The BOECKH INVESTMENT LETTER

SPECIAL REPORT
OCTOBER 23, 2012

Deleveraging and the Global Debt Crisis

> Contributing Editor Bruce Ramsay developed the Debt/CF methodology, and he has become an expert on the global debt crisis since retiring from Acumen Capital in 2003, presenting at various conferences on credit and the euro crisis. In a note we circulated on Feb. 22, 2012, we shared his methodology which is useful for comparing the trajectory and sustainability of debt levels for various countries and has numerous advantages over the standard debt/GDP metric.

Assessing the financial risk of a nation requires comparing the aggregate debt[1] of all sectors with a measure of the ability to service that debt. The typical measure of debt to GDP, akin to the "revenue" of a nation, can be misleading, especially during the false prosperity generated within a financial bubble. Instead, comparing debt to savings provides a more direct measure of leverage that is far less vulnerable to the distortions created during a bubble. For example, in a case where GDP growth is weak or stagnant, national savings nevertheless can be growing. This scenario means that support for the debt load is actually improving faster than the GDP figures would indicate. In contrast, a case might develop where GDP is growing (e.g. due to a credit bubble), but savings are decreasing and the nation's ability to carry its debt load

[1] For aggregate debt, we have used total liabilities data from all sectors. This simplifies comparison between nations, as current standardized data for total liabilities is available for most countries. This approach may be argued to produce exaggerated results for certain nations with financial centres, including the U.S., U.K. and Switzerland. This concern and these countries will be covered in a future report.

is actually faltering. Gross Saving[2] is analogous to cash flow, so we call this approach debt to cash flow (Debt/CF) analysis.

During the early stages of a credit bubble, national savings tends to rise roughly in proportion to GDP. However, savings generally weakens well before the end of the credit cycle, as the boom encourages increased consumption at the expense of saving. For the corporate sector, cash flow tends to weaken towards the peak in the business cycle, well before the beginning of a recession, because profits, productivity and capital spending fall and inventories start to rise (Chart 1). Chart 2 shows that for the total U.S. economy, savings peaked in Q4 2006, nearly two years before the financial crisis erupted. This pattern holds true for most countries, including Ireland and Finland, also shown in the chart. Canada's gross savings held up very well in the wake of the financial crisis, a sign of Canada's relative strength and robust financial sector.

Chart 1

U.S. Corporate Gross Savings

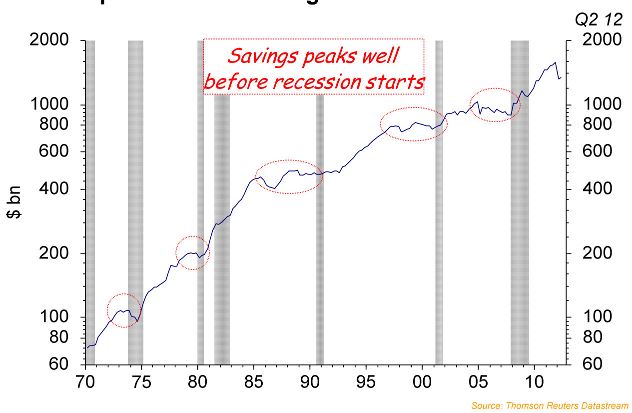
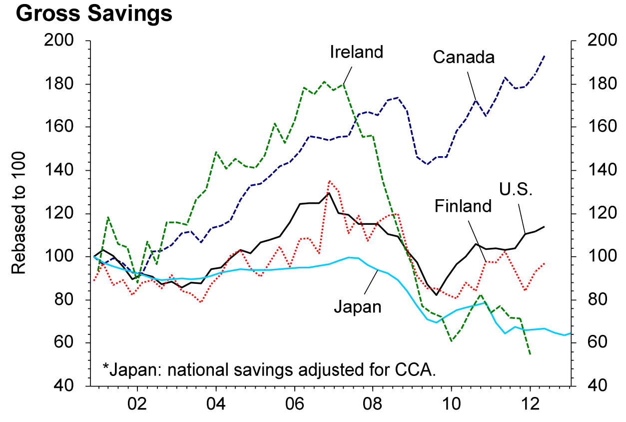


