debt is not properly supported by income, and debt not secured by income generally indicates an overvalued asset that has not been recognized as such. When a financial event occurs as happened in 2007 and 2008 at the start of the Great Recession, much like tectonic shift movement in an earthquake, stock market averages and mortgage home values imploded and moved towards their ‘real worth.’

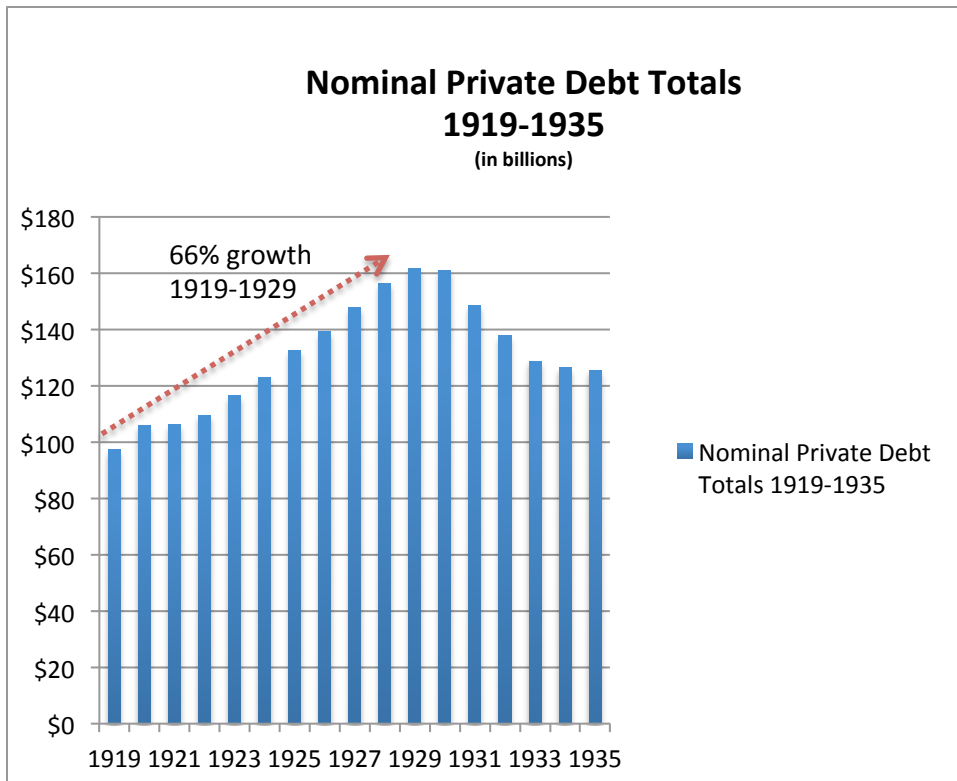
Table 1c: Consumer Debt to Income 1945-2011



Since debt buildup was the cause of the Great Recession, we wondered if private debt growth might have been the cause of the Great Depression.

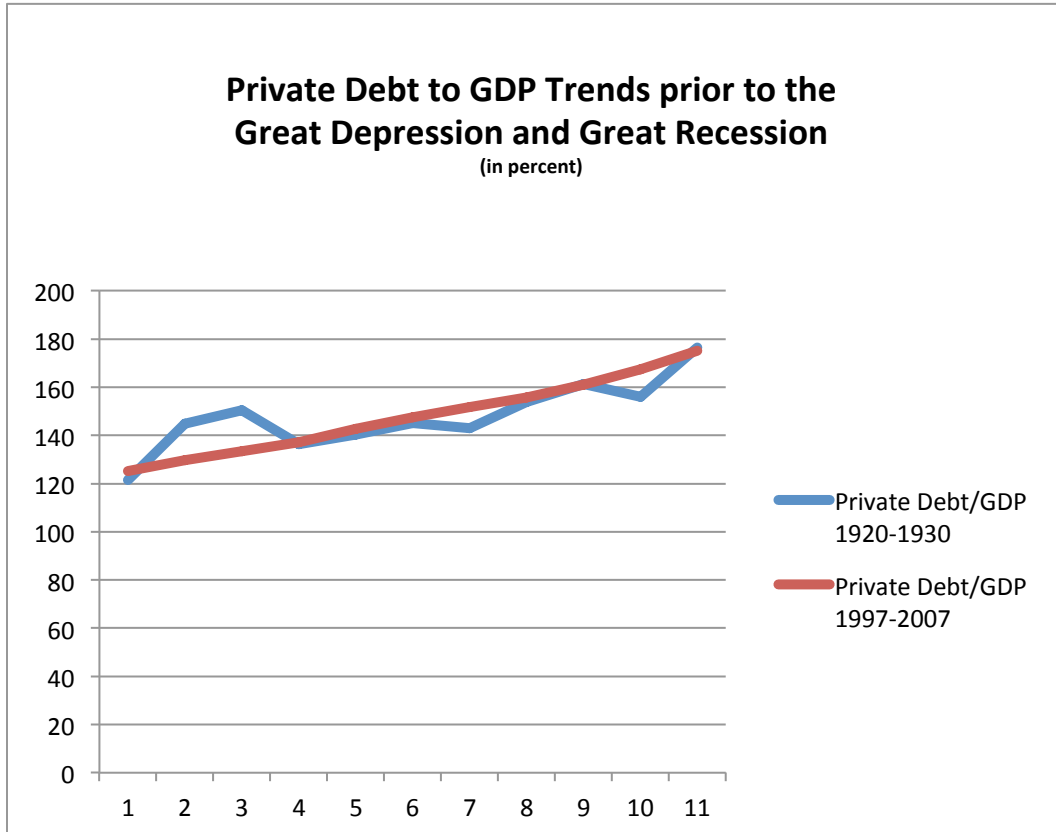
Gathering and compiling data sets that we believe have been underutilized or ignored, we checked the growth of private debt during the 1920s and early 1930s. We used total private debt — consumer and business — rather than mortgage totals alone because of the difficulty in subcategory comparison between the periods, which meant uncertainty as to whether mortgages in the 1920s were categorized the same as mortgages in the 2000s — and because of our speculation that private loan growth would end up being the primary driver of asset bubbles regardless of the type of private debt. Throughout this paper, we use totals that exclude financial debt.

Table 2a: Private Debt Totals 1919-1935



Translating these totals to the private debt-to-GDP ratio and comparing the period before the Great Depression to the period before the Great Recession reveals very similar trends for both periods — 45 percent growth from 1920 to 1930 and 40 percent from 1997 to 2007 — as shown in Table 2b.

Table 2b: Private Debt to GDP Trends



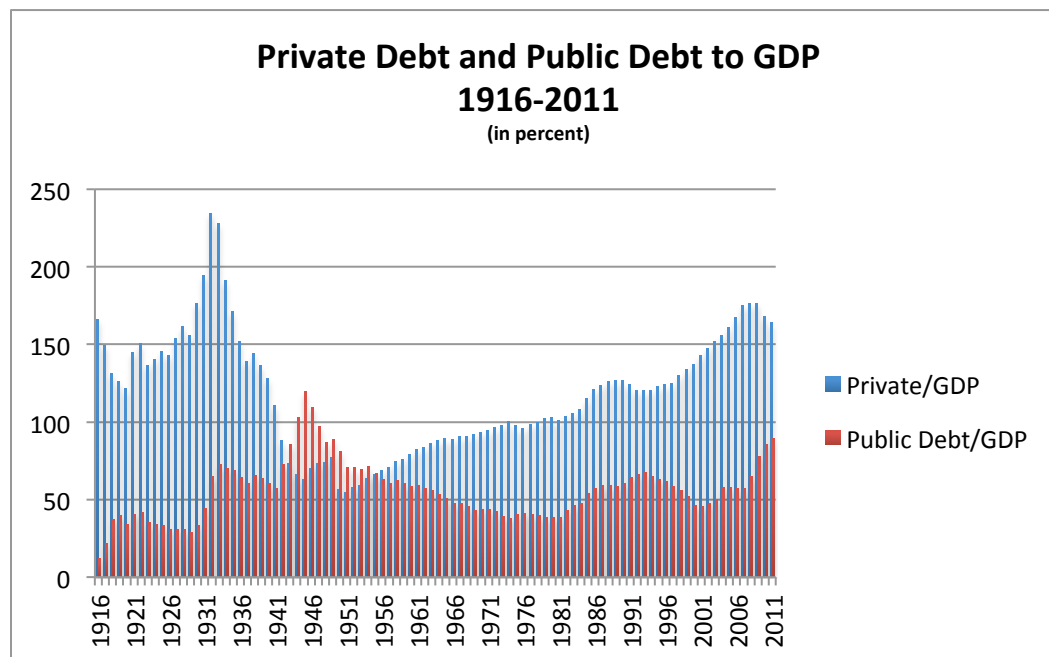
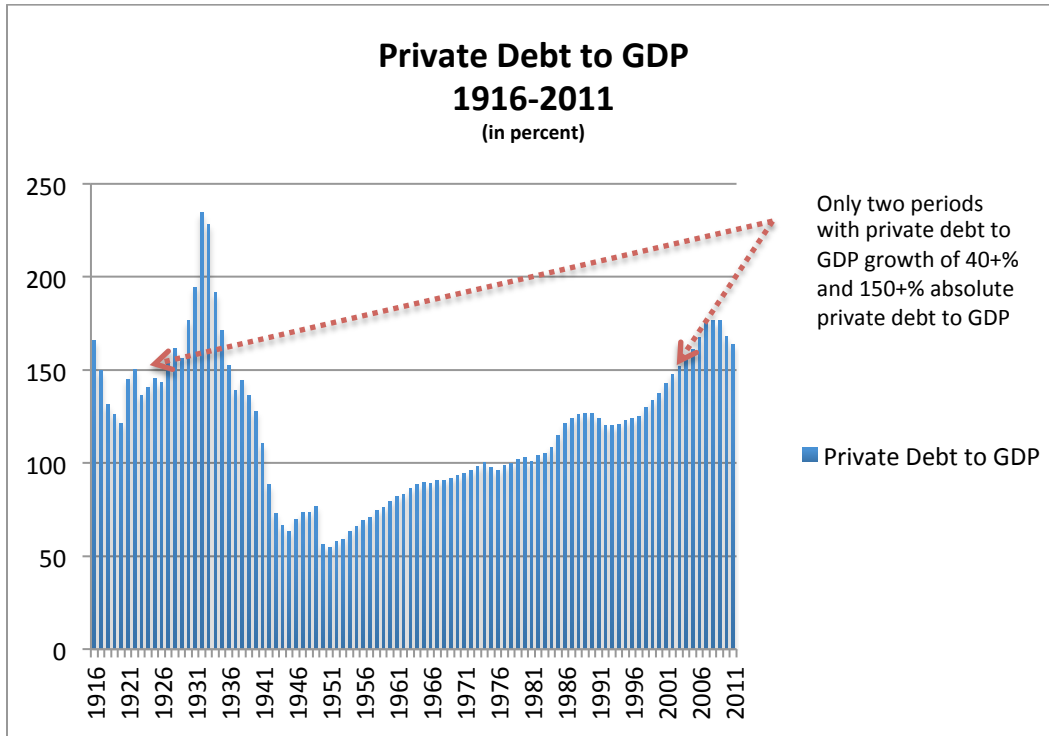
In fact, as shown in Table 3a and Table 3b, if we look at the entire period from 1916 to 2011, which is the period for which private loan totals are available, we see only one other comparable period in which private debt-to-GDP growth was over 40 percent, and that was the period immediately after World War II. At that point, the massive deleveraging of the Great Depression had left private debt totals at a century-long low, and loan growth was facilitated by such things as the GI Bill, and buffeted by the Baby Boom. So there are only two periods where loan growth-to-GDP is this rapid and private debt to GDP is over 150 percent — the 1920s and the 2000s.

