Global Debt: Challenges and Opportunities

The world is deep in a flood tide of debt. Do we care, and what can we do about it?

Debt is inextricably linked to economic growth. Whether in the form of government, business or household credit, debt can fuel economic growth, and economic growth can increase the propensity to borrow. And when growth is too weak, credit can be used to stimulate it. The cumulative effect of credit use by the various sectors of an economy is a rise in its overall debt. While economic prosperity is often credit-financed, higher levels of debt appear connected to lower future economic growth. Almost all debt accumulations have been hard to reverse, most have involved tough policy choices, and some notable ones have ended badly.

In this whitepaper, we discuss the state of global debt, how it came to be, where it may lead, and what we believe portfolio implications to be.

The state of global debt

More than eight years since the 2008 global financial crisis started, the world seems to be drowning in debt. Global economic growth, meanwhile, remains anemic, after years of sluggishness. Some economists attribute it to high levels of debt\(^1\), reasoning that they have been preventing economies from realizing their full potential because governments, businesses and households have been devoting significant resources to debt servicing—resources that otherwise would have been available for productive activities.

Global debt was on a steep rise before the crisis, and continued growing after it. The McKinsey Global Institute estimates that, by mid-2015, the world’s debt stood at $204 trillion—$68 trillion (or 50%) higher than it had been in 2007, immediately before the crisis, and $121 trillion (or 145%) higher than in 2000. Governments, businesses and households all contributed to the increase. (See Exhibit 1.)

What is more, global debt has been growing faster than the world’s economy. As of mid-2015, it stood at 294% of global gross domestic product (GDP), up 25 percentage points (pp) since the end of 2007 and 48 pp since the end of 2000\(^2\). In many countries, debt has increased to levels not normally seen during peacetime\(^3\). In advanced economies, government debt has had several spikes associated with wartime borrowing or economic crises over more than two centuries, and is now at its highest levels since World War II\(^4\) (see Exhibit 2). Businesses and households have never been as indebted before\(^5\).

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Emerging economies alone contributed 47% to the growth in global debt since 2007. China, whose government launched an ambitious stimulus program in late 2008, in response to the global financial crisis, played a leading role, with its debt more than quadrupling since 2007 (see Exhibit 3). China’s debt is mostly domestic, held by banks, and has been used primarily to finance real estate and other investments.

Debt levels can increase in both good economic times and bad. When growth is too weak, governments may attempt to stimulate economic growth by investing or spending borrowed funds, as well as adopt policies that encourage businesses and households to invest or spend using credit. Several prior periods of debt accumulation were followed by severe economic contractions, and what we are experiencing now may have similarities to past cycles. The current secular debt cycle is now more than five decades long, with deleveraging pauses in the 1980s and 1990s. It intensified in the last few years, raising some critical questions:

- Should we be concerned?
- Does this pose any risks? If it does, is there a way out?
• Do we need to deleverage at any cost, or should we rather focus on learning to manage the debt and its growth trends?
• Could it be that it does not matter as much as we fear? What if debt has become a structural element of the modern global economy, with its deep financial markets, sophisticated risk management tools, and steadily declining interest rates to historically low levels that make debt servicing as easy as it has ever been?
• Finally, how should investor portfolios be positioned in this environment?

Debt accumulations are historically associated with slower future GDP growth, systemic instability, and economic and financial-system vulnerability. The faster the debt build-up, the worse the ensuing contraction has tended to be. In the years leading up to the global financial crisis, major advanced economies saw household debt spiral upward to unsustainable levels along with housing prices, until real estate collapsed and domestic spending slowed, with more-leveraged households experiencing larger spending slowdowns. Faster private-sector deleveraging and quicker balance-sheet recognition of losses have resulted in more robust recoveries.

The economic slowdown following debt accumulation is well understood by those familiar with the aftermath of the lending booms in the U.S. in the 2000s and Japan in the 1980s, and research findings corroborate it. Exhibit 4 outlines an illustrative example. When domestic demand is fueled entirely by credit, $1 of borrowing generates $1 of spending, and the stock of debt increases by $1, all else being equal. To keep demand at the same level through credit, debt needs to keep increasing. When the flow of credit stops, demand goes back to what it was before borrowing, and the stock of debt remains at a high plateau. To decrease debt, we need to reverse the credit flow, which causes a contraction in demand. What is more, weak demand leads to disinflation or even deflation, which, in turn, triggers easier monetary policy, currency depreciation, and increased vulnerability of the banking system to crises.

Since debt overhangs have often happened during or after deep recessions, wars, or other crises, it is not clear whether anemic or negative growth can all be blamed on high debt. Also, the impact on growth depends on each economy. Emerging economies, as well as countries that lack inclusive political and economic institutions, are considered to be more adversely affected.

Some deleveraging has been taking place since the crisis, but it has been uneven across economies.

**Exhibit 4:** Debt would rise perpetually in an economy relying solely on credit to sustain demand (depicted by dotted lines). If credit stopped flowing, demand would stagnate while the stock of debt stabilized, and it would contract if the credit flow reversed in order to deleverage.

**Business debt**
A study by the McKinsey Global Institute found that business deleveraging has been taking place in the developed world, with debt-to-GDP ratios falling in the U.S. and a few other countries and stabilizing elsewhere. The financial sector deleveraged significantly in the years since the financial crisis, mainly as a result of new regulations and stricter capital standards. While this has made the sector more stable, it has also restricted availability of credit to households and businesses. The decline in corporate bank lending has been somewhat offset by an increase in non-bank credit. A significant part of the latter includes the issuance of corporate bonds by larger companies, while share buybacks have been increasing at a pace similar to that of bond issuance in the U.S., according to Strategas Research Partners (see Exhibit 5), as well as in Japan and, to a lesser degree, Europe.
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Exhibit 5: Corporate bond issuance and S&P 500 buybacks have been increasing at similar paces

Source: Strategas Research Partners and Merrill Lynch Chief Investment Office.
Past performance is no guarantee of future results.
Please see Appendix for index definition.