Chart 2

Gross Savings



In this report we apply the Debt/CF method to a range of countries to provide perspective on the global debt crisis. The eurozone remains the focal point, as nations such as Spain and Greece are failing to make much headway on their debt burden. It is

[2] Gross Saving is a standard measure reported in the System of National Accounts.

hard to achieve actual or *ex post* savings increases when an economy is in decline, as profits, employment and incomes are all falling, even though *ex ante* savings may have been be going up: this is called the paradox of savings, the harder you try to save, the lower your actual savings. In previous letters we have discussed the causes of the eurozone crisis and the potential outcomes. However, in order for a successful resolution, the fundamental problem of excessive debt must be brought under control.

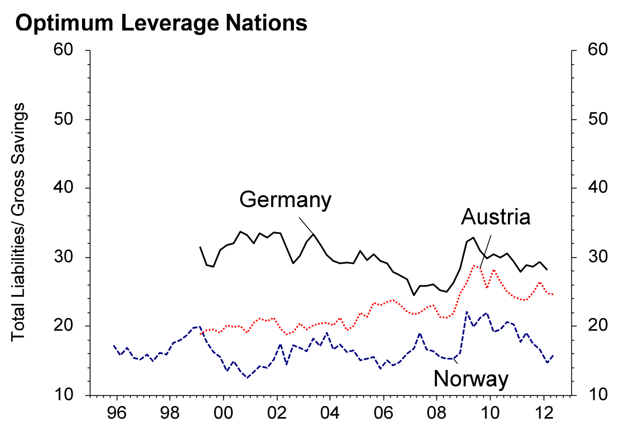
As a first step to assess these issues under the Debt/CF methodology, nations are categorized by their extent of leverage.

Optimum and Warning Leverage

Debt/CF multiples of 30x or lower are a good indicator of financial strength, and countries in this zone can be considered to have optimum leverage. Norway, Austria and Germany are all in this category due to relatively healthy levels of debt and savings (Chart 3). All have growth rates above the eurozone average, as well as lower unemployment and higher real wage growth. In the case of Norway, behind this ranking of course are significant resource revenues and very high, and growing, savings rates (Chart 4).

Austria's debts have been growing modestly, but gross savings have recovered to pre-crisis levels. Meanwhile Germany has also contained growth of its debt and savings have recovered,

Chart 3



although not to pre-crisis levels. Germany reduced leverage in two phases, first following re-unification, and second in the recovery following the financial crisis of 2008-09. The optimum leverage of these nations provides a benchmark against which escalating risk can be viewed.

Chart 4

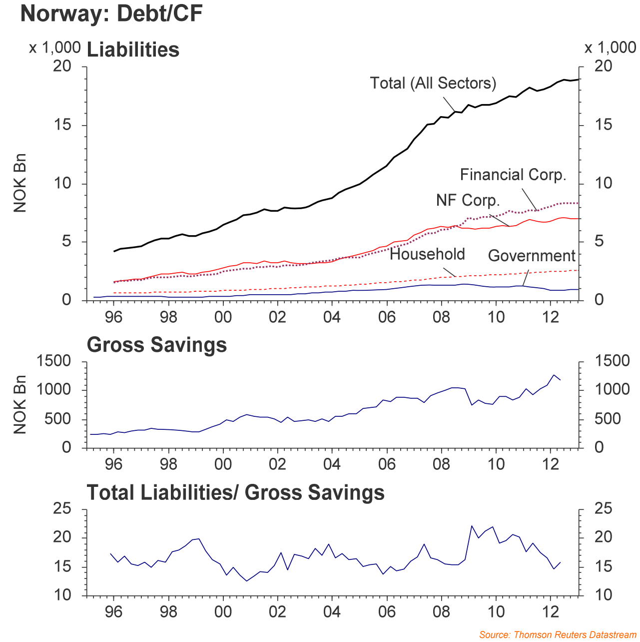
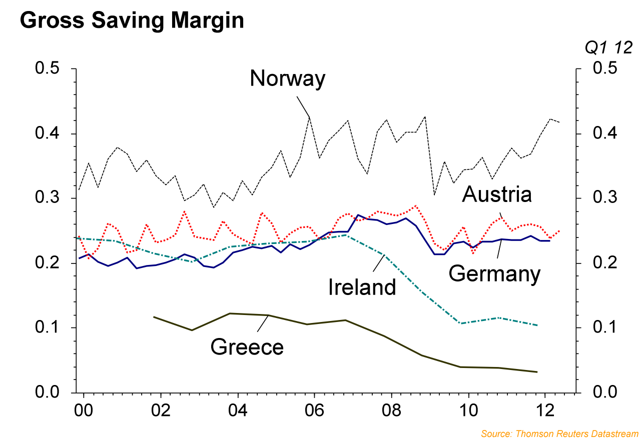