Our sense is that of these two factors — growth rate of debt vs. the absolute level of debt — rapid growth appears to be the more important factor signaling a potential economic crisis. It seems intuitive that very rapid growth in debt could readily result in significant overbuilding or overinvestment in some asset, whether housing, commercial office buildings, stocks and bonds, plants, or something else. After all, population growth was 16 percent compared to 45 percent private debt growth from 1920 to 1930, and 10 percent compared to 41 percent private loan growth from 1997 to 2007.

Furthermore, as shown in Table 3b, government debt was significantly less than total private debt and growing far less rapidly in *both* pre-crisis periods. In fact, government debt-to-GDP was declining slightly

before 1929. Generally, government debt was a smaller factor in all but the World War II period. We believe that this is significant and at odds with much of the general policy debate which wrongly focuses on government debt rather than other debt factors in analyzing economic crises.

Table 3a and Table 3b: Private and Government Debt Growth 1916-2011

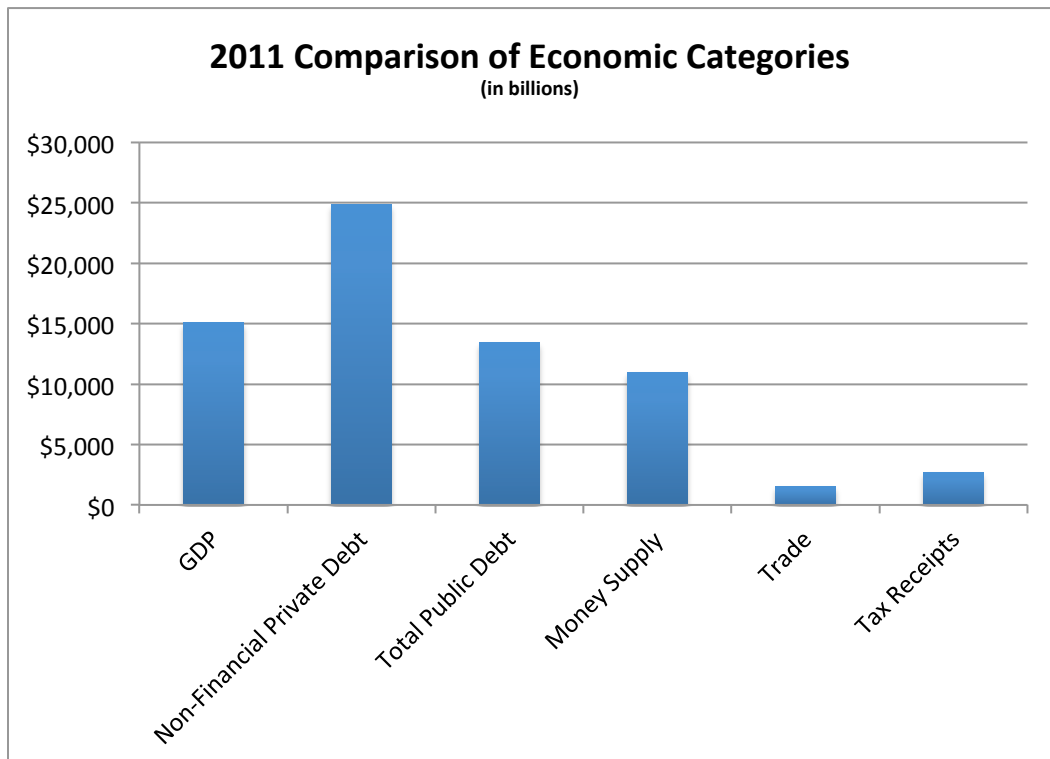


The Great Depression and Great Recession — both of which we are tempted to call "debt bubble recessions" or to borrow Nomura chief economist Richard Koo’s phrasing of “balance sheet recessions” — seem to stand apart from other post-war recessions in terms of their consequential size and impact. Both crises brought 50+ percent declines in stock market values and triggered massive declines in real estate values. The only other post-war instance of a stock market decline that harrowing was 1987, which as Table 4a shows followed a reasonably large debt build-up itself. The decade of the 80s (the Reagan years), often referred to as the beginning of a “great moderation,” had a 23 percent increase in private credit and a 53 percent increase in government debt. Notably, however, these debt buildups began from a much lower leverage point than what was the case in both the 1920s and 2000s.

[Note: During the Great Depression, nominal GDP contracted 45 percent while in the Great Recession nominal GDP contracted 3 percent. Most other post-World War II recessions did not have a full year decline in GDP, and after the immediate post-war adjustment period, and the most notable were the 1973-75 recession in which oil prices tripled, and the 1981-82 followed 20 percent interest rates. These had significantly less negative impact on GDP and asset valuations than the Great Depression and Recession.]

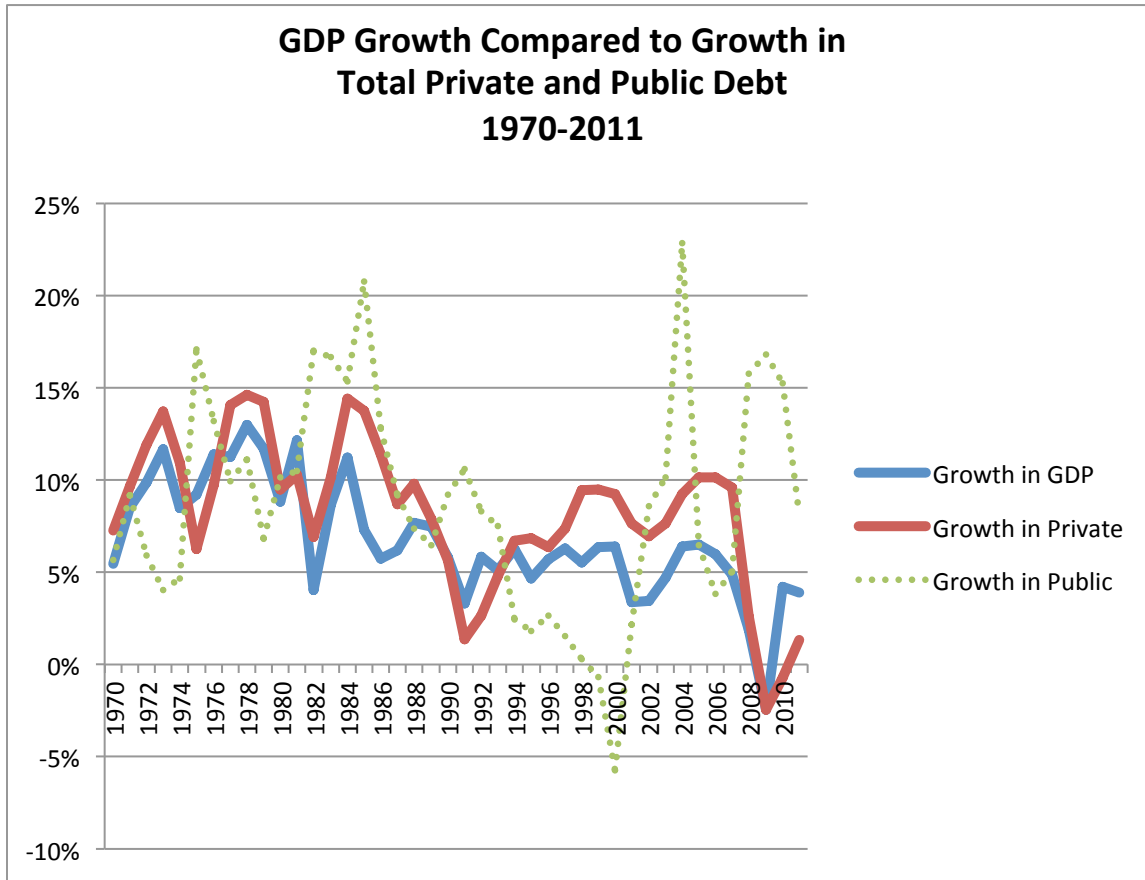
Given the analysis above, private credit stands out as a candidate for the most important determinant of economic results, both as the key driver of GDP growth and a metric for predicting future financial crises. It doesn't seem unreasonable to think that private debt growth might have a major effect on the economy, since private debt totals are much larger than other factors such as government debt, money supply, GDP, trade, reserve requirements, and tax.

Table 4a: Comparison of Private Loans, Public Debt, Money Supply, and GDP in 2011



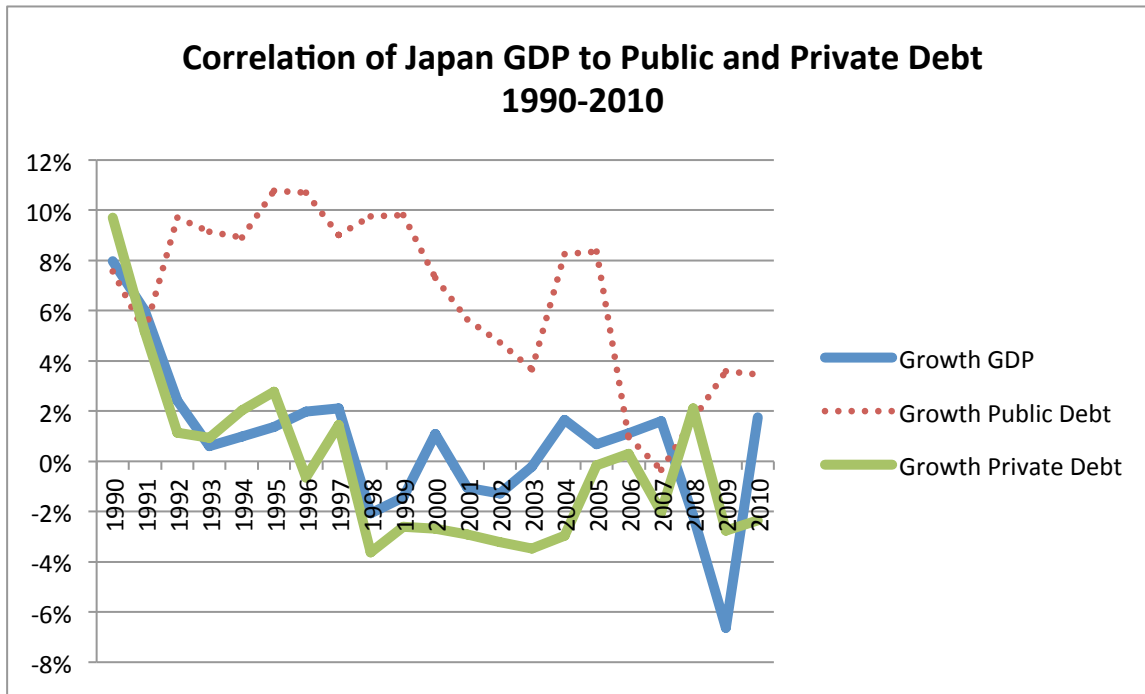
Further, as shown in Table 4b, there is a closer correlation of growth in GDP to growth in total private debt than to total public debt.