This trend may be indicative of a shift in the capital structure of firms toward less equity and more debt. The rebalancing to a lower cost-of-capital equilibrium in the current environment of low or negative interest rates could be reflective of capital market efficiency and deepening. Share buybacks have proven rewarding to investors for several years, as Exhibit 6 shows.

Exhibit 6: Share buybacks have proven rewarding to investors for several years

Source: Bloomberg and Merrill Lynch Chief Investment Office.
*Bloomberg index tickers: SPBUYUT, SPXEWTR. Please see Appendix for index definitions.
Past performance is no guarantee of future results.

Other forms of non-bank credit include transparent forms of securitization, as well as lending by hedge funds, pension funds, insurers, leasing and government programs, and the still small but rapidly growing peer-to-peer lending platforms. All of these can be vital sources of funding to smaller entities. Non-bank lending can serve an important role in promoting economic growth by providing needed credit to the private sector.

Among proposals to better manage the growth in corporate debt is reducing or phasing out the deductibility of interest, coupled with reductions in marginal rates and other potential adjustments.

Household debt

Household spending and residential investment were credit-financed to a large degree before the global financial crisis. Since it broke out, households in the U.S. and several other advanced economies, such as Ireland, the U.K. and Spain, have been deleveraging. This is being done mainly through a rise in precautionary savings and paying down debt to weather the economic uncertainty. Delinquency write-offs and reduced credit availability for new mortgage, auto and credit card loans also played a significant role. In the emerging world, household debt has been rising at different rates across countries, with China leading the trend, and is still at modest levels relative to income.

Real estate prices and household debt are highly correlated in several economies because the larger the mortgages for which home buyers are approved, the more they bid up house prices. The link between mortgage debt and real estate prices makes household debt hard to reduce.

Central banks can be effective in managing mortgage credit trends and house prices through the appropriate mix of interest rate and macro-prudential policies. These have been found to meaningfully reduce real household credit growth and house price growth.

Among proposals to improve the stability of the home mortgage market is requiring or encouraging homeowners to purchase insurance that makes mortgage payments after a job loss or other adverse event. Tax incentives, such as deductibility of mortgage interest, could be reconsidered, since they lead households to take larger mortgages to maximize tax benefits. They mainly benefit high-income households, and contributed to the unsustainable home price increases that caused the systemic instability during the 2008 global financial crisis.

Innovative proposals, mainly by think tanks and academics, include flexible mortgage contracts. By automatically adjusting payments, a “continuous workout mortgage” would protect homeowners during recessions, unemployment, or other triggers impairing their ability to pay. A “shared responsibility mortgage” has payments linked to the local house price index, and can adjust downward if house prices fall, while the amortization schedule remains the same, resulting in a principal reduction to the homeowner. In turn, the lender would receive a portion of the capital gains upon sale of the house, if it appreciates.
Bankruptcy and foreclosure can be lengthy and costly. In their place, several economists have advocated debt reduction through renegotiation, mortgage principal reduction, refinancing and, for certain types of household loans, such as unsecured credit card debt, even forgiveness. Some point to historical evidence of voluntary debt forgiveness in ancient Mesopotamia, and the United States in the early 19th century and during the Great Depression\textsuperscript{23}, and during biblical Jubilee years (Leviticus 25). Broader adoption of non-recourse loans outside the United States, combined with sound macro-prudential policies to prevent lending excesses, could speed up bad-debt resolution, with lesser adverse impact to the economy\textsuperscript{24}.

**Sovereign debt**

Countries have typically borrowed to finance several endeavors, including wars, investments in productivity-enhancing projects (e.g., infrastructure), and fiscal policies that stimulate economic growth through increased consumer spending. The level of public debt a country can sustain is determined by its ability to continue servicing it through organic economic growth or access to more borrowing. When the stock of debt rises above a “tipping point” that impairs either or both of these sources, it ought to be reduced\textsuperscript{25}. In the absence of default or restructuring, debt build-ups can take a long time, or be impossible, to eliminate. Deleveraging after major financial crises typically takes longer and is more painful than after wars and, in some cases, debt remains high or gets even higher. In the current cycle, deleveraging started slowly in the world’s major economies.

Debt-reduction episodes have involved “belt-tightening,” elevated inflation, financial repression, stronger economic growth, and default or restructuring\textsuperscript{26}. Fiscal consolidation at the right pace and speed\textsuperscript{27} has played a key role in reversing public debt build-ups, as Sweden and Finland demonstrated in the 1990s. After World War II, the U.S. and other countries reduced their public debt through higher inflation and financial repression\textsuperscript{28}. France restructured hers after the Revolution and Napoleonic Wars, and so did several European countries after World War II. A number of emerging countries restructured theirs under the Brady Plan in the 1980-90s\textsuperscript{29}. Post-Brady Plan, large restructurings include those in Argentina (2005), Greece (2012), and Russia (1998)\textsuperscript{30}. Britain, which twice in the last three centuries ran enormous public debts, associated mostly with wartime spending, deleveraged through primary budget surpluses and robust economic growth (see Exhibit 7)\textsuperscript{31}.

