

The Index Investor

Global Macro Analysis and Asset Allocation Insights

Articles on the Growing Threat to Political Legitimacy

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dangerous levels. And even then, we urge readers to combine our views with those of other analysts who use different valuation methodologies (research has shown that combining the results of different methodologies tends to improve forecast accuracy). We also provide qualitative analysis (e.g., our alternative scenarios and Economic Updates) of how economic and political conditions are likely to change in the future, and the implication for asset class valuations and returns. However, there are also subjective factors involved in deciding whether an asset class is dangerously overvalued. These include a client's emotional and financial tolerance for downside risk, and his or her exposure to the asset class in question.

The second issue is, if you decide that an asset class is dangerously overvalued, what should you do? Clearly, there is a range of options, including buying extra insurance (e.g., an index put option or volatility ETF), shifting exposure from overvalued to undervalued asset classes; and/or increasing one's allocation to cash (e.g., short term Treasuries). In our view, there is no right answer about the best course of action to pursue, as it depends on a wide range of factors including client preferences (e.g., some clients hate to see losses, even when they are offset by gains on a put option or volatility ETF), client mandates (some portfolios can't invest in derivatives), or the performance parameters upon which an advisor's performance evaluation and compensation are based.

Feature Article: The Critical Challenges Posed by Leverage and Legitimacy

It is safe to say that the world economy has entered a period characterized by complex and dangerous dynamics that few people even begin to understand. And even fewer people have tried to think more than a few steps ahead, about where these dynamics may take us, much less what those future scenarios imply for asset allocation and risk management decisions today. Finally, it goes without saying that any attempt at such thinking is bound to be imperfect, given the complex and evolving nature of the underlying system that is generating the rapid and often confusing changes we see all around us today. Nevertheless, professionals who have been entrusted with the

management of other people's money, and especially those who have a fiduciary duty to their clients, have an obligation to think about these issues. The goal of this essay is to help our readers meet this challenge.

To preview what lies ahead, we will state our key conclusions up front. The world faces two critical challenges in the years ahead. The first is obvious: How to deal with the problems caused by excessive leverage in multiple sectors of the global economy? The second is less obvious, but possibly even more important: Will the legitimacy of current political systems be maintained as the leverage problem is resolved? Broadly, the way in which these challenges are met could give rise to four scenarios; however, we will concentrate on only two: (1) the global debt problem is largely resolved through higher economic growth, and current political systems generally maintain their legitimacy; and (2) the global debt problem is largely resolved through austerity and various types of default, and many current political systems lose their popular legitimacy. However, before we discuss these scenarios in more detail, we first need to look at the underlying issues in greater depth.

Options for Resolving the Global Debt Problem

We are squarely in the camp that believes that the seriousness of the debt problem facing the world economy has not been fully absorbed by most investors. And the problem goes well beyond the building bubble in China, which we analyzed at length in last month's issue. Let us take a fast sector by sector tour, starting with the U.S. household sector. The proximate cause of the 2007/2008 crisis – excessive construction of, and investment in residential property based on excessive mortgage borrowing and lending, leading to a price bubble that eventually collapsed – has not been resolved. According to First American Core Logic, 28% of mortgaged U.S. residences still have negative or near negative equity at the end of the first quarter of 2010. As a number of analyses have noted, negative equity makes buyers increasingly unwilling to keep paying their mortgages, and increases the probability that they will “strategically default” on them. At the same time, U.S. unemployment remains

stubbornly high (the broadest measure, so-called “U6 unemployment” has been stuck at more than 17% for over a year), which reduces borrowers’ ability to make mortgage payments, even if they are willing to do so. Beyond mortgages, and despite net repayments, total household sector debt (which also includes credit card, auto, student and other loans) remains at or near record levels not just in the USA, but also in many other developed countries.

Moving on to the non-financial corporate sector, the two most glaring problems are loans for commercial real estate (CRE) and highly leveraged transactions (e.g., leveraged buyouts and recapitalizations by private equity funds). Just in the United States, the Congressional Oversight Panel (for TARP financing) has estimated that \$1.4 trillion in CRE loans will come due between 2010 and 2014. The COP estimated that nearly half of these loans are underwater. Moreover, it did not estimate the future losses that banks will take when they sell the real estate assets they currently hold on their balance sheets as a result of previous foreclosures. With respect to highly leveraged transactions, Bain and Company recently estimated that \$460 billion of debt for these transactions will mature between 2012 and 2014. In relation to these exposures, the aggregate capital of many banks is undoubtedly insufficient to absorb the potential losses they face.

To put it differently, marking all their assets to market value would likely reveal many banks (and probably a few insurance companies) to be technically insolvent. As a result, a number of steps have been taken to prevent this from happening, and in so doing to give the banks time to rebuild their capital, hopefully to a level that can absorb future losses without requiring further government support and/or nationalization. The first of these steps was a change in accounting rules that has allowed many dodgy assets to be carried on banks’ balance sheets at higher values than those found in the secondary market for the same or similar assets. This “extend and pretend” approach was quite successful in the case of the 1982 LDC loan crisis, in which many large banks were also probably technically insolvent (although secondary markets for loans, as well as the degree of securitization, were both far less developed then than they are today).

The second step that has been taken to shore up bank profits and capital has been the efforts by central banks to hold down interest rates, and therefore bank funding costs relative to the rates being earned on their assets. The third step has been the change in policy that has enabled the banks to sell assets of questionable value to central banks at higher than market values in order to obtain funding liquidity. However, while these steps forestalled the first wave of the crisis, there is no guarantee that they will be sufficient if a second wave strikes.

One of the reasons for this is the rising doubts over the value of the government debt that many banks hold on their books. While Greece is now the best known example of this issue, others are not far behind, including the accelerating doubts about the creditworthiness of other national governments (e.g., Portugal, Spain, Japan, and even the United States) and sub-national national governments – for example, municipal bond issuers in the United States (e.g., see “State Debt Woes Grow Too Big to Camouflage”, by Mary Williams Walsh in the March 29, 2010 *New York Times*; “Beware the Muni-Bond Bubble” by Nicole Gelinias; “Public Pension Deficits are Worse Than You Think” by Andrew Biggs in the March 22, 2010 *Wall Street Journal*; “States are the Canary in the Fiscal Coal Mine” by Josh Barro; “Next Big Crisis is Unfolding in Muni-Bond Markets” by Joe Mysak, published by Bloomberg.com on April 9, 2010; and many excellent articles on this issue by Steve Malanga, including “The Beholden State”). Many governments came into the crisis of 2007/2008 in questionable financial shape, due to high levels of outstanding contractual debt relative to national or state output (i.e., the debt/GDP ratio) as well as high levels of unfunded liabilities for future pension and healthcare commitments (e.g., Social Security, national health care, and public sector employee pensions – regarding the latter, see “Public Pension Promises: How Big Are They and What Are They Worth?” by Novy-Marx and Rauh). The arrival of the 2007/2008 crisis, and the subsequent downturn in the economy, then made this fiscal situation worse in three ways. First, it reduced government tax revenues. Second, it increased government transfer payments (e.g., unemployment benefits). Third, it increased the outflow of government resources that were used to shore up the financial system and, in some

cases (e.g., GM) non-financial corporations. The net impact of these changes was an explosion in government debt/GDP ratios around the world.