Table 4b: Real GDP Growth Compared to Real Growth in Total Private Debt 1970-2011



To underscore the point, the correlation is similar in Japan's economy as shown in Table 4c.

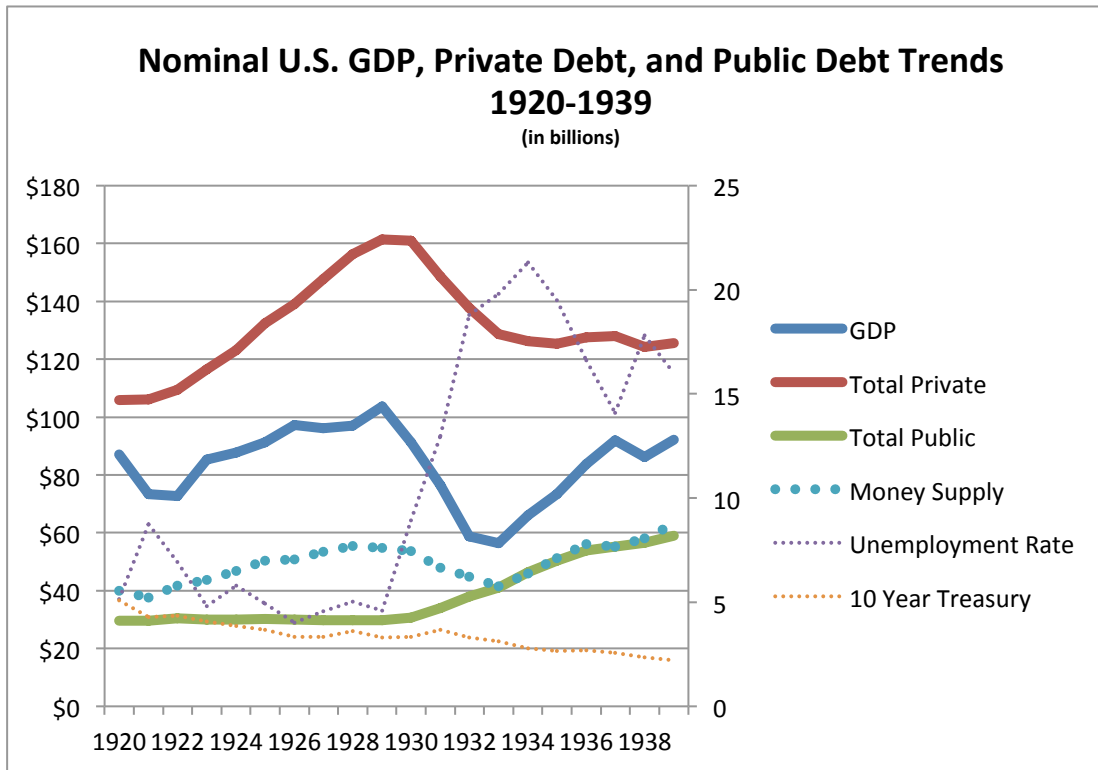
Table 4c: Real GDP Growth Compared to Real Growth in Total Private Debt 1970-2011



The fact that GDP growth correlates to private debt growth does not automatically imply that private debt growth to GDP should be a policy objective since it may drive GDP growth. The dilemma underscored by this paper is that the private debt that brings GDP growth is the same private debt that accumulates into a consequential overhang eventually suppressing growth. Furthermore, a dollar of private debt growth usually brings *less* than a dollar of GDP growth, but we are getting ahead of ourselves.

Returning to Table 3a, because the 1920s and the 2000s were the only two periods with both high private debt-to-GDP growth and overall private debt to GDP levels, we decided to take a closer look at the two periods — in particular the period ten years before and after the crisis — or in the case of the Great Recession, the period-to-date after the crisis. As shown in Table 2b and Table 3b, we were struck by the similarity between the two in the period before the crisis, but equally struck by the differences in private debt-to-GDP trends in the period after.

Table 5: Debt 10 Years before and after the Great Depression



What seems notable about the Great Depression, in addition to the rapid debt build up we have already seen, is the rapid reduction in nominal debt after the crisis point — roughly \$35 billion in debt contraction which translates into roughly \$45 billion in GDP contraction during the same short period.

Public debt growth prior to the crisis is flat and appears to play no role in causing the crisis. Further, the spending associated with the programs of the New Deal after the crisis are small compared to even the reduced private debt levels.

The reduction in private debt after the Great Depression represents over half the increase in debt during the prior decade. A significant portion of this reduction was paydown.

We know that bank failures totaled roughly 25 percent of the total paydown. And we can further speculate that a very different "batten-down-the-hatches" mindset governed the entire financial community — the bankers themselves, the local regulators, and the Federal Reserve monetary policy makers — that presumably contributed to this outcome. After all, Secretary of the Treasury Andrew Mellon is famous for having said, *"Liquidate labor, liquidate stocks, liquidate the farmers, liquidate real estate. It will purge the rottenness out of the system. High costs of living and high living will come down. People will work harder, live a more moral life. Values will be adjusted, and enterprising people will pick up the wrecks from less competent people"*

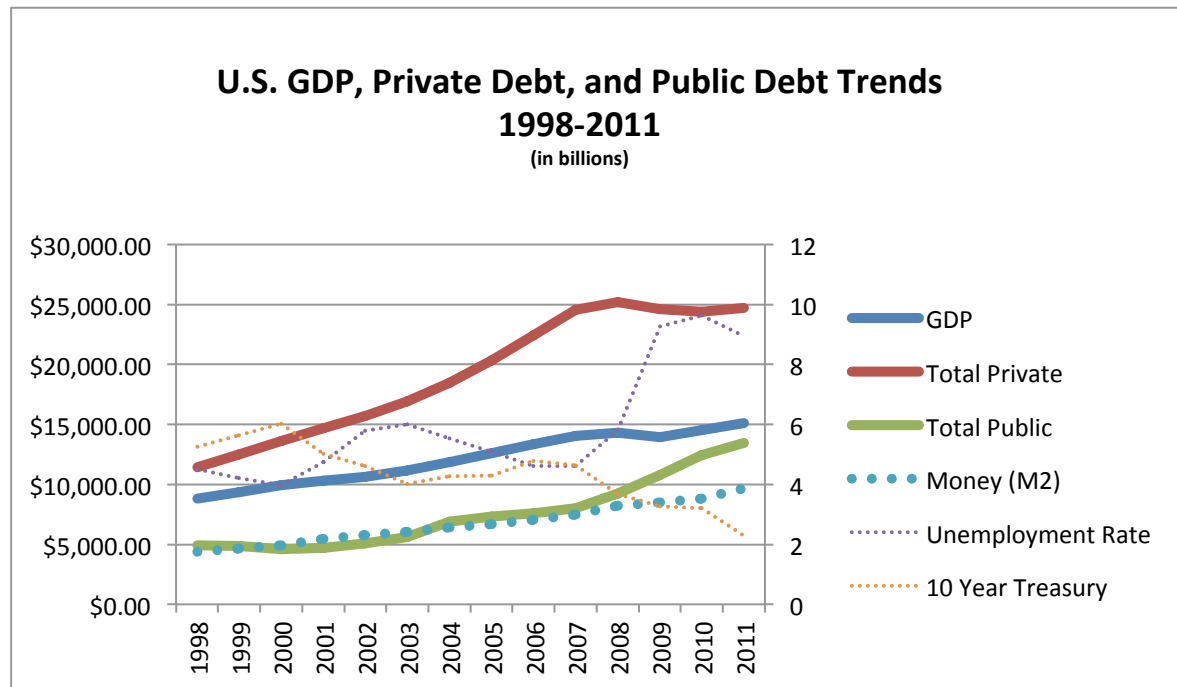
In any event, while being mindful of moral hazard consequences, the critical distinction here for business loans is between loans where a paydown was required that caused the contraction or demise of a business, as opposed to a restructuring of principal that allowed a business to continue to operate while making a restructured, lower payment on the loan. The critical distinction for household loans is between loans where paydown results in reduced spending, as opposed to a restructuring of principal where reasonable spending can continue while the household makes restructured, lower payments on the loan. In the former case, the economy contracts. In the latter case, it doesn't.

Which leads to the question as to whether, after the crisis began, this debt paydown itself was the primary reason for the greater GDP contraction in the 1930s. After all, money that would have otherwise been spending and investment was instead used for debt retirement. As others have suggested, the great paydown of the 1930s was likely the largest contributor to the great GDP contraction.

When we look at the Great Recession, we see a different pattern.

In contrast to the Great Depression, the Great Recession showed much lower debt reduction — 3 percent — and total private debt levels are now once again increasing. This lower debt reduction corresponded to a much lower contraction of GDP — 3 percent, as compared to the Great Depression, and as the country re-leverages, GDP is growing again. If our suggestion that debt paydown caused the contraction in the Great Depression is correct, then the reason there was not greater GDP contraction in the Great Recession because of the minimal debt paydown. But that leaves high debt levels in place, and consumers and businesses that remain overburdened with debt cannot lead an economy to higher growth.