Central banks around the world recognize the state of global debt as the new normal and have been broadening their mandates, using new tools or resurrecting old ones to manage it effectively. Financial repression, which helps governments ease the burden of debt service through artificially low or even negative interest rates, borrowing from captive domestic sources (e.g., pension funds), cross-border capital controls, and tighter connection with banks, is making a comeback. When certain issuers’ heavy leverage is perceived as a systemic risk, central banks bail them out, as the Federal Reserve did with several financial firms in 2007–09. The European Central Bank and other institutions did the same with the eurozone’s periphery earlier in this decade, but the required austerity exceeded the natural speed limit of fiscal consolidation and caused a severe economic contraction in certain countries.

Some have proposed that central banks engage in fiscal expansion by “printing money”—i.e., growing the monetary base or the total bank reserves and currency in circulation, and investing it in infrastructure and other projects, or even dropping it to the population from “helicopters.” This approach would allow governments to continue spending without the need to accumulate more debt or raise new taxes. These practices, termed “monetary finance,” are being discussed more and more. We feel that they need to be researched more and understood better, especially with regard to their potential for giving rise to moral hazard issues and risk of loss of central bank independence\textsuperscript{32}.

In the conventional sense, deleveraging without default, with as fast a return to robust economic growth as possible, is considered a successful outcome after a debt build-up. But, can economic growth be achieved during deleveraging?
Economic Growth During Deleveraging

Achieving economic growth while deleveraging is hard but possible, as Sweden and Finland demonstrated during the 1990s\(^33\). The two Nordic countries quickly recapitalized or nationalized banks and set up institutions to dispose of bad loans, thus ensuring stability in the banking system. They cut government spending at a pace that put debt under control without threatening long-term fiscal sustainability. They adopted meaningful structural reforms, including joining the European Union, which attracted foreign investment and helped exports, and enacted measures to boost productivity and growth in sectors such as retail and banking. Their exports rose by almost 10% annually in mid-decade, through a focus on a few export-oriented sectors and companies, and currency depreciations. Private investment revived and helped growth during the late stages of deleveraging. Finally, a stabilized housing market and a rebound in construction helped the economy return to normal conditions. Ireland’s recent success could be even more remarkable: The country grew while deleveraging in the arguably more challenging, post-2008, economic environment and within the confines of the European common currency.

The Conference Board proposed two policy levers as key to a successful sovereign debt resolution without the need for harsh austerity measures or stimulus programs that could add to debt accumulation: productivity-driven GDP growth, and constant per-capita government spending over medium-term planning horizons. The fiscal surplus that would emerge could eventually reduce debt-to-GDP ratios\(^34\).

Economies can grow while deleveraging even with weak or no credit growth, especially after banking crises and credit booms\(^35\). Examples include the U.S. and Japan after the Great Depression and the U.K. in the 25 years following World War II. The U.S. experienced real GDP growth even though debt-to-income ratios were declining since the trough of the 2008 global financial crisis. In these and similar cases, the flow of credit remained positive, even though the stock of debt was shrinking\(^36\).

The role of default or restructuring in achieving successful outcomes

Sometimes, defaults and/or restructurings are inevitable, and decisive action is generally the fastest way to deleverage and return to growth\(^37\). Such episodes can be painful in the short run, forcing investors to take significant losses\(^38\). However, if executed in a careful and orderly manner, a restructuring can lead to sustainable long-term economic growth and a rise in asset prices, as historical evidence shows (see Exhibit 8).

Liquidity crunch versus solvency crisis

A country can get heavily in debt for various reasons, and may not have cause for concern. If it temporarily lacks, but expects to soon have, the funds it needs for debt service, interim financing or at most an extension of bond maturities can relieve the liquidity crunch. But if it both lacks liquidity and, given meager economic growth prospects, is not expected to be able to generate the income and fiscal surpluses needed to service its debt in the future, more decisive actions may be in order. Such actions include debt rescheduling (i.e., lengthening of maturities, possibly involving lower interest rates), debt reduction (i.e., a “haircut” in the nominal value of debt) or, in the most undesirable case, a disorderly default, whereby the country fails to make principal or interest payments on schedule.

A liquidity crunch should not be mistaken for a solvency crisis, or vice versa, and the key to resolution is an accurate case-by-case diagnosis\(^39\).

It is hard to diagnose certain cases ex ante. What initially may seem just a liquidity crunch could be more serious and deteriorate into a solvency crisis, and may require that it be treated as such. In early 2010, few had foreseen the severe downward spiral that the Greek economy would enter as austerity measures were implemented. These measures significantly impaired the country’s ability to service its debt, and will continue doing so in the absence of an effective resolution\(^40\). In a similar manner, as the 2008 global financial crisis was unfolding, the U.S. financial institutions that failed, or nearly did so and had to be rescued, were those that had not been aggressive enough in raising adequate capital to remain solvent through the worst-case scenario that materialized. Even if a solvency crisis is diagnosed, a variety of factors involving multiple stakeholders and political constituents may impede administration of the necessary remedies.

Defaults, restructurings and market access

Potential investors duly avoid the country’s public and private assets for as long as any uncertainty remains that its troubles are over and there is almost no chance that a relapse will force them to assume any future losses. The caution is not limited to the public sector; it also encompasses the private sector. In fact, businesses in a defaulted, or otherwise financially troubled, domicile are hurt more than the sovereign borrower, as their access to capital markets is severely restricted for as long as their home country’s financial situation remains unresolved\(^41\).

Investors will eagerly come only after all past losses have been assigned. The safest way to achieve this is to take decisive
**Exhibit 8:** After sovereign debt restructurings, equity markets in seven of ten countries strongly outperformed global equities, and three underperformed them.

