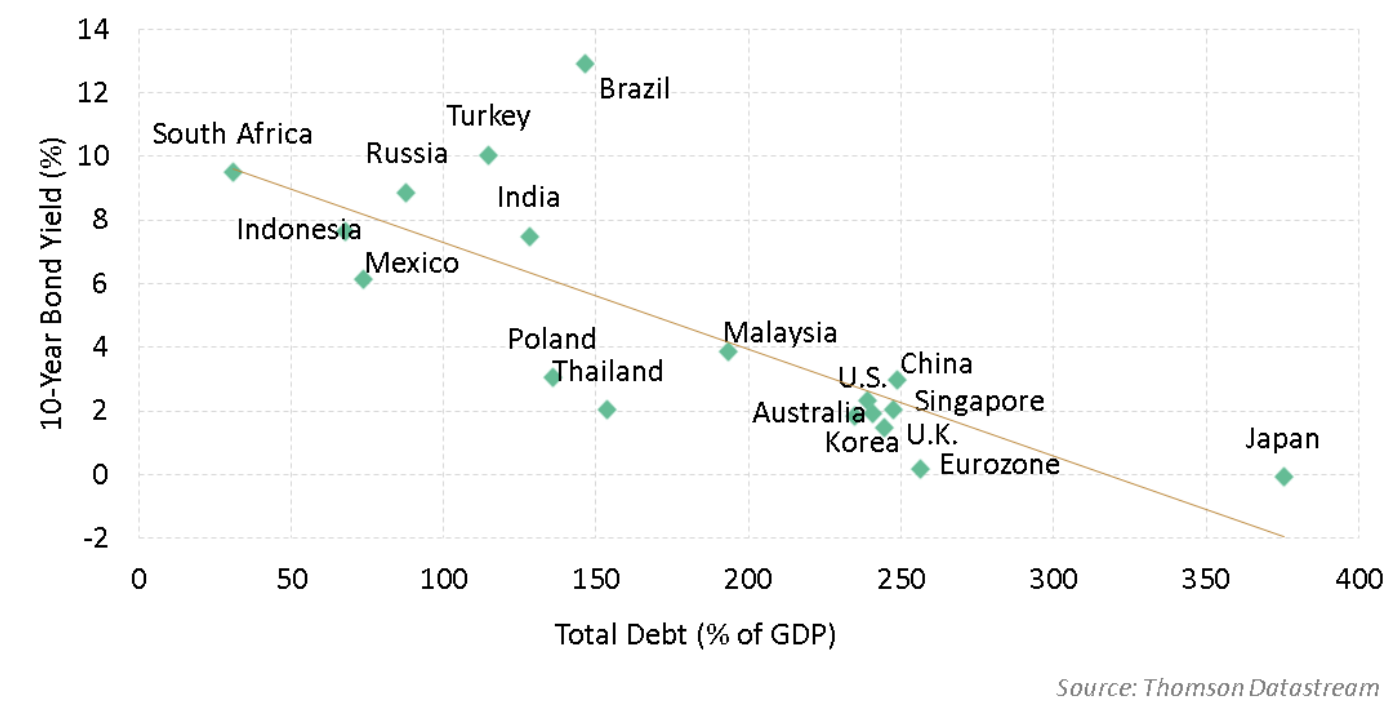


The Debt Paradox

Economists often lament that too much debt causes financial stress. However in reality, there is no evidence that the indebtedness level of an economy has anything to do with the level of interest rates, the key indicator of financial stress.

Chart 1: Debt Ratios and Interest Rates *As of 5/20/2016*



In fact, the correlation between the two variables is negative (see [Chart 1](#)). Countries with lower debt burdens have higher interest rates, and vice versa. Why is there such a paradoxical correlation?

Explaining the Paradox

From a macro perspective, debt occurs primarily for two main reasons. The first is to convert savings into investment. The second reason is to borrow expected future income to finance current consumption. When using debt to funnel savings into investment, corresponding assets are formed. However, when using debt to borrow future income to lever up current consumption, there is no corresponding asset formation. The net result is a reduction in the national savings rate.