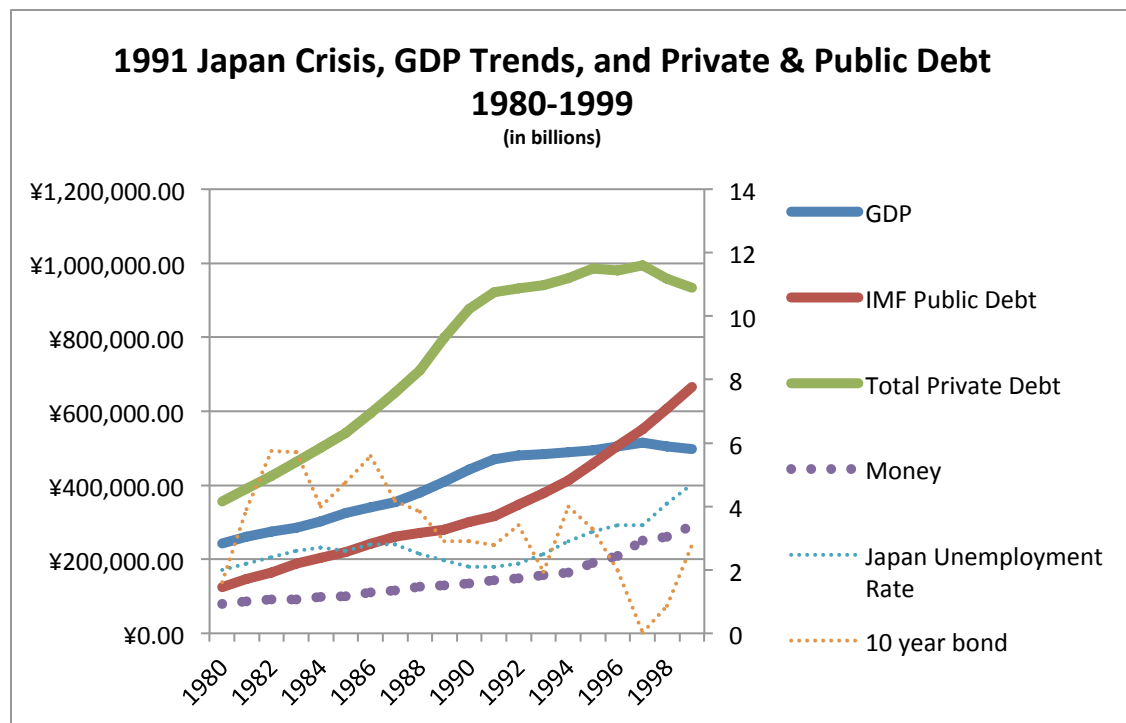
Table 6: Debt 10 years before and Period-to-Date after the Great Recession



As suggested above, the Great Depression and the Great Recession stand apart in the last century of U.S. economic history for their combination of rapid debt build-up, high private debt levels, large economic contraction, and significant asset value decline. We looked around the globe for another example of this that did not occur during the global Great Depression or Great Recession. We focused on major industrial economies where exports are less than 25 percent of GDP — both to increase the relevance of a comparison to the U.S. and on the presumption that high exports mean that that country is part of a larger system where external variables are a greater influence than internal ones.

The best example of a country that had the same pre-crisis combination of rapid private debt build up and high overall debt levels was Japan and the Crisis of 1991 — it had a 136 percent increase in nominal private debt in the decade leading up to the crisis (for a 35 percent increase in private debt-to-GDP), a private debt to GDP ratio well above 150 percent, and little correlation of government debt build-up to the crisis.

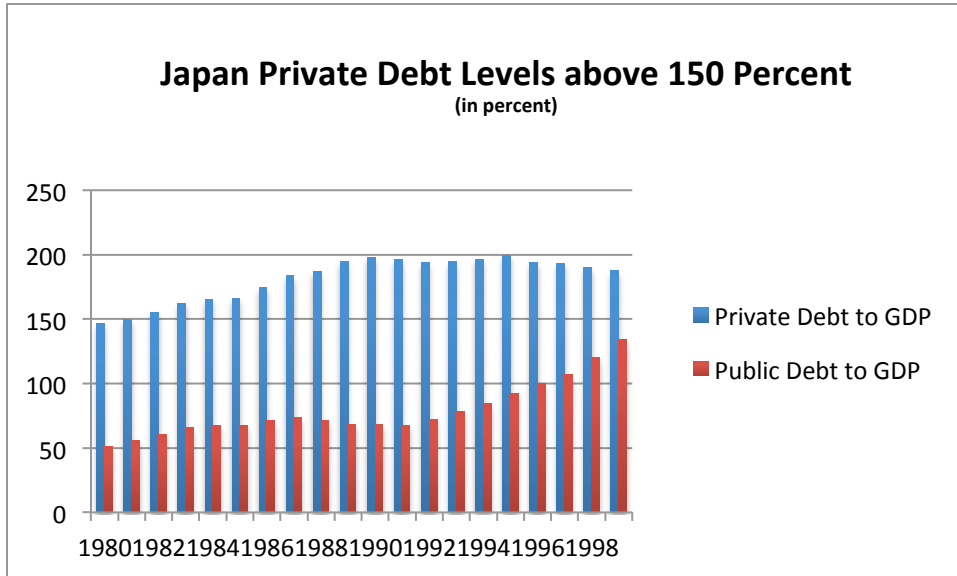
Table 7a: Japan 10 years before and after the Crisis



In this case, again there is no post-crisis reduction in debt and no contraction of GDP for six years; even though there was an over 75 percent decline in stock market values, a 90 percent decline in Tokyo property values, and a doubling of unemployment. A decline in private loans and GDP only occurs six years after the crisis in 1998 — and the decline by 1999 in private debt is 6.1 percent, accompanied is 3.5 percent decline in GDP.

As previously noted and shown in Table 7b, Japan's private debt levels during this period rose to well above the 150 percent level only reached in the U.S. in the immediate pre-Great Depression and Great Recession periods.

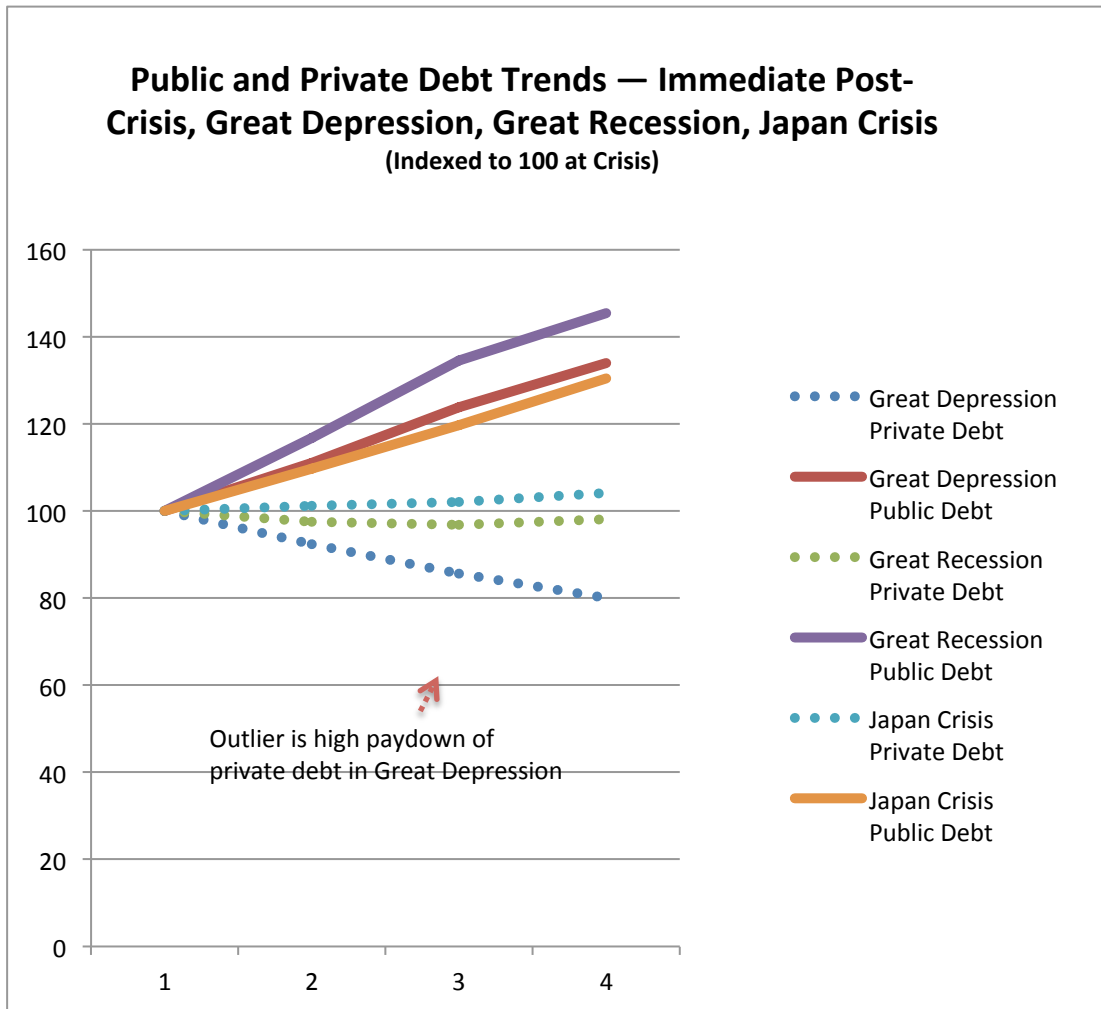
Table 7b: Japan Private Debt Levels above 150 Percent



We will return to the subject of Japan's economy in a moment.

In all three cases, public debt increased at comparable rates post-crisis, so the main difference in post-crisis behavior as regards debt is the divergence in private debt levels.

Table 8a: Increases in Public Debt Post-Crisis in all Three Cases



This analysis suggests high paydown in private debt is accompanied by high contraction in GDP as in the Great Depression, whereas little or no paydown in private debt is accompanied by little or no contraction in GDP as in the Great Recession and the first years after Japan’s 1991 Crisis.