We identified ten sovereign debt restructuring cases over the last three decades and examined the performance of a hypothetical investment in each country’s equity market made at the end of the month during which the restructuring was completed and held for two years². By the end of the two-year period, on the basis of price returns, seven of the ten investments would have outperformed the MSCI All Country World Index (ACWI) by an average of 92.0%, and three would have underperformed it by an average of 37.8%. Eight of the ten would also have had positive absolute price returns.

### Sovereign Debt Restructuring Case

<table>
<thead>
<tr>
<th>Country</th>
<th>Completion Date</th>
<th>Performance Period</th>
<th>AbsoluteΔ</th>
<th>Relative to MSCI ACWIΔ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico</td>
<td>March 1990</td>
<td>03/31/1990 – 03/31/1992</td>
<td>295.4%</td>
<td>292.6%</td>
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<tr>
<td>Argentina</td>
<td>January 2005</td>
<td>01/31/2005 – 01/31/2007</td>
<td>161.5%</td>
<td>128.1%</td>
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<tr>
<td>Philippines</td>
<td>April 1992</td>
<td>04/30/1992 – 04/30/1994</td>
<td>134.5%</td>
<td>109.3%</td>
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<tr>
<td>Russia</td>
<td>November 1998</td>
<td>11/30/1998 – 11/30/2000</td>
<td>83.4%</td>
<td>74.1%</td>
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<tr>
<td>Greece</td>
<td>March 2012</td>
<td>03/31/2012 – 03/31/2014</td>
<td>50.6%</td>
<td>27.3%</td>
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<tr>
<td>Poland</td>
<td>October 1994</td>
<td>10/31/1994 – 10/31/1996</td>
<td>28.3%</td>
<td>8.5%</td>
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<tr>
<td>Brazil</td>
<td>April 1994</td>
<td>04/30/1994 – 04/30/1996</td>
<td>28.4%</td>
<td>3.8%</td>
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<tr>
<td>Argentina</td>
<td>April 1993</td>
<td>04/30/1993 – 04/30/1995</td>
<td>8.9%</td>
<td>-9.9%</td>
</tr>
<tr>
<td>Jordan</td>
<td>December 1993</td>
<td>12/31/1993 – 12/31/1995</td>
<td>-3.9%</td>
<td>-24.2%</td>
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<tr>
<td>Peru</td>
<td>March 1997</td>
<td>03/31/1997 – 03/31/1999</td>
<td>-39.8%</td>
<td>-79.3%</td>
</tr>
</tbody>
</table>

Source: Bloomberg and Merrill Lynch Chief Investment Office. The graph shows average daily price returns of the MSCI equity market index over the seven countries that outperformed and over the three that underperformed the MSCI ACWI during the two-year performance period after a restructuring. Past performance is no guarantee of future results. Please see Appendix for index definitions.

- **a.** Each country’s MSCI equity market index was used to represent its equity market. As a requirement for inclusion in our sample, MSCI must have been offering a continuous daily series of the country’s equity market index at the time of, and for the two years following, the end of the month during which each restructuring was reportedly completed. We chose a single index provider—rather than a mix of index providers—for the benefit of a uniform equity market index calculation methodology. As a result, several restructuring cases for which MSCI country equity market index data were not available for the aforementioned time period were excluded from the sample.
- **b.** All cases except Argentina 2005, Greece 2012, and Russia 1998 were Brady Plan restructurings of distressed sovereign debt.
- **c.** Based on the MSCI equity market index for each country during the two-year performance period after a restructuring, as shown.
- **d.** Calculated as the difference between absolute price returns of each MSCI equity market index and the price return of the MSCI ACWI during the same performance period.
action to make public debt sustainable in the present. For example, after the Brady Plan restructurings finally eliminated debt overhang in countries that had defaulted on commercial bank loans in the 1980s, investors responded with a wave of capital inflows to the relieved sovereigns, whose stock markets rallied, economies benefitted from new investment and grew, and capital market access was restored42.

There is no sovereign bankruptcy court, and “gunboat diplomacy” seems to be a relic of history. In their absence, what motivates countries to pay their debts? The common assumption that they try to preserve their reputation as responsible borrowers is not supported by recent evidence43. In reality, governments typically tend to avoid default to contain political costs to incumbent governments44. A timely and orderly default and restructuring allows a country to receive rating upgrades and borrow again soon45. This is because global interest rates and liquidity conditions, decreased investor risk aversion during lending booms, yield-seeking attitudes, and portfolio manager strategies and incentives are stronger determinants of sovereign capital flows and market access46.

Yet, while default frequency does not seem to affect future market access, it appears that the magnitude of the most recent default likely plays a role: Restructurings involving deeper “haircuts” are associated with significantly higher subsequent bond yield spreads and longer periods of capital market exclusion47. As a special case, Argentina, whose long absence from global markets was caused by holdout creditor litigation, is again reissuing external sovereign debt. In line with research evidence, it is being well received by global investors, and it will be interesting to analyze its performance in the medium to long term48.

The outlook for debt and growth

Government debt crises might not have happened, or their effects might have been significantly attenuated, had better risk sharing been practiced. Today’s sovereign lenders and borrowers may draw some lessons from the Spanish Empire of the 16th century (see feature box).

Today, sovereign borrowers could make their debt service contingent on their GDP growth rates. After World War II, John Maynard Keynes negotiated such a clause in a U.S. loan

The King of Sovereign Default

King Philip II (1527-1598) of Spain ruled for most of the second half of the 16th century over an empire spread across three continents, one of the largest and richest in history. His wealth and power did not prevent him from defaulting four times. Yet, his serial defaults on sovereign debt comparable to today’s levels relative to the size of his empire’s economy did not cause systemic problems or severe economic downturns.