The net result of all the changes we have seen across multiple sectors was well summed up in a recent commentary by John Hussman (“Greek Debt and Backwards Induction”, www.hussmanfunds.com). “Looking at the current state of the world economy, the underlying reality remains little changed: there is more debt outstanding than is capable of being properly serviced. It's certainly possible to issue government debt in order to bail out one borrower or another (and prevent their bondholders from taking a loss). However, this means that for every dollar of bad debt that should have been wiped off the books, the world economy is left with two - the initial dollar of debt that has been bailed out and must continue to be serviced, and an additional dollar of government debt that was issued to execute the bailout. Notice also that the capital that is used to provide the bailout goes from the hands of savers into the hands of bondholders who made bad investments. We are not only allocating global savings to governments. We are further allocating global savings precisely to those who were the worst stewards of the world's capital. From a productivity standpoint, this is a nightmare. New investment capital, properly allocated, is almost invariably more productive than existing investment, and is undoubtedly more productive than past bad investment. By effectively re-capitalizing bad stewards of capital, at the expense of good investments that could otherwise occur, the policy of bailouts does violence to long-term prospects for growth.”

Let us now turn to the options that are available for dealing with excessive debt, relative to income. In broad terms, there are three choices: (a) Increase income. This requires no cut in current consumption, while the additional income is used to pay down debt. (b) Reduce consumption in order to pay down debt. (c) Reduce the amount of debt via some type of default – e.g., bankruptcy, debt/equity conversion, etc. How do these options apply to each of our overleveraged sectors of the economy?

Obviously, like every other sector, households would prefer to repay debt out of increased income. Yet how realistic is it to expect such an increase? On the one

hand, real incomes have been growing over the last twenty years for the top quintile of U.S. households (though this was often the result of a second earner entering the workforce). On the other hand, this has not been the case for other households – and those are the households that hold the majority of U.S. household debt. Unfortunately, this phenomenon has not been limited to the U.S., but rather seems to characterize income dynamics in many OECD countries. Multiple studies have examined the underlying causes of flat real household income growth – globalization, the impact of technology, growing skills mismatch, weakened unions, etc. – none of which is easy to quickly reverse. Bottom line: for the household sector as a whole, repaying debt out of rising income does not appear to be an option. That leaves austerity (reducing current consumption to repay debt) and/or default, in one form or another. Both trends are clearly underway, as evidenced by historically weak personal consumption expenditure data, rising personal bankruptcies and, particularly in the U.S., a growing number of “strategic mortgage defaults.” Thus far, political elites around the world have not taken steps to shift the balance of debt adjustment from austerity to making default easier for household borrowers. To cite one example of this, the attempts thus far by the U.S. government to facilitate mortgage restructurings have generally been judged failures – because they have not significantly reduced the net present value of the amount owed, or shifted its mix from all debt to a combination of debt and equity – as evidenced by the relatively small number of homeowners who have pursued these options, as opposed to defaulting.

Turning to the non-financial corporate sector, we find that once again rising income is the preferred but unlikely to be realized solution to the debt problem. In this case, rising income means rising revenue for borrowers, whether they be real estate developments (e.g., rising rents) or heavily leveraged companies. In both cases, rising income would logically result from an economy whose growth is based on something other than continued government support financed by increasing levels of sovereign debt and a rising debt/GDP ratio. To be sure, such a positive scenario could conceivably come to pass – provided that China and other Asian countries quickly reorient their economies from export to domestic consumption led growth while also

allowing a rising level of imports from OECD countries. However, as we described at length in last month's issue, the odds against this scenario seem very high. Once again, this leaves borrowers with a choice between austerity – i.e., cutting costs to free cash flow for debt payments – and default. The available evidence shows that non-financial businesses have been aggressively cutting costs and paying down debt – though this results in higher unemployment, with knock-on negative effects for the household sector (and, later on, reduced revenues for non-financial businesses).

However, the evidence also shows a rising tide of bankruptcies and defaults – with perhaps the most visible example being the decision on the part of a number of large investment banks to walk away from some very large commercial real estate loans owed by their subsidiaries. Again, this has knock on effects, as default and foreclosure saddles lenders' balance sheets with commercial property assets that are most likely worth much less than their carrying value. In turn, this reduces banks' willingness to extend risky loans to other borrowers – indeed, the evidence suggests that it is small businesses, which historically have created the most new jobs – that are bearing the brunt of this growing credit crunch. What we have yet to see in this crisis is the same degree of bankruptcies and debt/equity exchanges that we have seen in other serious debt crises, such as Latin American in the 1980s. Instead, we appear to be going down the same road that Japan did in the 1990s, dragging out the resolution of our current debt crisis, and in the process causing a high level of growth depressing uncertainty to persist.

Unlike other sectors, financial businesses have squarely focused on rising income – due to widening spreads between funding costs and portfolio returns – as the means to work their way out of their own excessive leverage (and asset quality) problem. In so far as austerity has been used, it has largely taken the form of cost reductions due to industry consolidation (e.g., layoffs following the acquisition of Bear Stearns and Lehman Brothers' failed businesses), rather than sharp reductions in employee compensation costs. And rather than lenders to financial institutions bearing a share of leverage reduction costs (e.g., via debt/equity conversions), what

we have seen instead is taxpayers bearing most of the burden (via government absorption of bank failure costs and provision of funding at below market costs).

This brings us to the options facing governments, as they attempt to manage the debt problems brought about by both the crisis and the actions they have taken to respond to it. In the case of sovereign debt, the underlying math is straightforward (as described 22 years ago by Tim Congdon, in his book, Debt Trap, or, more recently, by Willem Buiter in his outstanding Citicorp Global Economics research report, "Sovereign Debt Problems in Advanced Industrial Countries"). In order for the debt/GDP ratio to remain stable, the public sector balance (i.e., the budget balance before interest payments) as a percent of GDP must exactly offset the difference between the real rate of interest on government debt and the rate of GDP growth. For example, if the real interest rate is 2.5% and real GDP growth is 3.0%, the public sector deficit can be no greater than .5% of GDP, else the debt/GDP ratio must increase. Now consider a more realistic example today: if the real interest rate on government debt is 4.0% (because of some risk of default), and forecast real GDP growth is only 1.0%, the public sector must run a surplus of 3.0% if the debt/GDP ratio is to remain constant, and an even larger surplus if the debt/GDP ratio is to decrease (note that we have slightly simplified these calculations; to be technically correct, the difference between the real interest rate and real GDP growth should be divided by $1 + \text{real GDP growth}$ – however, that isn't necessary to develop a basic understanding of the underlying math). Last but not least, it important to understand another bit of math that is also critical to the resolution of the debt problem facing many governments today. As we have repeatedly noted over the years, a nation's current account deficit (as a percentage of GDP) by definition must equal the sum of its private sector deficit (total output less the sum of private consumption and private investment) and its public sector deficit. To carry on the example used above, if, in order to maintain the government debt/GDP ratio a nation must switch from running a public sector deficit to a public sector surplus, either the private sector balance and/or the current account balance must also change. For example, assume a nation is running a public sector deficit equal to 7% of GDP, with a private sector surplus of 4% of GDP,

and a current account deficit of 3% of GDP (4% + negative 7% = negative 3%). If the public sector balance must shift to a surplus of 5% of GDP, that swing of positive 12% must also be reflected in the private sector and/or the current account balance. For example, this could be accomplished by the private sector going from a positive 4% to a negative 5% (e.g., because of an increase in private consumption and/or investment) and the current account going from a negative 3% to 0% (e.g., due to a sharp increase in exports, or a sharp fall in imports). In reality, however, changes of this magnitude are extremely difficult to make – yet that is the challenge facing many governments today. Now that we understand the math, let's move on to the policy options governments confront.