Table 8b: Japan GDP 1997-2010

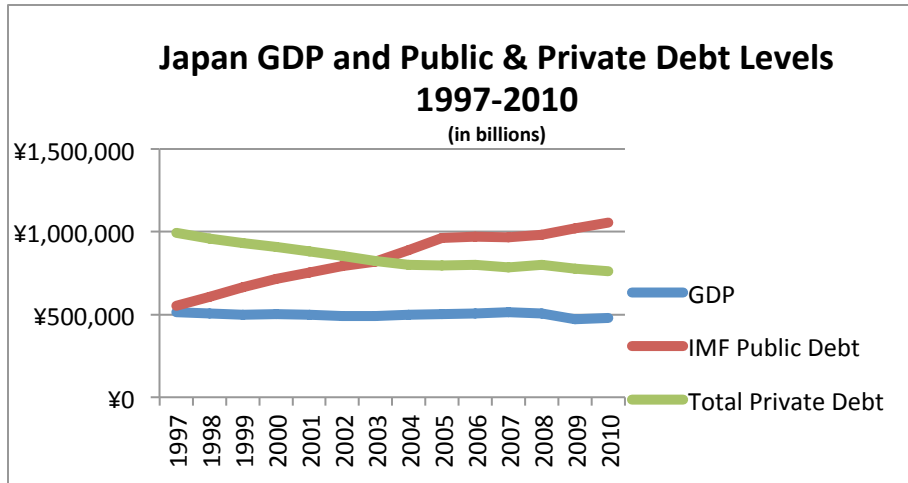
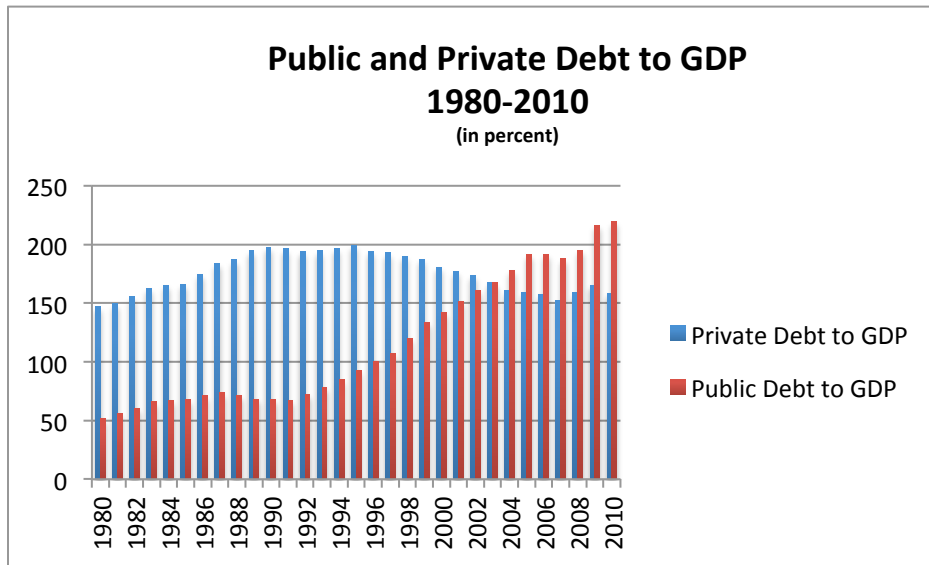


Table 8b picks up the Japan story in 1997, at the point debt-to-GDP reduction begins. At this point, the private sector begins to de-lever significantly. The reduction in nominal private debt is a very high 24%, and yet GDP only declines 9%. Remember that a similar 22% reduction in the 1930s brought a 45% decline in GDP. That is because government spending and thus debt rises by an even higher 91%.

It is a vindication of Keynes. But it is a sobering vindication. Public debt increased by roughly \$5 trillion while private debt decreased by roughly \$2 trillion — a net increase of \$3 trillion, all to keep the GDP decrease to a mere of \$500 billion. On a net debt basis — as we will see shortly — the story is better but still sobering, net debt only increase \$1.5 to \$2 trillion to hold the GDP decline to that \$500 billion — since private deleveraging is greater.

And total country debt to GDP for Japan is now at an all-time high — and public debt, which we suggest in a healthy economy should be no more than 25 to 33% of private debt, is now actually larger than private debt.

Table 8c: Public and Private Debt to GDP 1980-2010



Looking again at Table 3a, the silver lining that came from the otherwise wrenching “great paydown” of the Great Depression — and the deleveraging that continued in the early part of World War II — is that the private sector was left with a century long low in terms of its level of debt. This low leverage put both consumers and businesses in an ideal position to lead the GDP higher in the post-war era through rapid spending and investment and the associated build up of debt. In Japan, leverage remained high in the first years after the crisis point, and while the benefit was the avoidance of GDP contraction, the drawback was that Japan was left with a private debt load that suppressed growth. Deleveraging then began, with a contracting effect on GDP, and Japan’s GDP has been stagnant — part of the reason this period is often referred to as the Lost Decade.

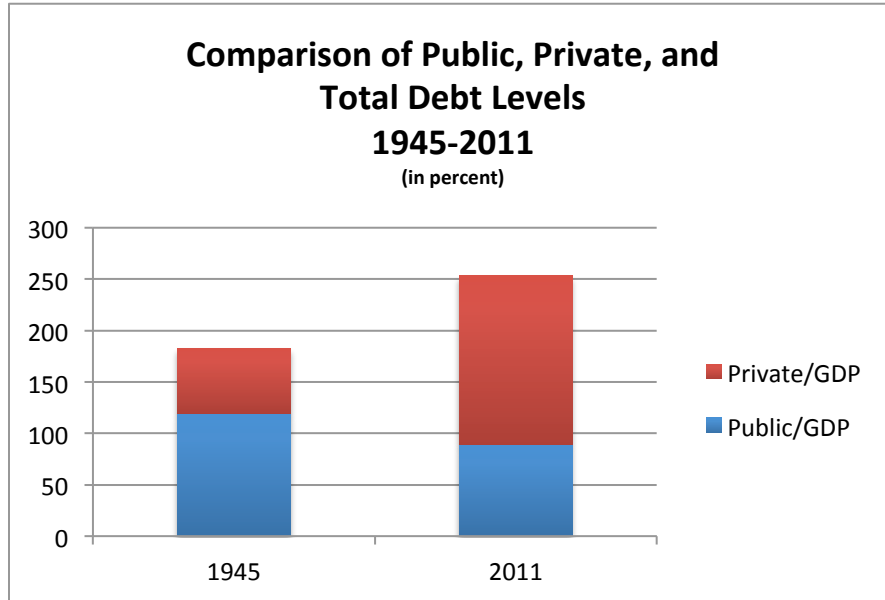
In the US after the Great Recession, GDP has nudged above pre-crisis levels, and after a brief drop, private debt levels are re-approaching the record highs of the crisis period. Given Japan’s early post-crisis experience, it seems reasonable to consider that these high private debt totals will continue to have a growth-suppressing effect.

USING GOVERNMENT SPENDING FOR STIMULUS

Some economists have advocated higher government spending programs to lead us to both lower unemployment and higher growth levels — even though government debt is at a post-war high (See Table 3b). These economists defend higher government spending programs by pointing out that 1) US government debt is higher than in 1945 and that was overcome, and 2) the current US government debt level is lower than that of certain other industrialized countries. These two arguments are valid but have the following limitations:

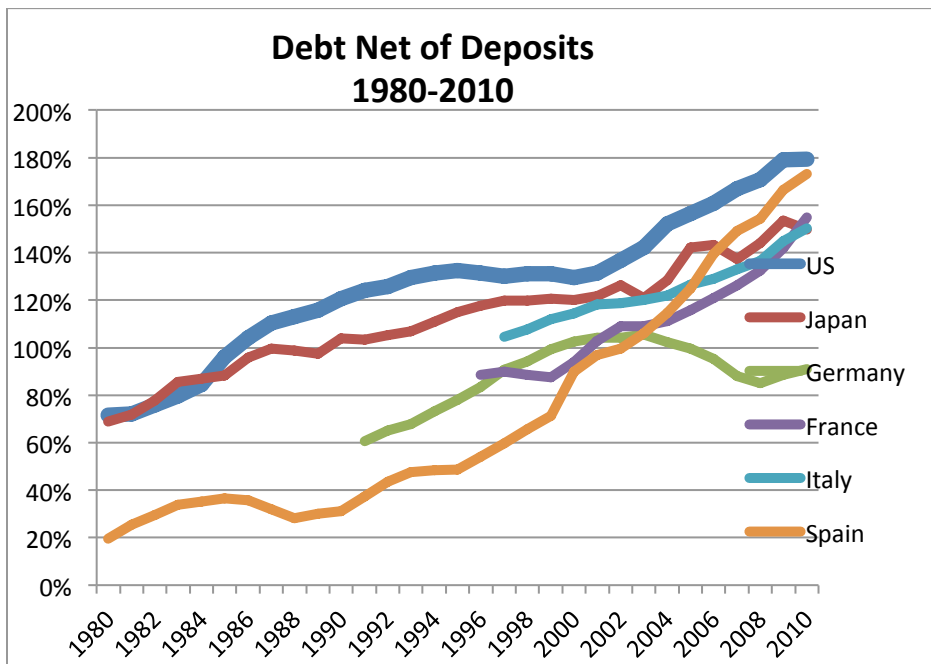
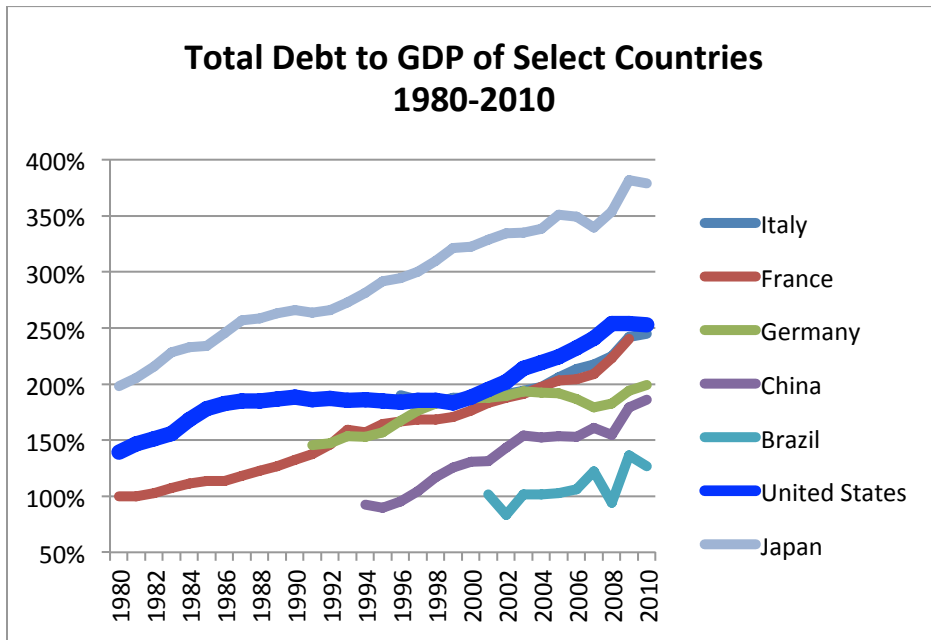
1. Although government debt levels are lower than they were at the peak of World War II, total debt levels are 40 percent higher than they were at that 1945 government debt apex.

Table 9a: Debt Levels Compared to Peak Public



2. Although US debt levels are below several other industrial countries, that is damning by faint praise. As shown in Table 9b, we are well below Japan, but above Italy, well above Germany, and still further above China and Brazil. The US is at or below the level of countries with slower growth than the US case, and above those with higher growth. High total debt levels may not cause slow growth, but they contribute — and at the very least this comparison is not helpful to the case for justifying high debt levels. Further, countries with high debt levels have less capacity to use stimulus to offset future crises, and therefore have a competitive disadvantage to countries with low debt levels — not to mention the higher portion of aggregate national income allocated to debt service. The argument falls even further short when we look at this same ratio net of non-financial deposits— to take into account different savings rates across countries. Viewed this way, the US debt-to-GDP ratio is less favorable than Japan’s, and Germany’s advantage is even greater.