King Philip’s bankers pooled risk through loan syndication, whereby many investors of small and medium-sized wealth participated in the lending. They also shared risk and reward with him by agreeing to debt service contingent on the evolving financial conditions of the crown. King Philip issued mostly short-term debt under flexible clauses—for example, making debt service contingent on the size and arrival date of the annual silver deliveries from the Americas. Lending to him was profitable, with average annual returns of 15% or more, even after factoring in his insolvencies49.
Countries could issue securities with equity-like features—e.g., bonds with coupons linked to the country’s economic growth and, hence, the country’s ability to service its debt. Government debt crises could be avoided through use of such securities. During an expansion, higher coupons would allow investors to share in the country’s prosperity. Conversely, a contraction would not necessarily cause a debt crisis, since lower coupons could protect the country’s ability to service its debt without raising tax rates or cutting spending, both of which could deepen the contraction. Lower coupons could also prevent a default or restructuring.

Securities with such characteristics have started to be used by governments, or have been envisioned and recommended as viable means of public funding. They present new opportunities to attenuate or prevent insolvencies:

- GDP-linked warrants, whose payments are triggered when a country’s economy meets pre-established growth targets, have been offered as part of bond exchange packages in sovereign debt restructurings, most notably by Argentina in 2005 and Greece in 2012. Economic statistics as reported by the issuing country will have to be used for valuing these securities, and hence their reliability must be a factor in investment decisions.

- Equity-like shares representing claims on a country’s GDP have been proposed or already issued. Such securities have even been envisioned for the United States.

- Commodity-linked bonds can sidestep GDP-related issues because they derive their value from the price of a commodity that a country produces and sells. In certain countries, a single commodity accounts for a major share of GDP, such as copper in Chile, crude oil in Russia, Nigeria, Saudi Arabia and Venezuela, and potentially natural gas in Cyprus in the future.

Proposed automatic restructuring mechanisms would trigger lower coupons, longer maturities, and conversion to equity-like instruments upon a pre-defined triggering event—for example, when the debt-to-GDP ratio reaches a certain threshold.

We ought to point out a critical difference between securities that investors will want to buy based on their superior risk-return characteristics, and securities that investors are forced to receive as part of a sovereign debt restructuring. When designing, structuring and offering such securities, political, social, economic, moral hazard, financial engineering, and a multitude of other public funding issues ought to be better understood and addressed, and incentives for all stakeholders must be aligned as best as possible.

**Portfolio implications**

While credit fuels economic growth, there comes a point where rising global debt leads to muted future economic growth. This implies low expected returns and higher volatility for assets. Investors would be well advised to practice sound risk management and take the long-term view with portfolio positioning, since research evidence and experience indicate these trends play out over very long horizons. That said, there can be cyclical moves within the secular trends of debt and growth that may present tactical positioning opportunities—for example, in response to central bank actions or sovereign debt resolutions.

Equities or traded debt of entities with low leverage or in the process of deleveraging are attractive. This holds true for all types of debt—government, business and household. For governments, a lighter debt load to service means more financial resources available to productively deploy elsewhere. Less indebted businesses have more funds available to invest for growth—through capital expenditures, acquisitions, or research and development—or return money to shareholders through higher dividends or share buybacks. Finally, households with stronger balance sheets can fuel economic growth and corporate profits through more robust consumption, and fewer delinquencies and foreclosures if and when the economic cycle turns.

The benefits of deleveraging are most directly observable in cases where there has been quick and decisive resolution. Equity markets of countries that have just restructured their debt are very likely to rally in the short to medium term (see Exhibit 8 again). There are multiple reasons for this. Countries whose economies were stifled under heavy debt service are all of a sudden relieved from the burden and have at their disposal resources to pursue pro-growth activities. A portion of their resources comes from renewed access to debt markets, and this is also true for their corporations. The credit cycle affects equity returns, and attempts to time it may be informed by historical experience and other factors. Equity market underperformance has followed periods of rapid credit build-ups, especially in emerging economies, so this is a valuable metric to track and use as a guide for asset allocations in portfolios.
For fixed income investors, sovereign spreads of countries and corporate spreads of firms that have low leverage are viewed as relatively safer and therefore enjoy tight spreads. Spreads of countries that recently deleveraged are narrowing, those of countries still deleveraging are likely to narrow, and so are those of corporates. This points to strong balance sheets and high quality in both sectors.

Debt accumulation, deleveraging and credit flow trends impact demand for commodities as a function of economic growth, and by commodity type depending on each economy’s specific characteristics.

Real estate is driven to a large extent by the credit cycle, interest rates, and macro-prudential policies. Prices are positively correlated with credit flows and inversely correlated with interest rates and tightening lending standards. Investors with a long-term horizon could take advantage of opportunities presenting themselves as the credit cycle unfolds, together with asset values and prices in each geography.

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Endnotes

1 See, for example, Lo and Rogoff, 2015. The authors include debt overhang among the possible explanations for sluggish growth. Others they include are a secular deficiency in aggregate demand, slowing innovation, adverse demographics, lingering policy uncertainty, post-crisis political fractionalization, insufficient fiscal stimulus, and excessive financial regulation. We argue that it is too soon to tell, and add underinvestment in productive resources, lower labor productivity, and (in the case of the U.S.) weak demand from abroad as potential contributing factors to the slower growth.


3 The term “peacetime” is used loosely, since several countries have been involved in conflicts during the global debt build-up. For example, the wars in Afghanistan and Iraq may have contributed significantly to the U.S. stock of debt.