Chart 5 demonstrates the critical impact of certain nations' savings margins, and the resulting strength of the Debt/CF as an indicator. A common characteristic of these optimum leverage nations are strong gross savings margins near 25% for Austria and Germany. Norway's savings margins are recently in the range of 40%. That is, for every euro or kroner of GDP, these nations generate 25 to 40 eurocents in savings. This cash flow is available to make principal payments on debt, and make significant investments for the future. In contrast, nations with weak and declining margins are exposed. As shown in Chart 5, Ireland and Greece are left with only perhaps 5 or 10 eurocents in savings per euro of GDP, and therefore will struggle with debt principal repayment obligations, let alone making investments for the future.

Chart 5



Moving up the leverage scale, Chart 6 presents five nations with a Debt/CF multiple between 30x and 50x. The grouping includes Finland, Canada, Sweden, Belgium and Denmark. These nations have all seen leverage escalate in connection with the 2008 financial crisis, with varying subsequent results reflecting attempts to rectify the problems.

Chart 6

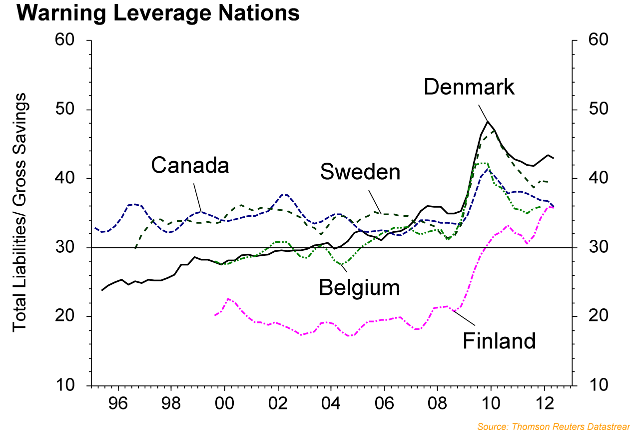
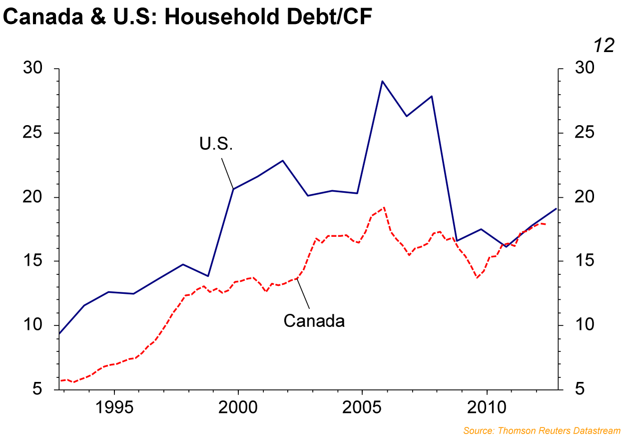