Table 9b and c: Debt to GDP 1980-2010



- Although many economists refer to US post-2007 deleveraging, the data show that after modest deleveraging, aggregate private debt levels are now level to increasing — business and non-mortgage consumer debt are increasing while mortgage debt is decreasing — and are well above levels of just 10 years ago. Public debt totals are at a post-war record level.

- As shown in Table 10a, the US — along with most others in the world — has experienced a long-term post-war increase in leverage. This increase in America’s debt ratio to GDP — 84 percent since 1970 — seems like it will continue into future decades, and there is reason for concern regarding this trend. Every other major country in the world has a similar trend, for example Japan’s total debt to GDP has increased by 91 percent since 1980 as shown in Table 10b.

Table 10a: Total Debt to GDP 1970-2011

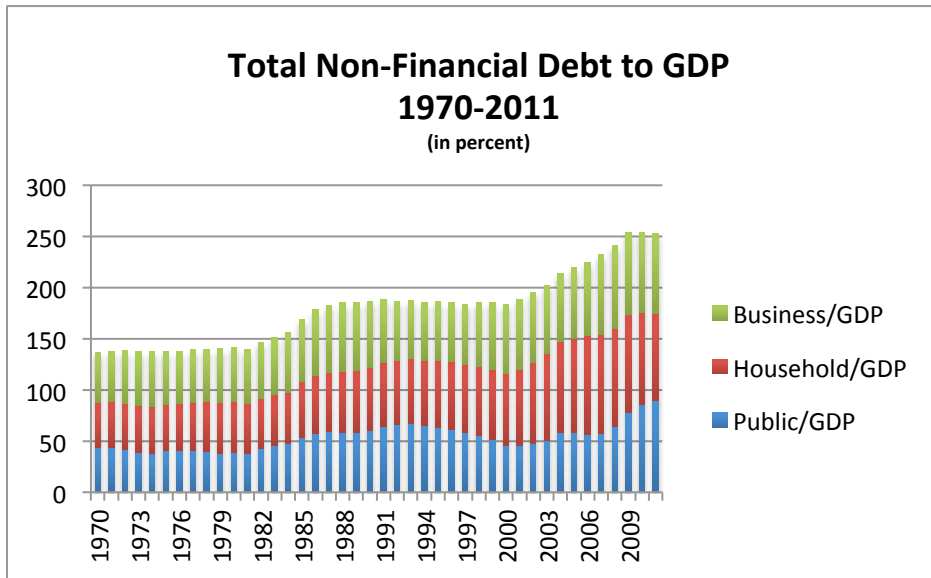
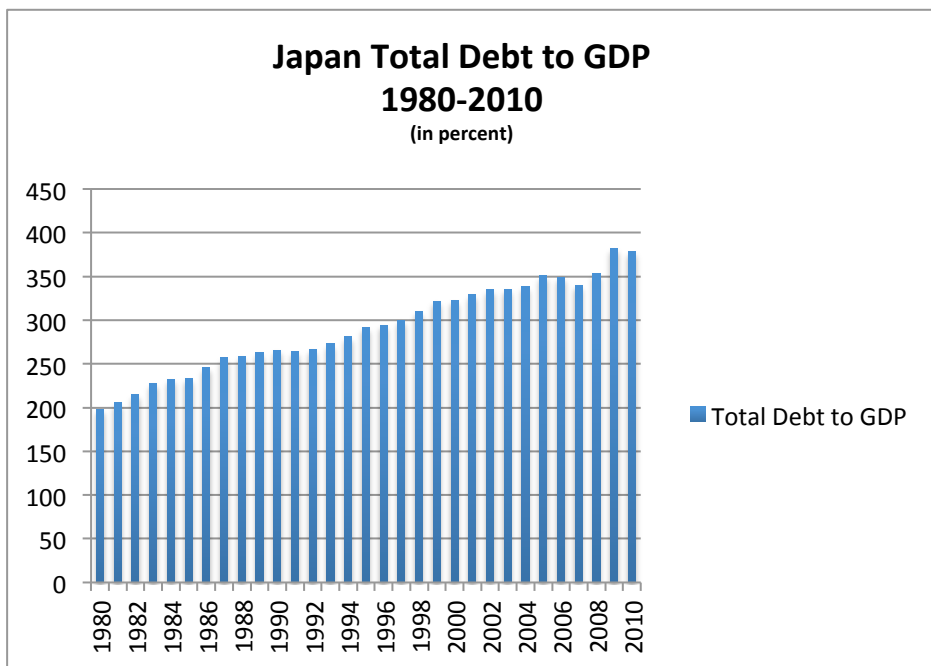


Table 10b: Japan Total Debt to GDP 1980-2010



5. Consumers and businesses that are overburdened with debt cannot lead an economy to higher growth.
6. It is generally true that government spending has a less favorable payback than private spending, and private spending is a more efficient source of stimulus.

One minor aside in view of the long-term increase in debt levels — whether in the US, Japan, or anywhere else. In an environment where both debt itself and the debt-to-income ratio is continually increasing, any loan approval criteria employed is continually becoming obsolete.

WHAT POLICY CAN ACCELERATE GROWTH?

So if government stimulus is not optimal, private debt paydown brings contraction, no private paydown leaves high levels of growth-suppressing debt, and inflation and/or growth would take a generation or more — the best alternative to reducing private debt-to-GDP ratios may be debt restructuring that does not require public funds. As mentioned, the political moment for restructuring may have passed, and the complexity of large-scale restructuring may be too daunting, but that does not change the fact that with the current record high levels of debt, the private sector is not positioned to lead America toward strong growth.

Creating consumer demand — the goal that so often eluded policymakers from Roosevelt forward — is a straightforward process. In 1990, the U.S. consumer debt-to-GDP level was 62 percent. In 2000 it was 70 percent. Today, even after some deleveraging, it is 88 percent. Reduced demand is largely a function of these high levels. Reduce the debt, and demand reappears.

Regulators have on occasion employed strategies that allow current asset write-down but allow capital and reserve reduction over time . This type of approach allows the banks to offset this write-down through earnings or capital augmentation over an extended period rather than all at once. With the earnings consequence associated with these write-downs dealt with, banks are then better positioned to the restructure loan agreements with the borrowers — including reduction of principal.

We understand that the effectiveness of this type of regulatory policy is complicated by a number of factors, including the large percentage of these loans that were securitized.

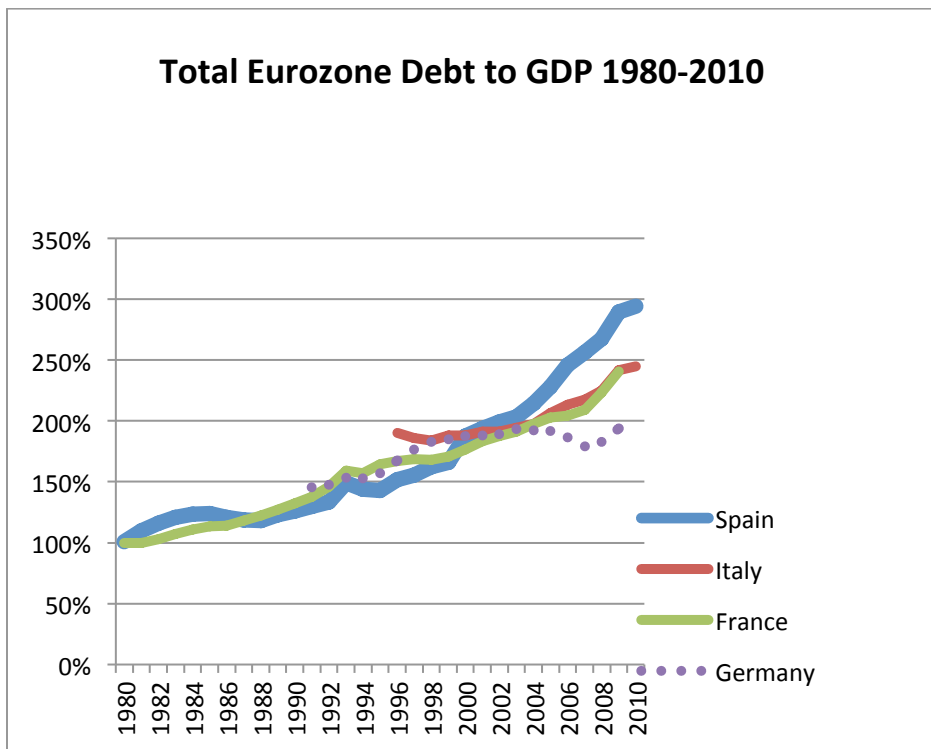
Further, whenever we have introduced the subject of debt restructuring and principal reduction, the issue of moral hazard has been raised. We would note, however, that restructuring leaves a permanent record on a given business or consumer's credit record, and impacts their ability to borrow in the future. As for any moral hazard for banks that made loans unsuitable for the borrowers — we can't add to what has already been written on this subject.

We estimate that as much as \$1 trillion in consumer first and second mortgage write-downs may remain to be taken. Whether that is true, and whether a restructuring such as we suggest can be achieved, we would still offer that \$1 trillion in debt restructuring — especially consumer debt restructuring — could provide stimulus that would be as great as \$1 trillion in additional government spending. This type of restructuring-based stimulus would bring benefits to consumers, businesses and the overall economy.

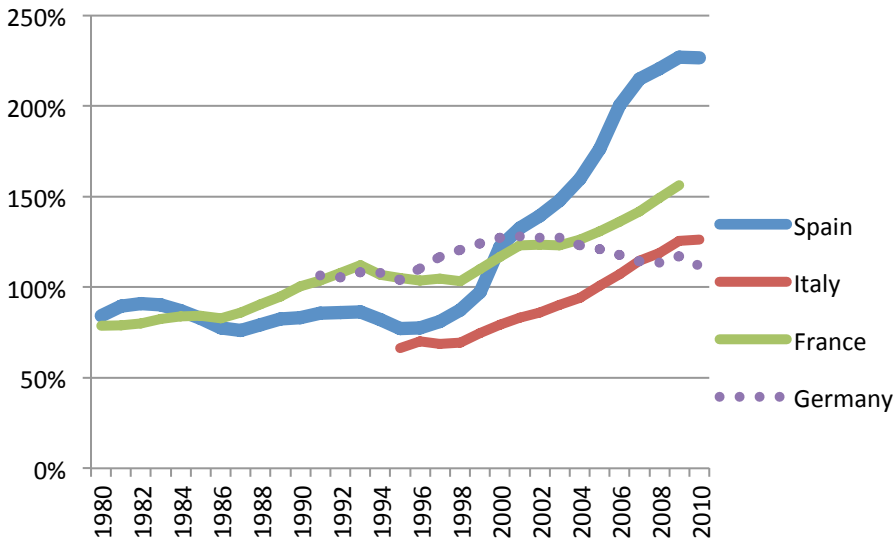
SOME THOUGHTS ON THE EUROZONE

Higher debt levels than America’s are the issue in Europe, and debt restructuring with similar regulatory forbearance is the key to a better path there as well. Tables 12a, b, c, d, and e show the steep total debt accumulation trends of the four Eurozone countries that comprise 77 percent of Eurozone GDP — especially Spain, which itself is 12 percent of Eurozone GDP (which contrasts to Greece at only 2 percent of Eurozone GDP). In Europe, too, public debt is the lesser issue, private debt levels now exceed 150 percent, and private debt to GDP levels in the period before the crisis are extremely high — well above the concerning 40 percent level in the case of Spain and Italy, with Germany as the notable exception across the board following its 2001 telecoms crash. We also show the relative levels of public and private debt-to-GDP in Spain in Table 12f.