4 See Reinhart et al., 2012.

5 See Reinhart and Rogoff, 2011.


7 See Buter and Rahbani, 2012.

8 See Reinhart and Rogoff, 2009.

9 Results are based on analyzing extensive datasets assembled by researchers (e.g., Barro and Ursua, 2008, Devereux et al., 2011, Reinhart et al., 2012, Jorda et al., 2013, 2015, McKinsey Global Institute, 2012, Medas et al., 2013, and Schularick and Taylor, 2012).

10 Mian and Sufi, 2014, present compelling evidence of a link between rising household debt levels and a subsequent spending slowdown affecting all households, and not only the most leveraged ones, even though the latter experienced larger cuts in spending. See also Dynan et al., 2012. Interestingly, balance-sheet adjustments were limited even for households most affected by the crisis, as reported by Cooper, 2013.

11 See Chen et al., 2015.

12 Reinhart and Rogoff, 2010, found that after government debt has exceeded 90% of GDP, median growth rates have been one pp lower, and mean rates even lower. Kumar and Woo, 2010, found that, for every 10 pp that the starting-debt-to-GDP ratio is higher, the subsequent real per-capita GDP growth can be 0.2 pp lower, with emerging economies more severely impacted than advanced economies.


15 The riskiest forms of shadow banking, including repos, CDOs, CDIs, and off-balance-sheet securitization vehicles, have been in a material decline since 2007. The unwinding of a global financial system that had become excessively complex, opaque and ultimately unstable and vulnerable to shocks is a welcome development (see McKinsey Global Institute, 2015).

16 The growth of non-bank lending ought to be carefully managed, as hidden risks and leverage may be building and could cause systemic instability until detected. A sound regulatory framework, with appropriate reporting requirements and monitoring mechanisms, can reduce its role as a source of systemic risk.

17 Tax code changes are always challenging, and this could prove a thorny policy matter, but would have the additional benefit of better capital structure and allocation decisions in firms, by increasing the relative attractiveness of equity versus debt, and labor versus capital goods investments.

18 Notable exceptions include the Netherlands, Denmark and Norway, where household debt as a percentage of household income has been rapidly increasing.

19 House prices are also driven by factors such as land scarcity, regulatory rules and urbanization. Monitoring mortgage debt trends, especially in major urban centers with high real estate prices, is therefore one of the most important policy matters (McKinsey Global Institute, 2015).

20 Macro-prudential policies could help control total leverage in an economy by limiting credit growth. They may include limitations on loan-to-value (LTV) and debt-service-to-income (DSTI) ratios, restrictions on interest-only loans and other types of mortgages, bank capital requirements, and other underwriting rules and banking regulations (see Kuttner and Shim, 2013).

21 See, for example, Jarocinski and Smets, 2008, and Iacoviello and Neri, 2010.

22 Shiller et al., 2011, discuss continuous workout mortgages, and Mian and Sufi, 2014, shared responsibility mortgages. Any misalignment of interests between homeowners and lenders in contract design, and the fact that their risk-sharing features may disqualify them as debt instruments, making their mortgage interest ineligible for tax deduction, could prevent widespread adoption of shared responsibility mortgages.


24 Non-recourse loans, broadly used in the United States, give creditors rights only to a defaulted loan’s collateral and do not allow claims on the borrower’s future income or other assets. This helps write off debts quickly and prevents severe disruptions to households’ economic life. On the other hand, recourse loans, common in many parts of the world, allow creditors to seize assets other than a defaulted loan’s collateral, or lay claim on the borrower’s future income. As borrowers slash spending to commit more funds to debt service in their efforts to avoid default at all costs, recessions can deepen and lengthen (see, for example, McKinsey Global Institute, 2015).

25 See, for example, Ostry et al., 2015.

26 For a detailed discussion, see McKinsey Global Institute, 2012.


28 A good analysis can be found in Reinhart and Sbrancia, 2011.

29 Most Brady Plan deals took place in Latin American countries—i.e., Argentina, Bolivia, Brazil, Costa Rica, Dominican Republic, Ecuador, Mexico, Panama, Peru, Uruguay and Venezuela. Others took place in Bulgaria, Ivory Coast, Jordan, Nigeria, the Philippines, Poland and Vietnam. Morocco was going to, but eventually did not, participate (see Das et al. 2012).

30 For a complete list of sovereign debt restructurings from 1950 to 2010, see Das et al., 2012.

31 For a discussion on France’s restructuring of Revolutionary and Napoleonic debts, and Britain’s debt reduction through fiscal prudence and economic growth, see Piketty, 2014.

32 For details, see Turner, 2015. Bernanke, 2016, emphasizes implementation issues. A related discussion can be found in Montier, 2016.


35 Resources on creditless recoveries include Abiad et al., 2011, Bijsterbosch and Dahlhaus, 2011, Takats and Upper, 2013, and Constancio 2014. Some researchers call recoveries without a rebound in credit “Phoenix Miracles” see, for example, Calvo et al., 2006, and Biggs et al., 2010.

36 See Dalio, 2015.

37 Levy-Yeyati and Panizza, 2011, have demonstrated that the costs of delaying a needed default, in terms of output losses, are more significant than the default itself, which often marks the end of economic malaise and the beginning of strong economic recovery for the defaulting sovereign. The timing of default or significant debt restructuring hence is a crucial policy matter, and policymakers’ efforts to postpone a default that has been widely anticipated and priced in by the market may be misguided (see Zettelmeyer et al., 2013). This is demonstrated by the cases of Greece and Puerto Rico, both of which are constrained by their inability to print money, and by the political complexities within the union that each is part of.

38 The “haircuts” in some recent restructurings ranged from 13% (Uruguay in 2003) to 73% (Argentina in 2005). See Sturzenegger and Zettelmeyer, 2008.