As in every other case, governments would prefer to grow their way out of their debt problem. So let's take a closer look at the underlying drivers of GDP growth. At the highest level, GDP growth reflects three inputs: labor, capital, and productivity (i.e., the efficiency with which labor and capital inputs are used). Hence, a change in GDP must reflect some combination of a change in the labor force, a change in the amount of capital employed, and/or a change in productivity. Changes in the labor force usually reflect a combination of demographic and social factors, including birth and death rates, immigration and emigration rates, and the percentage of potential workers who choose to seek work. Changes in the amount of capital employed is a function of the after tax return that can be earned on it use, as well as its cost, which in turn depends on the savings rate, competing capital demands by other sectors (e.g., government) and the level of perceived uncertainty and risk. Finally, changes in productivity (also known as total factor or multi-factor productivity) also reflect a range of factors, including the rate and quality of research and development spending, the quality of the educational system (for example, see “The High Cost of Low Educational Performance” a recent report from the OECD), the quality of infrastructure (see “International Productivity Differences, Infrastructure, and Comparative Advantage” by Yeaple and Golub), the quality of different national institutional contexts (see “The New Kaldor Facts: Ideas, Institutions, Population and Human Capital” by Jones and Romer), and the variation of management practices across firms, sectors and

countries (see “Why Do Management Practices Differ Across Firms and Countries?” by Bloom and Van Reenen, “Micro Efficiency and Macro Growth” by Nallari and Bayraktar from the World Bank, and “Cross Country Comparisons of Industry Total Factor Productivity” by James Harrigan of the Federal Reserve Bank of New York).

A common way to sum up these growth drivers is by showing a country’s rate of labor force growth and its rate of labor productivity growth, which captures increases in both the amount of capital per worker and in total factor productivity (though in the long run, the marginal return to more capital per worker declines to zero, and labor productivity growth solely reflects TFP growth). The following table (based on data from the OECD) shows how these vary across a number of developed countries that are faced with rising debt/GDP ratios. Where possible, we have also broken out the change in total factor productivity.

Country	Annual Labor Force Growth 2000-2008	Annual Labor Productivity Growth, 2000-2008	Apparent Potential Annual GDP Growth	Note: Annual TFP Growth 1999-2007
Australia	2.01%	1.03%	3.04%	0.59%
Canada	1.78%	1.01%	2.79%	0.66%
United Kingdom	1.00%	2.01%	3.01%	1.40%
United States	1.00%	2.07%	3.07%	1.50%
France	0.67%	1.54%	2.21%	1.04%
Germany	0.69%	1.40%	2.09%	1.02%
Italy	0.71%	0.34%	1.05%	-0.08%
Spain	2.97%	0.79%	3.76%	0.02%
Eurozone	1.25%	1.16%	2.41%	
Sweden	1.30%	1.93%	3.23%	1.94%
Switzerland	1.32%	1.26%	2.58%	0.70%
Japan	-0.22%	1.94%	1.72%	1.54%

This table highlights a number of important points about the potential for nations to grow out of their debt problems. First, developed countries have taken different routes to growth over the past decade. For example, the UK and US has slower labor force growth rates than Australia and Canada, but higher rates of labor productivity growth,

which was largely driven by improvements in total factor productivity (TFP) rather than higher amounts of capital per worker. Sweden and Switzerland had comparable rates of labor force growth, but the former was able to achieve a much higher growth rate because of superior TFP performance. Japan actually saw a fall in its labor force, which it offset with impressive TFP growth as well as higher capital per worker. Finally, among the four largest nations in the Eurozone, there was a significant difference in productivity growth between France and Germany on the one hand, and Italy and Spain on the other.

So what does this tell us about the chances a country will be able to grow its way out of its debt/GDP problem? It appears there are two main strategies that could be used: increasing labor force growth (e.g., via skill-based immigration, as Australia and Canada have done), and/or increasing total factor productivity growth (via such policies as infrastructure investment – e.g., the internet or smart-grid, improvements to the educational system, and/or improvements to business management practices). Going back to our public sector math discussion, higher GDP growth would likely bring two additional benefits. The first would be a reduced probability of sovereign default, and hence a lower real interest rate on the nation's debt. The second would be higher government revenues and a reduced need for government deficit spending to support aggregate demand and economic growth. Unfortunately, there are two critical obstacles to implementing this “grow our way out of the debt problem” strategy. The first is a timing problem: both increases in skilled immigration levels and implementation of reforms to increase TFP both take time and are likely to face opposition from interest groups that believe they will be adversely affected by such changes (e.g., in the U.S., look at the way teachers unions are resisting the Obama Administration's proposed education reforms). The second obstacle is a free rider problem – countries have an incentive to let other nations undertake these painful reforms, hoping that they can avoid them and simply increase their exports to grow their way out of their debt problems (in fact, the United States, many Eurozone countries, and China all seem to be taking this path, which is obviously an unsustainable situation). Given this, it seems likely that a nation attempting to grow its way out of a

debt problem would also have to increase its level of protectionism to ensure that the job creation and economic demand benefits that result from its painful reforms actually accrue to its own residents.

Is there an alternative to this depressing scenario? Perhaps, at least for some countries. As we saw in our discussion of the mathematics of the problem, a country that needs to achieve a substantial swing in its public sector balance from deficit to surplus must simultaneously achieve some combination of (a) an increase in private sector consumption spending; (b) an increase in private sector investment spending; (c) an increase in exports; and/or (d) a decrease in imports. Given the already high levels of household debt in many OECD countries, increasing consumption spending would seem to be out of the question, at least as a primary target of policy (though it might later increase, as a second order effect in an improving economy). Similarly, significantly increasing exports would also seem to present an insurmountable challenge in a world with flat or negative economic growth and shrinking credit availability. That leaves increasing private sector investment and decreasing imports in a relatively quick time frame, in a manner that results in an increase in domestic employment without recourse to protectionism and a global trade war. In our view, the only strategy that meets these requirements would be a change in regulations in the United States that forced a substantial increase in private sector investment and employment in the environmental and energy sector. For example, a sharp increase in both domestically produced biofuels (e.g., cellulosic ethanol, and other fuels derived from algae and bacteria) and incentives to help electric vehicles gain market share would reduce oil imports. At the same time, an explicit price on carbon emissions would encourage higher investment in natural gas production, carbon capture and storage, and other technologies. Whether this would result in sufficient changes in the private and current account balances to achieve the required change in the public sector balance remains to be seen. However, as we look over the current options, this appears to be the best hope for the U.S. growing its way out of its burgeoning government debt/GDP problem. Hence, from our perspective, a key indicator to watch is the progress of the so-called Kerry-Lieberman-Graham environment and energy bill

that has been introduced in the U.S. Senate. If it gains traction and is eventually passed, that will be a hopeful sign. If this fails to happen, the odds of going the default route would significantly increase, in our view.