Chart 7



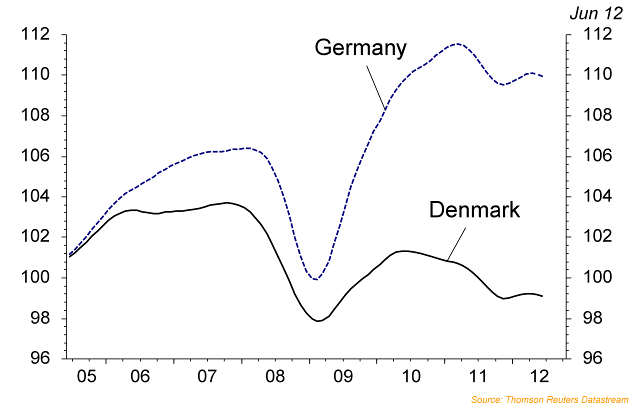
Finland entered the crisis well positioned with very conservative leverage, but has been on a steadily deteriorating trend as financial sector debts have climbed rapidly in subsequent years. Although perhaps not at immediate risk, Finland is on an uncomfortable path. The debts of Belgium, Sweden and Canada all continued to grow following the crisis, but each nation's savings have recovered and risks have thereby moderated from higher levels evident in the immediate fallout of the crisis.

Nevertheless, Debt/CF in particular areas such as household debt in the case of Canada continue to remain elevated. Canada's household Debt/CF lagged the U.S. throughout the 1990's and 2000's, and never reached the extreme levels seen in the U.S. household sector (Chart 7). However, Canada's household sector Debt/CF is now at about 18x and it has been rising steadily since mid 2009. This is a similar pattern to the U.S; however, Canadian policy makers are attempting to curb household leverage by modifying mortgage standards, while the U.S. is actively encouraging the expansion of household credit. In Canada, there are signs that the real estate market is beginning to soften, but so far there is no evidence of deleveraging.

In the case of Denmark, the nation has taken steps to reduce leverage, and has made progress since the crisis. However, Denmark's financial sector continues to take on more debt, and it is the most levered in aggregate in this group of warning status nations. Denmark's regional banks are facing significant refinancing challenges for debt taken on prior to the 2008 crisis, and the situation is complicated by central bank negative interest rates. Chart 8 shows the divergence between the composite leading indicator for Denmark in comparison to Germany.

Chart 8

Leading Indicator: Denmark vs. Germany



Eurozone Sovereign Crisis Nations

Greece and Portugal had Debt/CF of a reasonable 30x in the late 1990s to early 2000s (Chart 9). As these two nations reveled in the false prosperity of the growing debt bubble, leverage steadily escalated. In 2005, both nations broke above 40x Debt/CF, and continued upwards into very dangerous levels of above 60x by the onset of the 2008 global crisis.

Chart 9

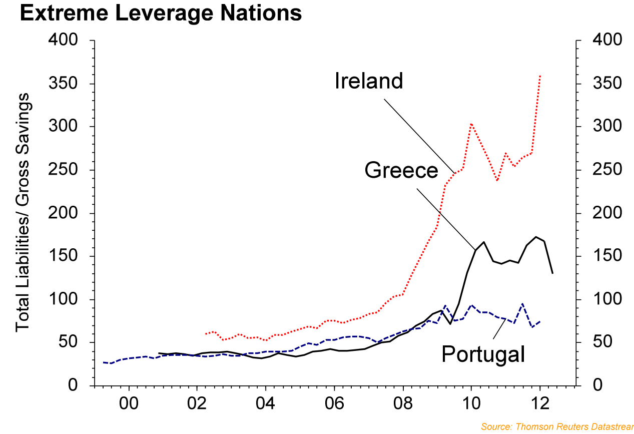
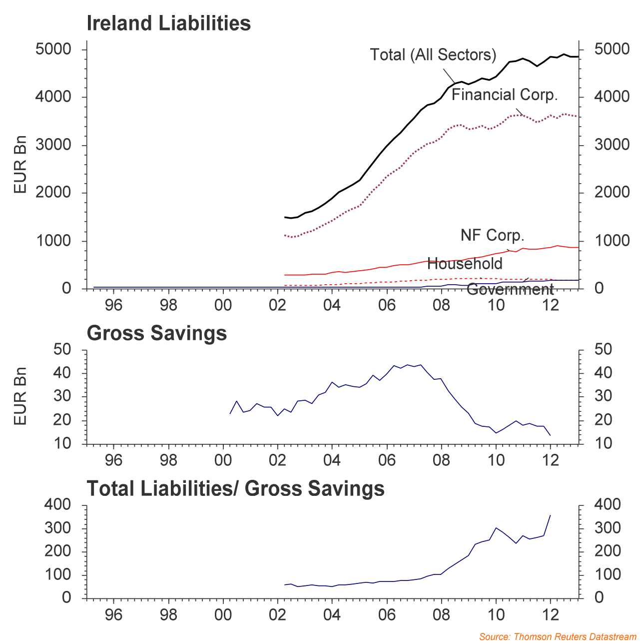