39 See, for example, International Monetary Fund, 2013-2015, and Das et al., 2012. Voth, 2014, defines sovereign debt sustainability as a country’s expected value of future primary fiscal surpluses. Net debt, which excludes borrowing by central banks and other government agencies, enables a better assessment of sustainability. A common error when treating a solvency crisis as a liquidity problem is trying to make an entity’s debt sustainable at a future date. The assumption is that the entity’s economy will have recovered enough over some period to make its debt sustainable and serviceable then, because it will be a certain lower percentage of GDP than it is at present. This assumption is
particularly misguided in that it supposes that we know exactly what will happen on the path to debt sustainability five to ten years from the present.

In three articles published after the Greek sovereign debt restructuring in 2012, Barronovo et al. argue that Greece’s solvency crisis was initially misdiagnosed as a liquidity crisis, and treated through temporary financing that proved ineffective and became a permanent burden to the country and a potential future write-off to its rescuers.

See Arzeta and Hale, 2008, and Das et al., 2010.

See Arslanalp and Henry, 2005. Success proved unsustainable for some Brady Plan countries (see Chuhun and Sturzenegger, 2005). Arslanalp and Henry 2006 contend that for poorer sovereigns, debt forgiveness entails a superficial boost if unaccompanied by policies that promote significant reforms to weak local economic institutions partially responsible for these countries’ malaise.

Eaton and Gersovitz, 1981 present analysis on countries’ credit access that supports the common assumption that countries avoid default to steer clear from reputational damage that could severely restrict new credit or make it more costly. Yet, beyond disputable centuries-old experience (see Tomz, 2007), contemporary evidence for this assumption is weak (see Panizza, 2009, and Datz, 2014).

Sovereign debtors’ market access was not determined by their default records during the debt crises of the 1930s and the 1950s credit boom (see Lindert and Morton, 1989).

Borensztein and Panizza, 2009 contend that the main motivation to avoid default is limiting political costs rather than preserving reputation, preventing international trade exclusion, or limiting costs to the domestic economy through the financial system.

Time horizons tend to be longer-term for investors and shorter-term for managers, since performance must be reported monthly, quarterly and annually. Compensation through performance fees also shortens the investment time horizons of these managers. Therefore, when liquidity is plentiful, industry incentives point toward assets and economies that provide relatively higher yields and growth prospects, regardless of (a recent) history of default (see Datz, 2009).

Cutales and Trebesch, 2011. Results perhaps reflect market caution toward a sovereign based on the degree to which it got itself in trouble in the past.

Despite its debt restructurings of 2005 and 2010, after its 2001 default, Argentina has not issued debt internationally given pending litigation with holdout creditors in U.S. courts. Not issuing bonds abroad is a high cost to pay for default, but not always one imposed by unwilling foreign creditors, in Argentina’s case, it is being forced by a minority of holdout bondholders. The distinction may seem subtle but, given increased concern now with the serious threat holdouts pose to sovereign debt restructuring deals, it is warranted, and significant effort is being undertaken on appropriate Collective Action Clauses (CAC) to include in future debt offerings to mitigate this threat and facilitate a needed restructuring (see Gulati and Buchheit, 2011).

See Drelichman and Voth, 2014.

See Griffith-Jones et al., 2011.


See Shiller, 2004, Griffith-Jones and Sharma, 2006, and Griffith-Jones and Hertova, 2012. Although attempts have been made to rigorously value these instruments such as (e.g., Miyajima, 2006, Ruban et al., 2008) and market experience with the Argentine warrants has been quite rewarding for investors, a number of issues ought to be better understood before GDP-linked warrants become widely accepted. An entity issuing GDP-linked securities signals its willingness to share its future expected economic prosperity with investors, to a certain degree, even if the securities have embedded redemption features or are somehow callable. Moral hazard around an entity’s GDP and inflation figures must be accounted for. These may be reported in a manner that lowers warrant payments resulting in losses to investors; or they could be manipulated to increase payments in certain years to create, or revive, interest in the securities, to the detriment of the entity’s taxpayers. In each case, economic statistics can be revised to their true values at a later time. Therefore, issuing GDP-linked warrants must be accompanied by robust procedures, controls and audits around the preparation and reporting of economic statistics, and their structure should allow coupon payment adjustments upon revisions in the figures used to calculate them. Adverse selection could also play a role. Entities that believe or know themselves to have weak economic prospects may prefer to issue GDP-linked warrants structured in a manner that makes them look attractive but secures a future stream of low coupon payments; conversely, those with strong confidence in their prospects would choose to structure GDP-linked securities so their future payment stream resembles that of fixed-coupon debt. Hence, moral hazard around an entity’s GDP and a few other issues, ought to be better understood and accounted for before GDP-linked warrants become more broadly accepted.

Griffith-Jones and Shiller, 2006, contend that “GDP-linked bonds” would create markets for countries’ economies. In contrast, they contend, stocks are claims on net corporate profits that can constitute as little as 10% of GDP. Similar market signaling and information issues (moral hazard and adverse selection) could exist for these securities as with GDP-linked warrants. If properly constructed, portfolios of such securities from several countries could offer investors true global diversification.

The “New Singapore Shares,” issued in 2001, paid a minimum dividend of 3%, plus the country’s real annual GDP growth rate, with no claw-back in years when it would be negative.