What about the second option – austerity? In the case of government, this involves shrinking the debt/GDP ratio by running a fiscal balance that more than offsets the difference between the real rate of interest on the nation's debt and its rate of GDP growth. At the aggregate level, in the absence any offsetting measures to stimulate either exports and/or private sector consumption and investment, a sharp swing from government deficits to surpluses would lead to a sharp contraction in aggregate demand (i.e., negative GDP growth). In terms of our economic balance equation, this would cause a sharp fall in imports, which would result in a large improvement in the current account balance. However, in a slowing economy, there would be even lower levels of private sector consumption and investment, so the private sector balance would also likely increase. Of course, this also assumes no trade war or knock on effects abroad, that would cause a fall in exports. Were that to occur, the amount of painful domestic adjustment would be even higher.

Let's look at the austerity option from another perspective. Today, with real interest rates in many cases higher than real GDP growth rates, austerity means making very large shifts from government deficits to government surpluses, at a time when government spending has been critical to maintaining aggregate demand. In short, in the absence of renewed private sector growth (e.g., due to changes in labor force and TFP policies), reducing debt/GDP ratios via government austerity is likely a recipe for global depression (particularly given the rising probability – as we examined last month – of a collapse in Chinese growth rates). This is not to say that some steps towards government austerity cannot and should not be part of the medium term solution to national debt problems. There are obvious opportunities for improving government finances in the medium, if not the short term (e.g., raising retirement ages, changing Social Security cost of living increase formulas, implementing consumption taxes, taking a different approach to medical cost containment, etc.). However, it

seems clear that a sharp change from government deficits to government surpluses is not in the cards in the short term.

This brings us to the third option: reducing government debt/GDP via some type of default. As shown by Reinhart and Rogoff in their excellent book ([This Time Is Different: Eight Centuries of Financial Folly](#)), sovereign debt defaults have existed for almost as long as people have made loans to governments. Outright sovereign debt repudiation is quite rare; rather, default more commonly takes one of two forms – either exchange offers that reduce the real net present value of the debt, or increased rates of inflation that have the same effect. Since the Latin American debt crisis in the 1980s, sovereign defaults have been more common than most investors realize, and an entire industry cluster has developed to manage them (indeed, one of us started out in this business way back when, and some of our colleagues are still at it almost 30 years later). In fact, that industry has been hard at work preparing for an eventual Greek exchange offer, which they regard as inevitable at some point in the future, due to the mathematical challenges facing that country (including a very high debt/GDP ratio, real interest rates made extra burdensome by a high default risk premium, a deeply distorted economy that virtually guarantees low GDP growth over the next few years, and the political impossibility of implementing a radical change in the government's fiscal situation and/or structural economic reforms that are needed to raise the potential growth rate). So default via an exchange offer is a viable course of action for many countries, particularly since repeated studies have shown that the long-term consequences of default have usually not been severe for the governments in question (see, for example, "The Costs of Sovereign Default: Theory and Reality" by Borensztein and Panizza). However, questions have been raised about how applicable the experience of past sovereign defaulters may be under the different conditions we face today. For example, past sovereign defaults were in countries that were relatively small compared to the size of the world economy, which was enjoying strong growth when the defaults and recoveries from them occurred.

As for the default-via-inflation option, as Buiter shows in his Citi report, in most cases it is less attractive than it first seems. The reason for this is that defaulting via an

unexpected (by creditors) increase in inflation works best under a limited set of circumstances, including (a) a large amount of fixed rate debt; (b) that has a relatively long maturity/duration; (c) which is held by foreign investors. Currently, the nation best positioned to undertake a default via inflation is the United States – yet going that route would seem sure to raise tensions with foreign parties holding U.S. government debt, particularly China.

Finally, a recent paper by the Bank for International Settlements makes a critical point about default on sovereign debt. In “The Future of Public Debt: Prospects and Implications”, Cecchetti, Mohanty and Zampolli begin by noting that “since the start of the financial crisis, industrial country public debt levels have increased dramatically, and are set to continue rising for the foreseeable future. A number of countries also face the prospect of large and rising future costs related to the ageing of their populations.” The authors’ broad conclusion is that “the [current] path being pursued by fiscal authorities in a number of industrial countries is unsustainable. Drastic measures are necessary to check the rapid growth of current and future liabilities of governments and reduce their adverse consequences for long-term growth and monetary stability.” Specifically, the authors of the BIS report focus on two scenarios. The first is a so-called “sudden stop”, in which investors, faced with high fiscal deficits and a rapidly rising debt/GDP ratio, stop buying a country’s new debt issues. As the authors note, this would almost certainly force the nation’s central bank to purchase (i.e., monetize) the debt, leaving it “impotent to control changes in inflation expectations.” A sudden stop would likely trigger a sharp fall in the nation’s currency, which in turn could lead other nation’s to impose trade and or capital controls (to limit the adverse impact on their own trade balance and employment). The second scenario is one in which a nation’s central bank gives in to pressures to undertake a partial default via inflation. The risk here is that “inflation expectations would become unanchored” by such a move, which would logically lead to a sharp increase in the yield demanded by investors in the inflating nation’s debt, which would at minimum trigger a slowdown in GDP growth (and a worsening of the government’s fiscal balance), and quite possibly a “sudden stop.”

So where does this leave us? Clearly, the first preference of every sector we have examined – households, non-financial corporates, financial institutions, and governments – would be to resolve their current debt problems by increasing their income – i.e., “growing their way out of it.” Indeed, a recent paper (“Great Depressions of the Twentieth Century”, by Kehoe and Prescott) reinforces this point, concluding that “government policies that affect productivity and hours worked per working age person were the crucial determinants the great depressions of the twentieth century.” However, we have also seen that increasing income is much easier said than done, particularly in the short-term. In the best case, a short period of austerity and reduced consumption would be able to keep the debt problem in check long enough for growth oriented reforms to be implemented and take over the debt reduction burden.

However, the combination of a high degree of political factionalism in many countries, as well as the temptation to be a free rider on growth reforms undertaken in other nations leaves us pessimistic about the likelihood that this scenario will materialize. It therefore seems inescapable to us that a substantially higher level of defaults of various types, across all sectors, lies ahead in many nations. As we have long expressed in our Economic Updates, rising defaults are likely to be accompanied by greater deflationary pressures in the short term, but greater inflationary pressures thereafter, particularly if we experience a sudden stop in one or more major countries. We also continue to believe that it would be impossible for a rise in defaults to take place without rising protectionism, and possibly capital controls that would collectively lead to a world that, as we have repeatedly described in our Conflict Scenario, is much more organized on the basis of different blocs (e.g., the Anglosphere, Europe, Sinosphere, etc.) as well as some “wild card” countries, including Russia and Iran.