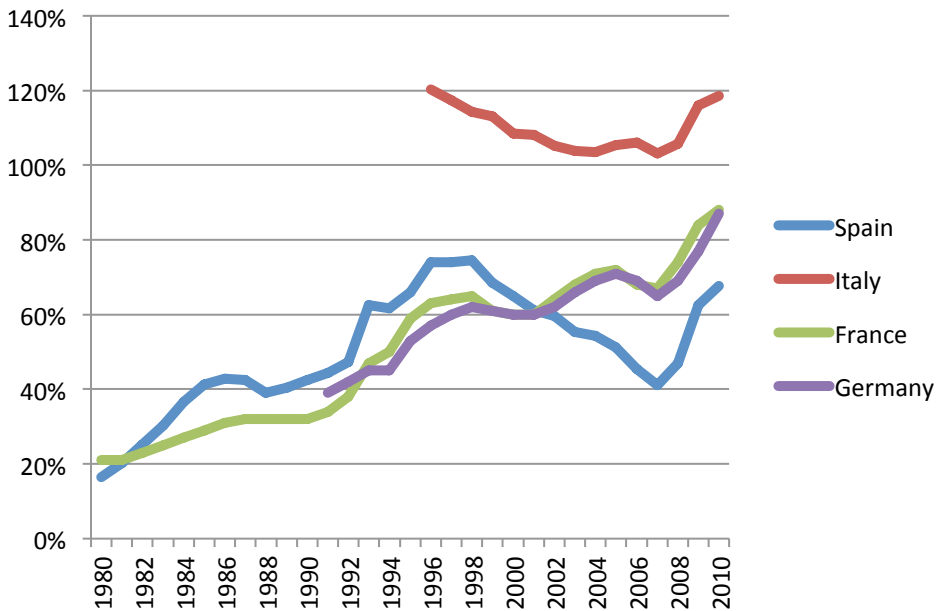
Tables 12a through f: Eurozone Debt Trends 1999-2010

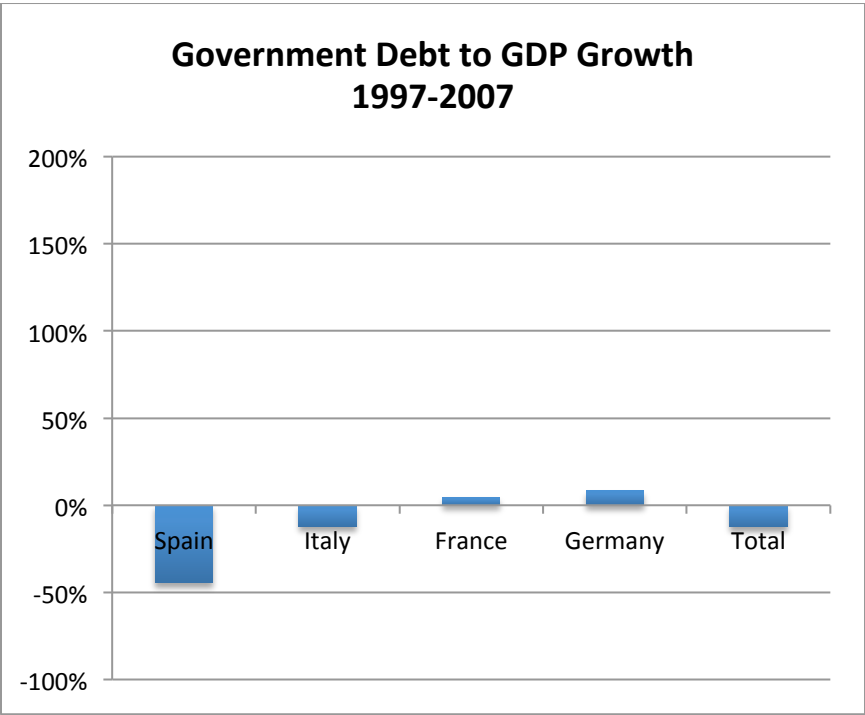
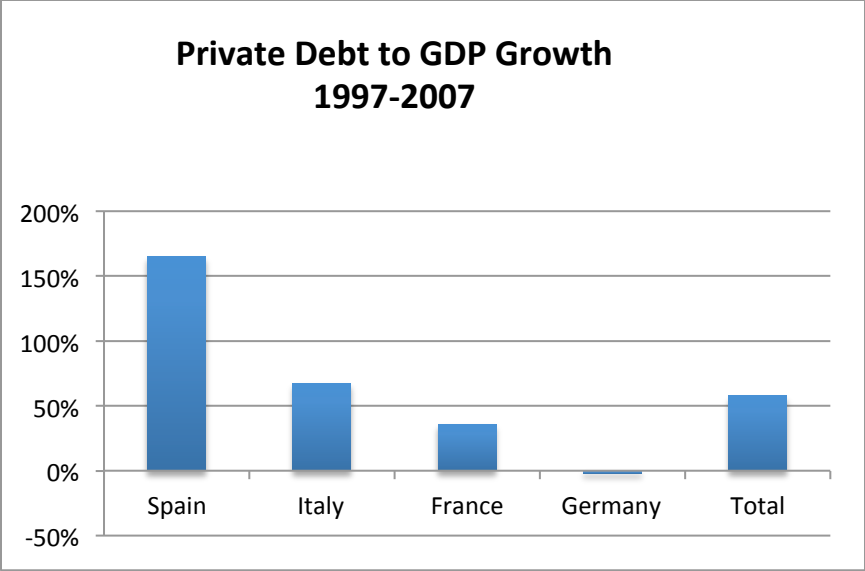


Private Debt to GDP 1980 to 2010



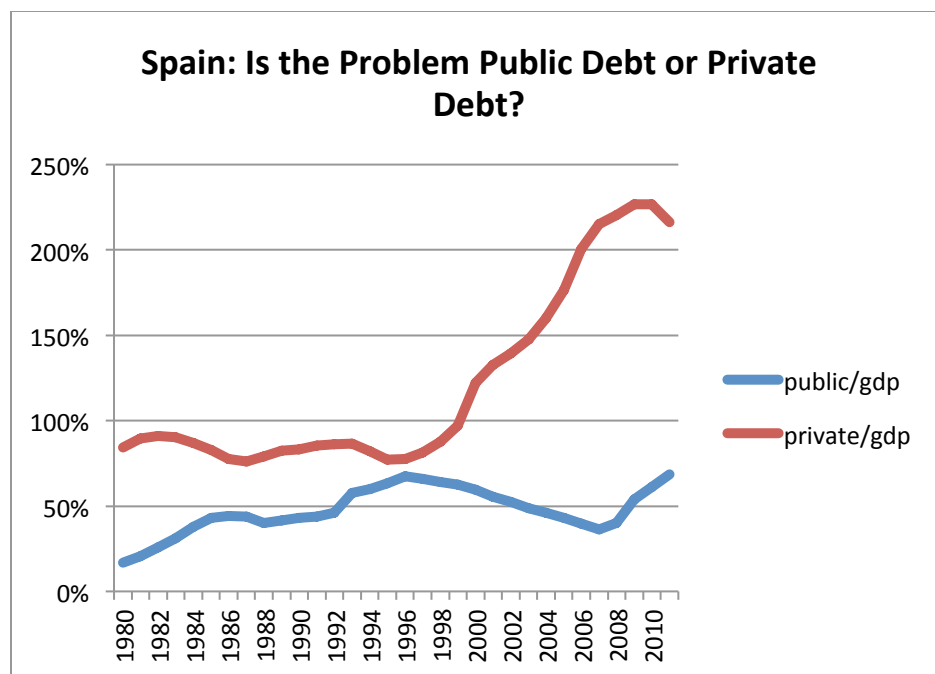
Government Debt to GDP 1980-2010





To take Spain as a specific case, as Table 14 below shows, the accumulation of private debt in Spain is a significantly larger issue than the government deficit issue. A certain level of government austerity is welcome, but government debt is not high by historical or international standards.

The issue is that tax revenues have fallen off, so unless tax receipts approach previous levels, government spending will need to be curtailed. The catch-22 is that private taxpayers — businesses and consumers — are so burdened by unprecedented, extraordinary levels of debt that they cannot spend at historical levels. And if their spending remains low, then profitability and employment levels will continue to suffer — and tax revenues will stay low. The only way out is a reduction of these private debt levels by strategies such as restructuring and mutualization.



A NOTE ON THE METRIC OF “NET” DEBT

We view the “net” debt-to-GDP ratio — total debt minus deposits — as a useful compliment to the debt-to-GDP ratio, but not a substitute. Used alongside the debt-to-GDP ratio, it gives a two-dimensional view of the phenomenon.

Total debt is clearly a powerful way to capture the decades-long trend of global debt accumulation, and to compare the relative state of debt in different countries.

However, we also knew that different countries had different savings rates, and we wanted a “balance sheet” approach to capturing that difference. “Deposit-to-GDP” ratios are different among countries, and — as one example — subtracting deposits from debt to get this “net” metric eliminates the gap between Japan and the US. Japan’s total country debt to GDP (public plus business plus consumer) is higher than the US’s, but its net country debt ratio is slightly lower than that of US.

Net debt also is interesting to examine through time — deposits don’t generally accumulate as rapidly as debt in a high-debt-growth period, so net debt growth in these periods is actually more rapid than total debt growth. Conversely, in a deleveraging period (however modest), deposits accumulate at a pace that makes net debt deleveraging more rapid than total debt deleveraging. This ratio provides interesting insight into behavior during both booms and busts.