Kamstra and Shiller, 2009, proposed that the U.S. Treasury issue a new security with a coupon tied to the current GDP of the U.S. Because the coupon of this security might, per their proposal, equal one-trillionth of the country’s GDP they suggest the security be called a “trill.” Shiller, 2013, demonstrates through examples how this might work. A U.S. trill held by an investor during 2011 would have paid the holder a coupon of USD 14.50, since the U.S. GDP was about USD 14.5 trillion in 2011. A Canadian trill would have paid CAD 1.81, with the country’s GDP at CAD 1.81 trillion. The security’s coupon would be determined in a similar manner for each trill-issuing country. And it could effectively protect its debt servicing ability: A Greek trill would have paid a 2008 coupon of EUR 0.23; the same trill’s coupon for 2013 would be estimated at EUR 0.18, about 21% lower, consistent with the magnitude of the country’s economic contraction during the period. Had the country issued trills several years ago, it might not have needed the bailouts, debt restructuring, and draconian programs of austerity.

In each of these countries is highly correlated with that commodities’ price, which is transparently set in global markets and can be assumed to be free of the risk of sovereign manipulation of GDP and inflation statistics. However, moral hazard could remain a problem, especially in the case of a country that has the power to manipulate a commodity’s price because it controls a sizable share of its global production and supply. Price manipulation can be particularly severe when practiced by groups of countries producing the same commodity, as in the case of crude oil.

See, for example, Steinhauser, 2013, and Mody, 2013. This would work in a manner similar to the case of contingent convertible bonds (CoCos) issued by companies, which are issued as bonds and can later convert to equity if the borrowing decision-making process is deliberately manipulated and a sovereign’s debt pushed past the restructuring trigger thresholds by a little more borrowing, moral hazard can lead to adverse selection.

Also, there is a difference between countercyclical mechanisms that ease the burden of debt repayment in economic downturns as opposed to a more specific group of assets based on automatic/mechanical approaches such as those proposed in the case of CoCos. The latter could be subject to moral hazard, which can undermine the integrity of the process. A better approach is to pursue a careful case-by-case debt analysis and negotiation. The renewed effort in official and legal circles to design a sovereign debt restructuring mechanism in light of the increased threat of holdout creditors and Greece’s lingering difficulties is welcome (see Committee on International Economic Policy and Reform, 2013), but a universally effective construct may be hardly feasible. Political, legal and financial strategies are adaptive. A framework that allows flexibility to accommodate the idiosyncrasies of each case and takes advantage of innovative financial products may not be ideal, but is certainly promising for all parties involved.
Alphabetical list of references


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Appendix

Index Definitions

**Standard and Poor’s (S&P) 500 Index**: A market capitalization-weighted free float-adjusted index of 500 large-capitalization U.S. stocks. It captures approximately 80% of available market capitalization. The index was developed with a base level of 10 for the 1941-43 base period.

**S&P 500 Equal Weight Index**: The equal-weight version of the S&P 500.

**S&P 500 Buyback Index**: An equal-weighted index designed to measure the performance of the top 100 stocks with the highest buyback ratios in the S&P 500.

**MSCI All Country World Index (ACWI)**: Captures large- and mid-capitalization representation across 23 Developed Market (DM) and 23 Emerging Market (EM) countries. It was developed with a base value of 100 as of December 31, 1987. With 2,482 constituents, the index covers approximately 85% of the global investable equity opportunity set.

**MSCI Argentina Equity Market Index**: Measures the performance of the large- and mid-cap segments of the Argentine market. It was developed with a base value of 100 as of December 31, 1987. With nine constituents, the index covers about 85% of the Argentine equity universe.

**MSCI Brazil Equity Market Index**: Measures the performance of the large- and mid-cap segments of the Brazilian market. It was developed with a base value of 100 as of December 31, 1987. With 60 constituents, the index covers about 85% of the Brazilian equity universe.

**MSCI Greece Equity Market Index**: Measures the performance of the large- and mid-cap segments of the Greek market. It was developed with a base value of 100 as of December 31, 1998. With ten constituents, the index covers about 85% of the Greek equity universe.

**MSCI Jordan Equity Market Index**: Measures the performance of the Jordanian market. It was developed with a base value of 100 as of December 31, 1987.

**MSCI Mexico Equity Market Index**: Measures the performance of the large- and mid-cap segments of the Mexican market. It was developed with a base value of 100 as of December 31, 1987. With 27 constituents, the index covers about 85% of the free float-adjusted market capitalization in Mexico.

**MSCI Peru Equity Market Index**: Measures the performance of the large- and mid-cap segments of the Peruvian market. It was developed with a base value of 100 as of December 31, 1992. With three constituents, the index covers approximately 85% of the Peruvian equity universe.

**MSCI Philippines Equity Market Index**: Measures the performance of the large- and mid-cap segments of the Philippines market. It was developed with a base value of 100 as of December 31, 1987. With 22 constituents, the index covers about 85% of the Philippines equity universe.

**MSCI Poland Equity Market Index**: Measures the performance of the large- and mid-cap segments of the Polish market. It was developed with a base value of 100 as of December 31, 1992. With 23 constituents, the index covers about 85% of the Polish equity universe.

**MSCI Russia Equity Market Index**: Measures the performance of the large- and mid-cap segments of the Russian market. It was developed with a base value of 100 as of December 30, 1994. With 20 constituents, the index covers about 85% of the free float-adjusted market capitalization in Russia.

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a. Index definitions in this Appendix are based on information available at the index providers’ websites and on Bloomberg as of March 31, 2016.

b. The MSCI ACWI and all MSCI Country indices defined in this Appendix are free-float market capitalization-weighted.

c. DM countries include: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the U.K. and the U.S. EM countries include: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Peru, Philippines, Poland, Russia, Qatar, South Africa, Taiwan, Thailand, Turkey and United Arab Emirates.
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