The Slowly Building Legitimacy Crisis

Let us now turn away from the debt problem, and towards the second crisis facing the world today: the accelerating erosion of political legitimacy. A number of writers have

remarked on this, but we don't believe the majority of investors (or even a significant minority) have yet absorbed the full implications of their observations. For example, in his article "Greece is the Welfare State's Death Spiral", Robert Samuelson notes that "virtually every advanced nation, including the United States, faces the same prospect. Ageing populations have been promised huge health and retirement benefits, which countries haven't fully covered with taxes. The reckoning has arrived in Greece, but it awaits most wealthy societies...Countries cannot overspend and overborrow forever. By delaying hard decisions about spending and taxes, governments maneuver themselves into a cul-de-sac...The welfare state's death spiral is this: Almost anything governments might do with their budgets threatens to make matters worse by slowing the economy... Cutting welfare benefits or raising taxes would, at least temporarily, weaken the economy, and perversely, make paying the remaining benefits even harder...[But] by allowing deficits to balloon, they risk a financial crisis as investors one day – no one knows when – doubt governments' ability to serve their debts and refuse to lend...If only a few countries faced these problems, the solution would be easy. Unlucky countries would trim budgets and resume growth by exporting to healthier nations. But developed countries represent about half of the world economy, and most have overcommitted welfare states...What happens if all these countries are thrust into Greece's situation?"

Gideon Rachman's recent column in the *Financial Times* offers a blunt answer: "Europe is Unprepared for Austerity." He begins by noting, "I used to think Europe had got it right. Let the U.S. be a military superpower; let China be an economic superpower – Europe would be the lifestyle superpower...Life for most ordinary Europeans has never been more comfortable...It was a great strategy. But there was one big flaw in it. Europe cannot afford its comfortable retirement...Europe's existence as a lifestyle superpower has depended on an ample supply of credit...While Europeans no longer fear foreign armies, they are starting to fear foreign bondholders." To be sure, Rachman offers a glimmer of hope: "the citizens of Latvia and Ireland have already swallowed actual cuts in wages and pensions. But these are both countries that have experienced real poverty in living memory, followed by

massive and unsustainable booms. They know that the past few years have been a bit unreal...[But] as the riots on the streets of Athens illustrate, not all Europeans will react so stoically to deep cuts in spending. Many have come to regard early retirement, free public healthcare, and generous unemployment benefits as fundamental rights. They stopped asking, a long time ago, how these things were paid for. It is this sense of entitlement that makes reform so very difficult. As the British election has just amply illustrated, politicians are extremely reluctant to confront voters with the harsh choices that need to be made. Yet if Europeans do not accept austerity now, they will eventually be faced with something far more shocking.”

And it is just not the Europeans who are struggling with the need to simultaneously rein in government spending and raise revenues. Most American states are required by law to balance their budgets each year. Yet achieving political consensus on the means to achieve this goal has proven to be extremely difficult, as evidenced by the fiscal crises now facing California, Illinois, New York, New Jersey, Rhode Island and many other states. As Anatole Kaletsky noted in a recent column in the *Times* of London, in virtually all democracies, the major parties lack a narrative that can both explain how we got into the mess we’re in today, and mobilize a majority of voters to make sacrifices in support of a plan to get us out of it. As Kaletsky notes, if ever there was a need for a “third way” it is now; but as yet, it is lacking, which creates an opening for political leaders who hold more extreme and populist views – a situation which, throughout history, has often led to trouble.

In another FT column (“Irish Treat Pain of Crisis Like a Hangover”), Gillian Tett notes that “there are two other, less tangible factors that appear to have played a role in the Irish story...One of these is the issue of political infrastructure or, more specifically, whether a country has the decision-making machinery in place to cut debt. The second...is social cohesion, and whether a government is able to impose tough choices on a society without sparking political instability, social turmoil, or worse.” Along similar lines, other analysts have noted that two other late 20th century national turnarounds (Canada and Sweden) both benefited from high levels of social cohesion and trust in national political institutions.

In essence, the underlying issue is as much whether nations have the willingness to solve their debt problems through means other than default, as whether they have the capacity to do so. Unfortunately, there is growing evidence that in many countries (and in the case of the Eurozone, regions), the social cohesion and trust that seems critical to this willingness is either at low levels or in rapid decline. For example, in countries around the world we repeatedly see public sector employees refusing to accept any reduction in their pay and benefits, and often turning to the courts to back their demands with judicial decisions. Unsurprisingly, this behavior is provoking a growing backlash (see, for example, “The Crippling Price of Public Employee Unions” by Mort Zuckerman, and “Do You Have to Love Labor Unions to be a Good Democrat?”, by Mickey Kaus). However, the fact that in many cases these same public sector unions have a very strong impact on elections (in effect, voting into office the people with whom they negotiate), is increasingly leading more and more citizens to question the underlying legitimacy of the current political system.

Similarly, in the U.S. pollster Scott Rasmussen (www.rasmussenreports.com) has repeatedly documented the very wide difference in views between the political and business elite (what he calls the “Political Class”) and the rest of the nation. We don’t doubt that similar polls in Europe would produce similar results. As Rasmussen notes, “Most Americans trust the judgment of the public more than political leaders, view the federal government as a special interest group, and believe that big business and big government work together against the interests of investors and consumers. Only seven percent (7%) share the opposite view and can be considered part of the Political Class. On many issues, the gap between the Political Class and Mainstream Americans is bigger than the gap between Mainstream Republicans and Democrats.” In this regard, we note again a point we made last month in our analysis of conditions in China: researchers have found that a key indicator of future political instability is the extent of factionalism in a society (see “A Global Model for Forecasting Political Instability” by Goldstone, Bates, et al). We also note that the Economist Intelligence Unit has adopted this model, and added to it worsening economic conditions as an important trigger event – and their “Political Instability Index” shows a rising likelihood

that such instability will occur in multiple countries. In this regard, we cannot help but see rising factionalism in Europe and the United States as very worrying signs. Other writers have concluded that the evidence shows that protracted downturns in economic growth and extended periods of unemployment undermine people's support for democracy, while increasing the attractiveness of leaders with more extreme views (e.g., see two recent papers on these issue: "Economic Growth and the Rise of Political Extremism" by Bruckner and Gruner; and "Joblessness and Perceptions About the Effectiveness of Democracy" by Altindag and Mocan).