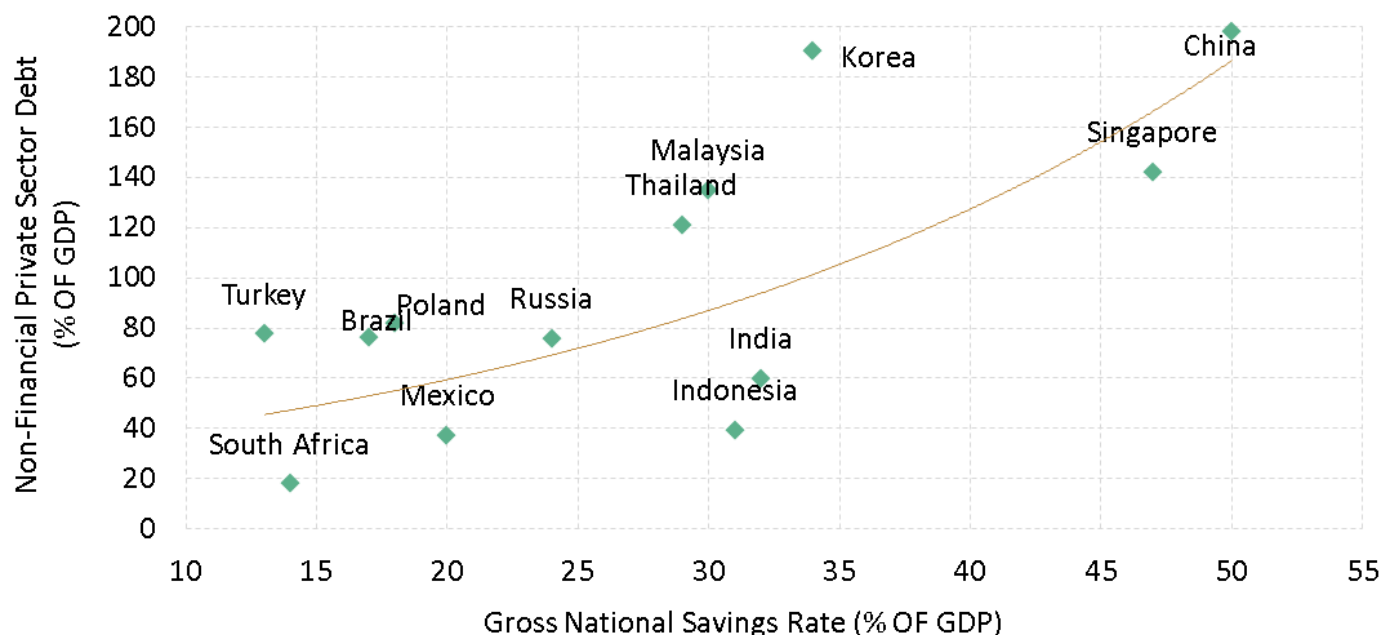
In reality, consumer credit—borrowing to consume—plays a much more important role in the developed world than in developing countries. In the U.S., consumer credit accounts for over 53% of the overall private credit market. In comparison, the share of consumer credit is much smaller in developing countries where both savings and investment rates tend to be higher.

Of course, a nation can also rely on the equity market to transform savings into investment. For example, in the U.S. over 70% of financial intermediation is done via the equity market. However, in most parts of the world, banks and bond markets are much more important in financial intermediation.

Regardless, for any given financing structure, it must be true that a higher national savings rate leads to a larger debt stock and a higher debt to Gross Domestic Product ratio (debt/GDP) than in those countries with lower savings rates. This conclusion is simply because higher savings usually require a larger amount of debt creation to transform them into investment, all else being equal.

There is a reasonably well-defined correlation between domestic savings rates and domestic indebtedness among emerging market (EM) economies (see [Chart 2](#)). For instance, China and Singapore have the highest domestic indebtedness, which mirrors their very high gross domestic savings rates. By the same token, low-saving nations such as South Africa, Turkey, and Latin American economies have significantly lower debt levels.