Chart 10



Although the data for Ireland begins in 2002 and already at elevated levels, the pattern was similar (see Charts 9 & 10). The 2008-09 financial crisis, and associated global recession served to expose the high financial risk of Portugal, Ireland and Greece. The nations' savings fell dramatically in the ensuing years, exposing already high leverage. Simultaneously, the flow of new credit turned off and the false bubble economy ground to a halt.

According to the Debt/CF approach, Portugal appears to have made the most significant progress in deleveraging among these three countries. Portugal's total debt has declined as financial sector debt has fallen, and savings have recovered, although not to pre-crisis levels. Of course, whether this progress can continue is uncertain in light of the risk of the area returning to recessionary conditions.

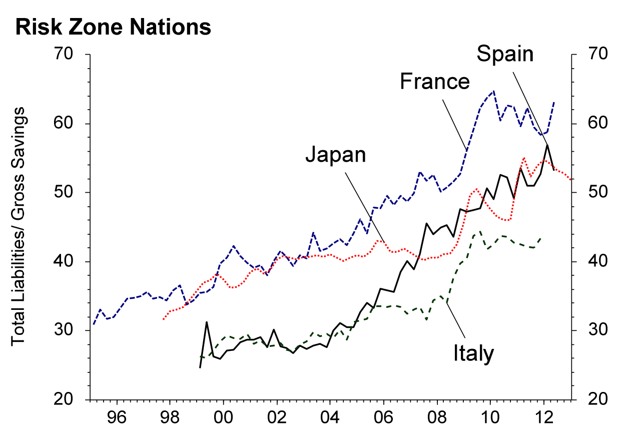
On the other hand, Greece has made essentially no progress in deleveraging. Economic turmoil continues to reduce savings levels which are now down 75% from the peak prior to the crisis, and, with a recent Debt/CF of 130x, the corresponding likelihood of bond repayments appears remote.

Ireland may be viewed by commentators as making progress in deleveraging, but the extreme Debt/CF suggests otherwise, at 350x, up from 250x after the crisis hit. Ireland's savings have also fallen 75% since peaking in 2007, while banking liabilities—based on bubble-level real estate prices—have been propped up rather than rationalized. Accordingly, without the support of internally generated savings, the likelihood of bond repayment is remote without further international bailouts.

Nations in the Risk Zone

Having reviewed nations with optimum and warning leverage and contrasted with the extreme cases resulting in sovereign crises, we can now examine at risk nations faced with precariously high leverage. Although these nations have not yet needed their sovereign debts bailed out, the fate of most of these will likely determine the survival of the eurozone itself.