In the United States, if not to the same extent in other developed countries, the negative impact of the mainstream/elite gap has been further reinforced by the wave of conspicuous consumption that has swept American in the past twenty years, led by the top quintile of households who benefited from globalization, and causing many others to take on loads of debt in an ultimately unsuccessful effort to keep up external appearances and internal self-images. We believe that some very basic neurobiological forces are at work in our society today. To begin with, fear is increased by the experience of loss and by a rise in uncertainty. However, it is also increased by envy – when others are perceived as more successful and attractive, one experiences a feeling of social loss. In turn, heightened primary feelings of fear have been shown to trigger a secondary reaction: a heightened fear of social isolation, and a stronger desire to stay with a group. It seems obvious that all of these reactions, which research findings suggest are hardwired into the amygdala region of our brains, were highly adaptive when small groups of humans first roamed the east African plain ages ago. They may prove much less adaptive today, especially given the frequently observed tendency for people and groups to react to fear with anger and aggression when they cannot flee from its source. Unfortunately, there is no doubt that there are a lot of fearful people out there today. Far too many households have seen the core elements of a middle class existence slipping from their grasp, including a sense of employment security, retirement income security, healthcare security, housing security, and confidence that their children would be able to attend college or university. Moreover, in Europe there is the additional pressure created by cultural

challenges posed sizeable and rapidly growing domestic Muslim populations. In comparison, the United States' difficulties in absorbing large numbers of Hispanic immigrants (or similar challenges in Australia and Canada) pales by comparison.

Recent events have no doubt caused an increasing number of already fearful and angry members of the OECD middle class to question the legitimacy of the system that has produced the situation they face, and which seems unwilling (e.g., via passage of a mortgage restructuring program in the U.S. that actually provided some cash flow relief) or unable (e.g., stemming the offshoring of jobs) to help them.

As George Friedman recently wrote ("The Global Crisis of Legitimacy", www.stratfor.com), "the state both invents the principle of the corporation and defines the conditions in which the corporation is able to arise. The state defines the structure of risks and liabilities and ensures that the laws are enforced. Emerging out of this complexity, and justifying it, is a moral regime. [Investors'] protection from liability [via the creation of the corporation] comes with a burden. Poor decisions will be penalized by losses, while wise decisions are rewarded by greater wealth. Because of this, society as a whole will benefit...The greatest systemic risk, therefore, is not an economic concept, but a political one. Systemic risk emerges when it appears that the political and legal protections given to economic actors, and particularly to members of the economic elite, have been used to subvert the intent of the system. In other words, the crisis occurs when it appears that the economic elite used the law's allocation of risk to enrich themselves in ways that undermined the wealth of the nation...with the political elite apparently taking no action to protect the victims." Friedman concludes with the observation that, "in extreme form, these crises can delegitimize regimes. In the most extreme form...the military elite typically steps in to take control of the system." We do not believe we are near this point today in most developed countries (see, for example, "American Coup D'Etat: Military Thinkers Discuss the Unthinkable", *Harpers*, April, 2006); however, we also note that we have seen coups happen plenty of times during three decades of work in emerging markets, and that Rasmussen and other polls regularly find that, in the United States, the military is held in much higher regard than virtually all other institutions today.

In sum, in May 2010, we see a building crisis of political legitimacy in many developed countries, perhaps most dangerously in the Eurozone and the United States, regions that are increasingly fractious, and where there is no clear consensus on the need for change, nor a clear desire to achieve a shared vision of a better future, nor an understanding of what sequence of changes must occur to get there, nor any sense of how these changes could be achieved. Meanwhile, as debt crisis pressures increase, and the majority of households and businesses see their situations becoming more desperate, and as political elites only seem to protect the interests of the favored few, the overall legitimacy of the political system in the eyes of the many continues to corrode. We do not know what form the future will take if a tipping point is reached; however, in a recent essay (“Complexity and Collapse”), Niall Ferguson reminds us that fundamental change can happen far faster than most people realize, once the underlying level of tension within a system has reached a critical threshold. We have long believed that the new system that would emerge after a crisis of legitimacy would be one organized around blocs, with far lower levels of global trade, labor, and capital flows. We also rather strongly suspect it would be a world in which conspicuous consumption is far less prevalent, the financial system far more regulated, government spending and economic growth lower and inflation and taxes higher than is the case today.

Implications for Asset Allocation

At the outset, we proposed two scenarios that describe the way our Conflict Scenario could further evolve in the years ahead. In one, current debt problems are resolved through an uncertain and unstable mix of austerity, renewed growth, and a limited number of defaults in the household, corporate and financial sectors, but generally (apart from some sub-national governments) no major defaults at the national government level. Under this scenario, the current political elite and political system largely retain their legitimacy, though some rough patches are inevitable. In our alternative scenario, both austerity and the changes required to increase GDP

growth are blocked by political opposition, forcing a growing series of defaults across all sectors, including national governments. This scenario could also be triggered by a collapse in China, which we discussed last month. It includes a sharp period of debt deflation, followed by sudden stops, monetization of debt, and a sharp increase in inflation. Politically, elites lose their legitimacy, significant political changes occur, global flows of trade, people and money sharply contract, and the world system reforms into a series of blocs, including the Anglosphere, Europe, and Sinosphere. The following table describes the implications of these scenarios for various asset classes:

Asset Class	Scenario 1: Muddle Through Scenario	Scenario 2: Default Into Competing Blocs
Real Return Bonds	<ul style="list-style-type: none"> Under either scenario, demand for real return bonds will increase, generating falling yields and positive returns (that said, there isn't much more room to fall from currently low levels). 	<ul style="list-style-type: none"> Real return bonds may also become subject to concerns about government defaults. Hence, discrimination in country quality will be critical under this scenario, in addition to the ability to repatriate funds invested outside a given bloc. We continue to favor Australian and Canadian RRBs, as well as those issued by Sweden and Germany.
Nominal Government Bonds	<ul style="list-style-type: none"> Default premiums on government bonds will spread, making good credit analysis important – e.g., monitoring government debt/GDP ratios, policy responses, and the evolution of the inescapable math of government debt and the economic balance equation. Even the countries we consider most attractive still face challenges (e.g., Australia's GDP is heavily dependent on Chinese growth; Canada's reliance on oil sands and U.S. growth, and significant household debt problems; Sweden and Switzerland's dependence on the Eurozone's health, etc.). 	<ul style="list-style-type: none"> Timing will be critical, as nominal government bonds, in the absence of default, will do well during the initial deflation, but will then suffer as inflation and/or defaults increase. Similarly, repatriation of capital will become an issue in a world of blocs. On balance, in this scenario we prefer Anglosphere government bonds, as the flexibility of these economies promises a quicker recovery and fewer defaults. Similarly, in the Eurozone we prefer Sweden, Switzerland and Germany.
Nominal Credit Bonds	<ul style="list-style-type: none"> Careful credit risk analysis – not simple dependence on ratings -- is critical. Bond issued by companies in sectors with more stable cash 	<ul style="list-style-type: none"> Careful credit risk analysis – not simple dependence on ratings -- is critical. Bond issued by companies in sectors with more stable cash