Chart 2: Debt Ratios and National Savings Rates *As of 9/30/2015*



Source: Thomson Datastream

This chart also explains the paradoxical relationship between low interest rates and high indebtedness: high-saving nations, which tend to have higher debt creation, tend to have lower interest rates than those countries with low national savings rates. All of these factors make the correlation between rates and indebtedness seem “paradoxical.”

Therefore, it is both meaningless and misleading to discuss whether a nation is too indebted without considering its financing structure, national savings rate, and the nature of debt formation. Europe and Japan have much more leveraged banking systems than the U.S. because the former traditionally rely on banks for financial intermediation while the latter primarily depends on equity markets. Similarly, the eastern Asian nations have underdeveloped equity markets but very high savings rates—the key reason behind very high debt/GDP ratios in many Asian economies.

Obviously, the relationship between savings rates and levels of indebtedness is never precise. For example, some countries can borrow savings from abroad, while others could lend out their excess savings to foreigners.

Both can disrupt the savings rate-to-debt level correlation. Nevertheless, it still does not change the fact that the levels of debt creation are positively correlated with the levels of national savings and how those savings are transformed into investment.

How Much is Too Much?

Is there a limit for debt accumulation? How much debt is too much? Most economists would turn to the debt/GDP ratio for an answer, but the ratio has historically provided poor guidance for debt crises. The real issue here is: How to link the level of debt with a debt crisis?

A debt crisis arises when all creditors collectively redeem their holdings of debt in exchange for the most liquid form of asset—usually the legal tender in which the liabilities are denominated. When debtors cannot satisfy the redemption need, a debt moratorium or default occurs.

However, there is a huge difference between private sector debt and government sovereign debt. There is nothing unusual about debt crises in the private sector—they frequently occur in the private debt market, especially during recessions. In fact, private debt defaults, asset liquidations, and bankruptcies are inherent in free-market capitalism, and a private debt crisis can occur with a low or high debt/GDP ratio.

The 1989-1990 savings and loan crisis, which was essentially a debt crisis, occurred when the U.S. private debt/GDP ratio stood at about 120%, which was significantly lower than today. In contrast, the 2008 debt crisis transpired when the private sector debt/GDP ratio was significantly higher.

Similarly, China's worst debt crisis, called the "triangular debt trap," took place between 1994 and 1995 when the government combated soaring inflation by shutting off credit, leading to a full-blown crisis and widespread corporate debt defaults. At the time, China's credit/GDP was 90%. Today, the same ratio stands at 170%.

All of these examples show that the private debt/GDP ratio provides no useful signal for whether a country is nearing a debt crisis or not. Private debt crises can erupt at any level of private sector indebtedness. The risk of debt crisis is always highest during times of economic recession when asset values drop, cash flows shrink, and corporate profits evaporate, all of which make it difficult for borrowers to service their debt.

Can a Sovereign Debt Crisis Occur?

Sovereign debt crises are much less frequent than private debt collapses. It has been extremely rare for a sovereign debt crisis to erupt in a developed nation. In fact, if a nation's sovereign debt stock is denominated in its local currency, sovereign debt default is almost impossible. This is because the central bank balance sheet is the ultimate payment guarantee for outstanding government debt. In other words, a central bank will never run out of money if it decides to buy government bonds from anyone who wants to sell.

Of course, if a central bank buys too much government debt, a fall in the local currency, a rise in inflation, or some combination of the two are all possible. But, the risk of an actual sovereign default, or nonpayment of the sovereign government to its financial obligations, is zero.

However, if a government has accumulated large amounts of foreign currency-denominated debt, a sovereign default can happen whenever there is a confidence crisis. If a government's financial obligations are denominated in a foreign currency, but as the debtor country it has no legal jurisdiction to issue the legal tender in which the debt obligations are written, it immediately becomes liquidity-constrained when there is collective redemption demand from foreign creditors.