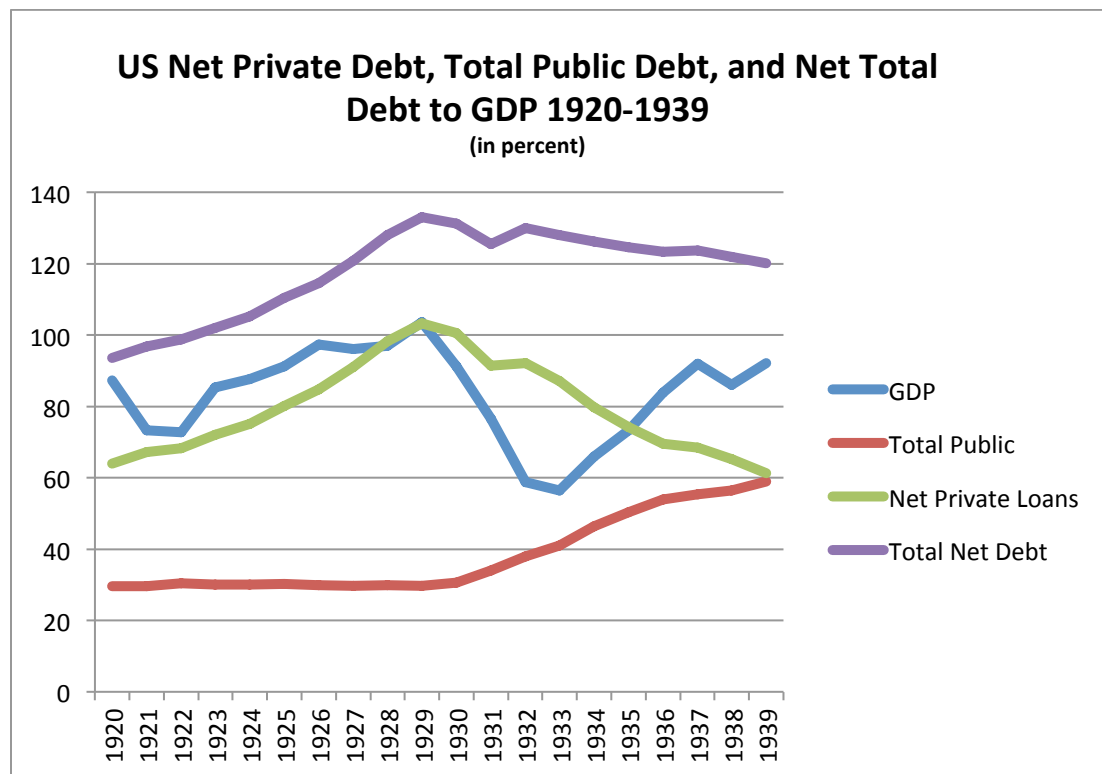
There are two things that this net debt metric does not do as well as the total debt ratio. First, it doesn’t capture the stress to an economy as clearly as total debt, because the overlap between borrowers and savers is not high. In other words — a lot of these highly leveraged borrowers are not the ones in a position to build or benefit from these deposits. Second, the growth in net debt does not correlate nearly as well to GDP growth as growth in total debt. That is because the “proceeds” from an increase in debt go fairly directly into GDP in the form of spending and investment, while an increase in deposits, by

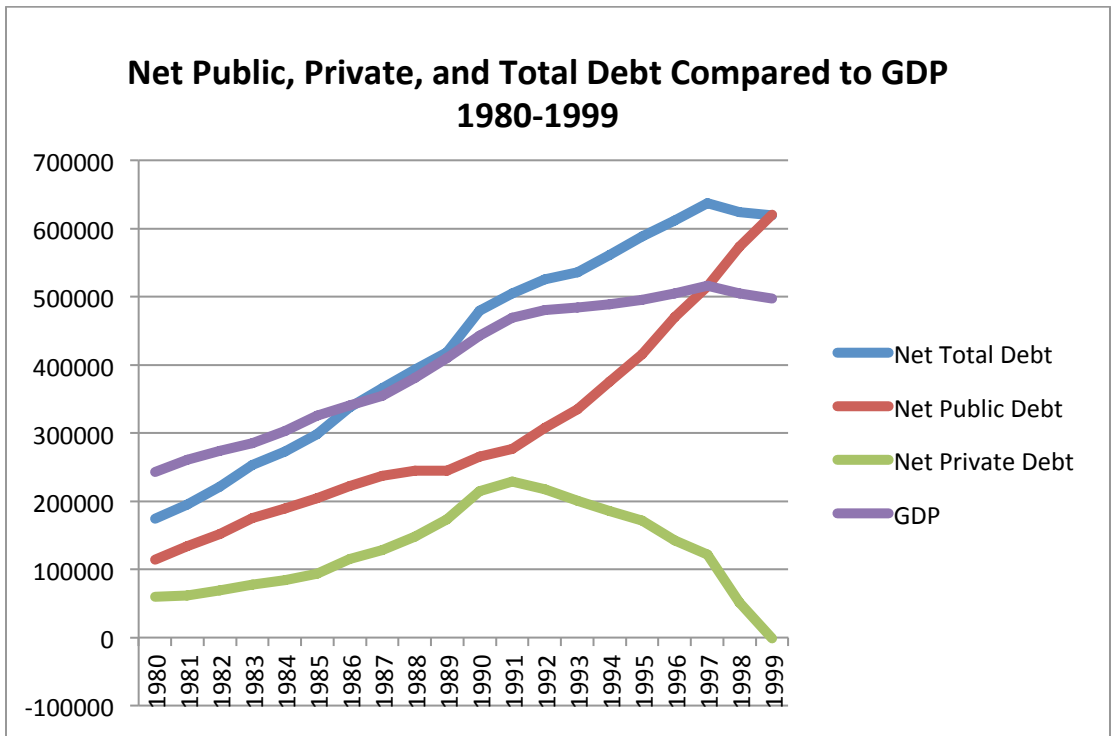
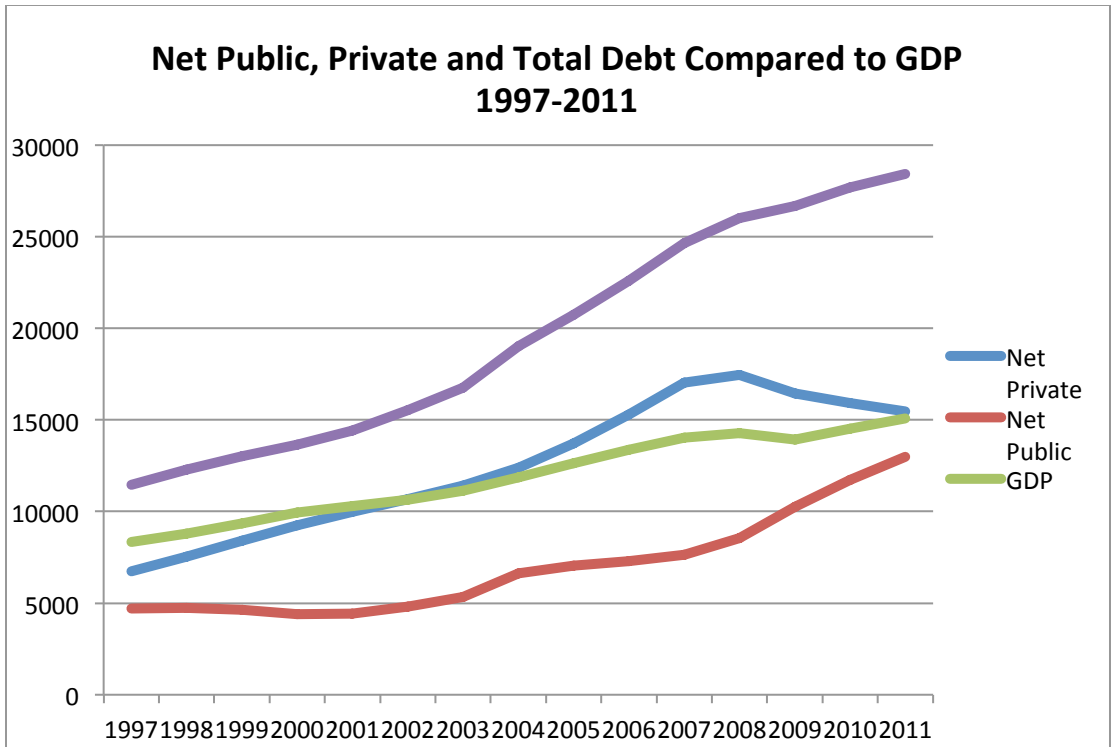
definition, is not money going directly into GDP — again suggesting that the overlap between borrowers and savers is not high.

We are still analyzing this metric, in particular what other items should be included or excluded — for example, money market funds. But even this preliminary look is interesting and the metric seems too useful to omit. Tables 13a, b, and c show the Great Depression, Great Recession and Japan’s 1991 Crisis viewed with this metric, and should be compared to Tables 5, 6, and 7 respectively.

In the Great Depression, you still see the “great deleveraging” — but it continues more steeply in the late 1930s, and seems to underscore the role of public spending in those later years. In the Great Recession as well, the post-crisis deleveraging is somewhat more pronounced, although the private debt ratio remains well above the levels in prior decades. A look at Japan’s 1991 Crisis and the Lost Decade also shows this steeper deleveraging story — the Japanese private sector is deleveraging rapidly — and underscores the role of public leverage in off-setting this.

Tables 13a, b and c: Net Debt Analysis of the Great Depression, Great Recession, and Japan Crisis





SUMMARY AND KEY POINTS

- Private Credit Trends are the key to predicting the next crisis — and provide important explanations for the Great Depression, Great Recession, and Japan’s Lost Decade.
- Private Credit Trends cast new light on the booms the US has had in the past. When many thought Japanese *keiretsu* were going to dominate global business, what was really unfolding was a leverage-driven boom. Reagan’s revolution was leverage-driven. The Roaring 20s? Leverage-driven as well.
- Aggregate debt paydown brings GDP contraction
- Using government debt to offset a contraction might work in the short term, but it leaves a debt hangover that suppresses growth. We should consider strategies for reducing debt that do not bring GDP contraction. A much better way to reduce debt may be through debt restructuring — for example reducing distressed debt through debt forgiveness. Even with subsequent moral hazard consequences, this strategy is better than high levels of usually inefficient, new government spending.
- Using government debt to offset a contraction might work in the short term, but it leaves a debt hangover that suppresses growth. A much better way to restructure distressed debt is to provide debt forgiveness. Even with subsequent moral hazard consequences, this strategy is better than high levels of usually inefficient, new government spending.
- Private debt and public debt ratios are at historic highs, too high to be meaningfully changed by growth or inflation in less than a generation
- The long-term, secular increase in US and global debt-to-GDP levels shows that a dollar of increased debt is yielding less than a dollar of GDP growth.
- The propensity for private debt growth to accumulate into a growth-suppressing overhang and result in value collapses in stocks, housing, or other assets may suggest a need for a global recalibration of bank tangible capital requirements.

We haven't mentioned innovation. True productivity-enhancing business innovation and the policies that foster it are the most important drivers of economic growth. But if the discussion is higher government spending versus austerity, perhaps it is time to focus instead on the potential benefits of increased restructuring.

In Table 14, we show the trend since 1970 in total US debt, in total private debt, and also in total private debt minus deposits — our “net debt statistic. One question as we conclude — when and how will the current decades-long global leveraging trend end?

Table 14: Long Term Trend in US Total Debt, Total Private Debt, and Total Private Net Debt