Asset Class	Scenario 1: Muddle Through Scenario	Scenario 2: Default Into Competing Blocs
	flows – e.g., staples, utilities, energy – are likely to perform best. In the U.S., even in the absence of a deeper crisis, we still expect to see higher defaults by municipal issuers, with knock on implications for banks and insurance companies who hold this paper.	flows – e.g., staples, utilities, energy – are likely to perform best. The potential exists for very sharp and sudden losses as confidence is lost and many investors attempt to exit their fixed income positions. Lower quality issues – both private and public – are most at risk.
Commercial Property	<ul style="list-style-type: none"> Returns will suffer as defaults on commercial mortgage backed securities increase (one high visibility REIT bust will shift psychology); however, this will likely also trigger an overreaction on the downside. 	<ul style="list-style-type: none"> In countries where bubbles may still exist (e.g., Australian and Canadian residential property), they will burst. REITs will suffer due to concerns with underlying leverage. Offsetting this may be inflows driven by inflation hedging – however, there will be competition for these from other asset classes. On the other hand, in regions (e.g., Europe, UK) where property has been a traditional refuge in difficult times, prices of directly owned investment property with solid tenants and modest leverage levels will increase.
Commodities	<ul style="list-style-type: none"> Industrial metals likely to underperform relative to the past because of lower GDP growth. As corn ethanol is displaced by newer fuels, agriculturals' correlation with other commodities should fall, increasing their portfolio benefits. Energy as a sector should do well, but could experience a major shift driven by changes in energy and environmental policy. 	<ul style="list-style-type: none"> Performance of different sectors is likely to widely diverge. Industrial metals will likely suffer. Agricultural commodities may be hurt by trade restrictions; careful analysis will be critical, but so too will be capital controls. In the energy space, oil may underperform, due to declining demand and substitution on the supply side; gas may outperform due to higher use in electric generation. Energy MLPs may become an attractive alternative for traditional fixed income investors.
Gold	<ul style="list-style-type: none"> Continued weak GDP growth and high uncertainty should hold down real bond yields in the US, which will support positive returns on gold. Returns on gold will also depend on the effectiveness 	<ul style="list-style-type: none"> Gold will do well; however, coins may outperform gold based ETFs in a world of capital controls and declining faith in financial instruments.

Asset Class	Scenario 1: Muddle Through Scenario	Scenario 2: Default Into Competing Blocs
	<p>of policy choices in the US – the less effective default and austerity policies, the higher the returns on gold.</p>	
Timber	<ul style="list-style-type: none"> Continuing problems in the housing market will keep putting downward pressure on timber prices and returns. The price of timber investment vehicles will likely vary with changing inflation expectations. However, timber prices could receive a significant upward boost if environmental legislation allows timber operators to recognize the value of the CO2 sequestration benefits provided by forests. 	<ul style="list-style-type: none"> As in the case of physical gold and property, investment in physical timber will be attractive as a store of real value in highly uncertain and likely highly inflationary times.
Developed Country Equity	<ul style="list-style-type: none"> At best, prices in defensive sectors like staples and utilities could benefit from outflows from fixed income as defaults mount. Depending on legislative changes, the energy sector could also benefit. 	<ul style="list-style-type: none"> Cross border investments will be affected by restrictions on trade and capital movements, and the differing fortunes of emerging blocs. Defensive sectors could benefit from a flow out of fixed income (remember, the size of fixed income markets dwarfs equities, and most issues are nominal, not real returns).
Emerging Equity	<ul style="list-style-type: none"> Emerging markets may well see an even bigger bubble develop than exists today. 	<ul style="list-style-type: none"> Emerging markets will be negatively affected by trade and capital controls. Worsening conditions will also put pressure on local institutions, which could lead to deteriorating treatment of foreign portfolio investors (e.g.. look at the recent history of Venezuela, Russia or China).
Volatility	<ul style="list-style-type: none"> Will continue to provide valuable benefits to investors' portfolios. 	<ul style="list-style-type: none"> Will continue to provide valuable benefits to investors' portfolios.
Uncorrelated Alpha Strategies	<ul style="list-style-type: none"> High level of uncertainty suggests that strategies without consistent long or short exposure should perform relatively better – e.g., equity market neutral and global macro. Some event driven strategies may do well – e.g., distressed debt, assuming highly skilled 	<ul style="list-style-type: none"> Global macro and currency strategies will be negatively affected by trade and capital controls. Equity market neutral should, assuming skilled manager, do well within a given bloc. Ditto for event-driven strategies – there will be no shortage of distressed debt, though

Asset Class	Scenario 1: Muddle Through Scenario	Scenario 2: Default Into Competing Blocs
	managers.	recoveries are likely to be highly idiosyncratic, and less reflective of historical averages – hence, there is heightened risk for model driven strategies.

Global Asset Class Valuation Analysis

Our asset class valuation analyses are based on the belief that financial markets are complex adaptive systems, in which prices and returns emerge from the interaction of multiple rational, emotional and social processes. We further believe that while this system is attracted to equilibrium, it is generally not in this state. To put it differently, we believe it is possible for the supply of future returns a market is expected to provide to be higher or lower than the returns investors logically demand, resulting in over or underpricing relative to fundamental value. The attraction of the system to equilibrium means that, at some point, these prices are likely to reverse in the direction of fundamental value. However, the very nature of a complex adaptive system makes it hard to forecast when such reversals will occur. It is also the case that, in a constantly evolving complex adaptive system like a financial market, any estimate of fundamental value is necessarily uncertain. Yet this does not mean that valuation analyses are a fruitless exercise. Far from it. For an investor trying to achieve a multiyear goal (e.g., accumulating a certain amount of capital in advance of retirement, and later trying to preserve the real value of that capital as one generates income from it), avoiding large downside losses is mathematically more important than reaching for the last few basis points of return. Investors who use valuation analyses to help them limit downside risk when an asset class appears to be substantially overvalued can substantially increase the probability that they will achieve their long term goals. This is the painful lesson learned by too many investors in the 2001 tech stock crash, and then learned again in the 2007-2008 crash of multiple asset classes.

September 2010

different asset classes, if the allegations are true, how does this affect the validity of your portfolio allocations?

If the understatement of inflation was consistent over time, absolute real returns would be lower, but their relative ranking would stay the same. Hence, our asset class weights would also remain the same, but the probability of achieving different long term real return targets would be lower. However, this is unlikely to be the case, as there have been frequent changes over time in the methodologies used by different governments to estimate inflation. This would certainly affect our estimates of historical real returns, but again would not affect their relative ranking. On balance, I think the general conclusion is that the most important impact of changing inflation measurement methodologies is to reduce, perhaps substantially, the probability of achieving a given long term real return target.

Feature Article: The Growing Political Legitimacy Crisis

Our current analytical framework is based on the assumption that the world faces four critical and interrelated challenges today, whose potential effects are non-linear. This makes them both hard to understand, and raises the likelihood that we will underestimate their potential impact and will be surprised by the rapid changes they may cause. The first challenge is the fragile nature of the global financial system, in which a very large amount of debt of highly uncertain quality rests on a very thin capital base. On the other side of this equation is the precarious position of many parties that are struggling to repay and/or rollover that debt, including households, some corporations (e.g., commercial property developers), and various levels of government, up to and including some sovereign nations.