Inevitably, a sovereign debt default will occur when the government's foreign exchange reserves are depleted and other sources of revenues are shut. For example, sovereign debt defaults took place in Mexico in 1995, Russia in 1998, and Argentina in 2000. All of these episodes were hard-currency debt crises.

Some may ask: What about the eurozone debt crisis? Isn't all eurozone sovereign debt denominated in the euro? If so, why has there been a sovereign debt crisis?

The root cause for the spike in sovereign risk occurred when the European Central Bank (ECB) refused to backstop its troubled bond markets, effectively turning the euro-denominated debt into de facto foreign currency debt. By the same token, the crisis was quickly defused in March 2012 when the ECB merely hinted that

it would act as the buyer of last resort thanks to Mario Draghi's now-famous "whatever it takes" speech.

Putting Debt in Perspective

For years, debt has been demonized by politicians and feared by investors. In reality, debt accumulation has largely mirrored how national savings have been transformed into investment. The level of debt to GDP ratio offers no insight on systemic risk, financial stress, or economic vulnerability. Some countries have seen sovereign debt crises erupt with a very low debt/GDP ratio, evidenced by Russia in 1998 and Mexico in 1995, while others have enjoyed enormous bond and currency market stability even with high or rising debt/GDP ratios. For example, Japan's public sector debt/GDP ratio is over 250% and yet bond yields are literally zero.

It is particularly worth noting that China's very high savings rate and its very underdeveloped capital market are the key reasons behind the country's ever-increasing debt/GDP ratio. In my view, any prediction of a Chinese debt crisis based solely on the country's high debt/GDP ratio will prove to be naively wrong. Similar predictions were made about Japan in the mid-1990s. At the time, the world investment community formed a strong consensus that a collapse in the Japanese government bond (JGB) market and the yen was inevitable because of Japan's high and rising public sector debt and the Bank of Japan's (BOJ) purchases of JGBs. In hindsight, these predictions proved to be dead wrong.

An Economist's View on Debt Rescue

John Maynard Keynes, the English economist, has allowed us to understand the importance of the inter-sectorial transfer of savings and dissaving. If the private sector saves too much and spends too little, then the public sector must dis-save to maintain a balance between aggregate supply and aggregate demand, according to Keynes. There is nothing evil about fiscal deficit and public sector debt, just as there is nothing virtuous about maintaining a balanced budget. Fiscal policy should be calibrated according to the underlying balance of an economy rather than the prevailing debt/GDP ratio.

The most effective way to deleverage an economy is to expand the ratio's denominator—GDP. The impact of nominal GDP growth on the debt/GDP ratio is exponential, meaning a faster expanding economy could bring down debt/GDP more rapidly. The opposite—focusing on the numerator by trying to squeeze debt or credit creation—almost never works because it can only create an impasse in the savings-to-investment transformation. This is a recipe for creating excess savings and corresponding nominal GDP contraction.

There has always been a contentious debate between the so-called Austrian school solution and Keynes-style rescue involving a transfer of private sector liabilities to public sector deficit and debt. The Austrian school disciples prefer a market-based solution, allowing a wholesale liquidation of economic and financial excesses. The Keynesian school, however, emphasizes the use of government sector dissaving to bridge the gap of inadequate aggregate demand at times of crisis or recession.

It is difficult to know which policy ideology will lead to better outcomes over the longer run. This is as much a debate on economic policy as on economic philosophy. Nevertheless, the 1930s experience was a classic Austrian-school experiment, and it is almost certain that no modern democracy would allow a repetition of a similar economic outcome today. This reason alone is why we have witnessed widespread government bailouts at times of economic difficulties and financial crisis.

Conclusion

In actuality, there is probably no mathematical limit on how much debt load a nation can carry. If there is one, we don't know what it is. Nor is there one single indicator that can accurately signal a potential debt crisis. Instead, debt accumulation and financial vulnerability of an economy are balance sheet concepts which call for a holistic approach to analyse the risk. We cannot focus only on the liability side of an economy. Do not forget, though, that for every dollar of debt formation, there is likely to be a corresponding asset being created. Only when the complete picture is understood can we make the right judgement on the issue of debt sustainability.

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