Chart 11

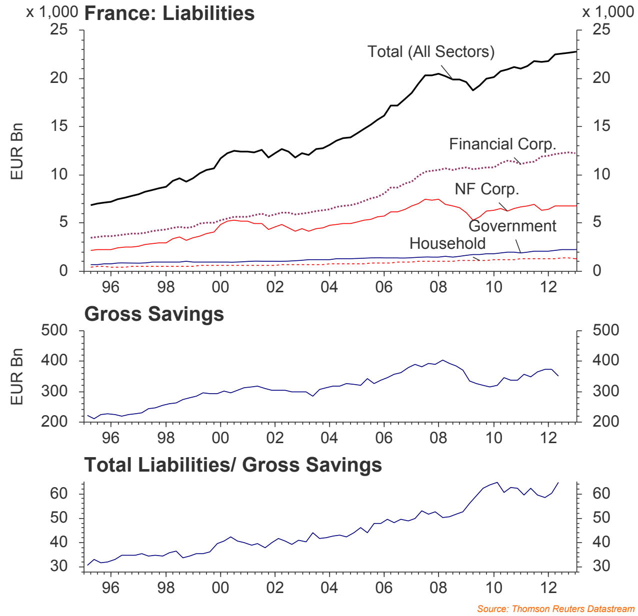


The leverage of Italy and Spain initially followed roughly the same path (Chart 11), starting in 1999 in good position with Debt/CF under 30x and rising only modestly until 2005. From 2006 to 2008 Italy held leverage stable, while Spain's leverage continued to escalate as its real estate bubble economy gathered momentum. The chart depicts leverage in Italy then staying approximately constant from 2009 to current, after the upward shock of the 2008 crisis and recession. Total debt has grown only slowly while savings has recovered somewhat, although still holding at a depressed level. Italy has recently undertaken various austerity measures, as the nation's finances have come under international scrutiny.

Spain, on the other hand, has been unable to arrest the escalation of leverage, and currently sits considerably more exposed with a Debt/CF of over 50x. Ominously, Spain's savings rate has been trending consistently downward, as the artificial effects of its bubble economy fade. This trend is directionally consistent with savings declines in Ireland and Greece, although not as drastic in magnitude. In sum, Italy is certainly better positioned to pull through the difficult adjustments ahead, while Spain continues to spiral toward eventual sovereign default.

Chart 12 depicts the relentless escalation of leverage in France. As we have pointed out in prior reports (See our report "France: Another potential Domino?", Aug. 21, 2012), France may be the next link in the instability chain, which helps explain why Hollande's government has split with its traditional ally, Germany, and now supports the troubled debtors in their demands for softer terms and support. While media and bond trader attention has not been as focused on France thus far, the Debt/CF position of the nation is very weak, certainly worse than Italy and Spain. France's aggregate debt has continued upwards along with increasing financial sector and government debt loads. Savings has made some recovery since 2008, but ominously has resumed a declining trend in the past two quarters. These two factors may combine into a set of parameters which expose the nation's weak financial position.

Chart 12



Conclusions

Recent market trends indicate growing confidence in Spain and the eurozone as a whole. Spanish and Italian bond yields have fallen about 2 percentage points since the peak in July, and most risk assets continue to rally globally since the summer sell-off. However, the underlying dynamics of the deleveraging process remain a concern. Granted, minor progress has been achieved in some eurozone nations, but leverage has increased for others. Globally, overall leverage is up, in part as a consequence of central bank liquidity actions. This central bank largesse is only a temporary salve, boosting financial asset prices but doing little to spur growth.

The Debt/CF approach provides some insight into the global debt crisis. In terms of the nations reviewed in this report, France and Spain are certainly in a dire situation. Few countries reach a Debt/CF level over 50x and achieve a soft landing. Japan is the exception, if we can call its ongoing balance sheet recession a soft landing. The usual explanation for why Japan can live easily with such high leverage is its high internal savings. But looking at Japan's continually increasing debt and simultaneous falling savings, the high ratio of Debt/CF suggests Japan is a disaster in the making. Rapidly shifting demographic trends and huge entitlement programs threaten to undermine savings, and consequently support for the massive debt load.

We continue to have a high degree of skepticism that the eurozone can remain intact. The most likely outcome is a two euro solution (see our report, "A Two Euro Solution to a Terminal Illness," July 13, 2012). However, the Debt/CF perspective shows a broad range of countries and sectors that are heading for trouble. As Buffet said, "It's only when the tide goes out that you learn who's been swimming naked." Well, the tide is heading out: global growth is slowing, and the debt load of many countries and sectors is clearly unsustainable.

Date: October 23, 2012

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About Bruce Ramsay

Bruce A. Ramsay is a Wharton School alumnus and was founder and Chairman of Acumen Capital until 2003. In his research piece available at EndingOverLending.com, Bruce introduced the concept of applying the Debt/CF ratios to nations. In continuing his efforts in tl area of financial instability, Bruce is currently living in Europe, presenting his research at a series of academic and institutional conferences.