The second challenge is the weakened and imbalanced state of global aggregate demand. In many countries, private sector balances (i.e., the difference between savings and investment) have swung from strongly negative to strongly positive since the global financial crisis exploded in 2008, as investment has been cut

back and strenuous efforts have been made to save more in order to reduce outstanding debt. The resulting reduction in private sector demand has usually been balanced by a sharp expansion of government deficits and attempted expansion of the money supply, in order to avoid an even deeper economic contraction and more severe rise in unemployment. However, in a world that has become globally interconnected to a degree not seen since the early 1900s, the benefits of these government stimulus programs have spread beyond domestic borders. This has slowed the reduction in aggregate demand in nations that have been most reliant on exports for economic and employment growth, such as China, Germany, and Japan. In theory this has bought time for these nations to take steps to expand domestic demand (which in turn would allow nations running substantial current account deficits, such as the U.S. and U.K., to reduce them, and replace government deficits with rising exports as a source of GDP growth). Indeed, this is the fundamental assumption that underlies the “muddling through” scenario, which describes a slow, but steady recovery from the Great Recession. In practice, however, we are seeing once again the truth of the old adage that “no plan survives its first contact with reality.”

The third challenge facing the world economy is the risk that developed economies will slip into an extended period of deflation, similar to Japan’s experience since the bursting of its property and equity bubble in 1989. This challenge is the subject of this month’s feature article.

The final challenge we face is maintaining the legitimacy of various political institutions that function as control parameters for the global economy and financial markets. These institutions are both international (e.g. rules governing multilateral trade and capital flows) and domestic (e.g., rules governing taxation and redistribution), in the face of economic and social stresses not seen since in most countries since the 1930s.

In essence, the “muddling through” scenario assumes that all these challenges will be met, and that the main price we will pay is a prolonged period of slower economic growth (the truly rosy scenario assumes that rising domestic demand in emerging markets will cause them to become the new motor of the world economy,

which in turn will return global growth to its previously high levels). The downside scenario assumes that we will fail to meet one or more of these challenges, and, given their complex interrelationships and non-linear effects, the result will be an extended period of stagnation whose severity will take many people by surprise.

In our assessment of the new evidence that each month presents, we continue to use the “Analysis of Competing Hypotheses” (ACH) methodology, whose essence is the conscious search for information that is credible and has a high diagnostic value (i.e., it has a low probability of occurrence under more than one scenario). In this way, ACH helps to protect us from the confirmation bias – the tendency to attend to, and give greater weight to information that confirms your preferred view, rather than information that contradicts it (see “Forecasting Accuracy and Cognitive Bias in the Analysis of Competing Hypotheses” by Andrew Brasfield).

This month, we will focus on the growing risks to the legitimacy of political institutions, which we first wrote about in our May 2010 issue. Our starting point will be different frameworks for understanding (and organizing evidence about) the issue of declining political legitimacy. Broadly speaking, there are two ways to construct these frameworks: deductively, by combining existing theories, and inductively, by drawing insights from historical evidence. We’ll begin with deductive frameworks, drawn from complex adaptive systems theory.

The evolutionary process that drives adaptation can be described quite simply. Since the resources available to them are not infinite, to achieve their goals in the face of competition systems must generate variations – new ways of thinking or behaving. These variations are evaluated against a set of “selection criteria”, with those passing this test implemented. Those that produce the best results are reinforced via the provision of additional scarce resources. Organisms and organizations also have “fitness criteria” that enable them to measure their performance against three generic criteria (indeed, all performance measures are variations on this basic set): (1) effectiveness, or results relative to goals; (2) efficiency, or the amount of resources used to achieve those results; and (3) adaptability, or the change in effectiveness and efficiency per unit of change in the external environment. Within this framework,

legitimacy is a function of the extent to which fitness criteria match selection criteria – put differently, is the organization incentivizing (via its fitness measures) those behaviors that are needed to ensure its survival, given the selection criteria it faces. Seen from this perspective, crises of legitimacy develop when either the gap between fitness and selection criteria grows wide, and/or when intensification of the selection environment (e.g., a rise in extinctions due to a fall in available resources) magnifies the impact of even small gaps between fitness and selection criteria.

The second approach to the legitimacy issue is based on the work of Stuart Kauffman, who popularized the use of so-called “NK landscape” models to explain the behavior of complex adaptive systems (see his book, [The Origins of Order](#)). An organization or society’s performance can be described in terms of the sum of the fitness of the individual agents (e.g., individuals or groups) that comprise it. In the NK model, “N” represents the number of agents. The fitness of an agent is a function not only the result of the decisions it makes, but also on the decisions made by some fraction of the other agents in the organization. In the NKCS model, “K” refers to the number of other agents that affect a given agent’s fitness– hence its value can range from zero to N-1. The term “landscape” refers to a metaphor that describes differing levels of organizational fitness as mountain peaks of different heights. When the degree of interrelationship between agents’ fitness (K) is low relative to the number of agents (N), the “fitness landscape” is relatively smooth, with only a few peaks. On this type of landscape, it is easy to see the combination of decisions that generates the highest level of fitness. However, as the interrelationship between agents’ fitness increases (K becomes larger), the fitness landscape becomes much more jagged, and it is much more difficult to identify (and agree on) the combination of agent decisions that results in the highest level of organizational fitness. As long as selection pressure in the environment is low, the organization can continue to exist, even with a high degree of K relative to N. However, once selection pressures increase, the high degree of K makes it very difficult for an organization to adapt, as agents will resist decisions that would negatively affect their individual fitness, even if they would raise the overall fitness (and therefore chances of survival) of the organization as a whole.

This is very similar to the phenomenon of public policy paralysis induced by a rising number of special interest groups described in 1982 by the political scientist Mancur Olson in his book, The Rise and Decline of Nations. Seen from this perspective, crises of legitimacy arise due to intensifying conflict between rising selection pressure and a high K organization's inability to make the changes necessary to increase its chances of survival.

The third approach to the legitimacy issue is based on social network dynamics, and the way information, ideas, and behavioral norms propagate through them. A social network is defined by individual people and the links between them. Different network types are defined by the structure and nature of these links. Many social networks are so-called "scale free" networks, because the number of links per individual follows a power law (exponential) distribution, with most people having relatively few links to others, while a few individuals are very highly connected. In some cases, a single link between individuals is sufficient to transmit information or an infection, as in the case of social network models of opinion formation or influenza infection. However, there are also situations where a single link between two individuals is not sufficient to generate transmission. As described by Centola and Macy (in their paper, "Complex Contagions and the Weakness of Long Ties"), "when behaviors are costly, risky or controversial, the willingness to participate [i.e., to change one's behavior] may require independent affirmation or reinforcement from multiple sources. We call these 'complex contagions' because successful transmission requires interaction with multiple carriers...Many collective behaviors involve complex contagions that require social affirmation or reinforcement from multiple sources...For complex contagions to spread, multiple sources of activation are required." Hence, complex contagions are more likely to spread when individuals in a network observe the new behavior or belief in a significant number of the other individuals to whom they are linked. Other research has estimated that for most people, the maximum size of this socially relevant group is about 150 (see "Neocortex Size as a Constraint on Group Size in Primates" by Robert Dunbar).

More specifically, two conditions are required for the transmission of a complex contagion. First, an individual has to be susceptible to it, in the sense that his or her current behavior or beliefs are not achieving goals or satisfying needs that are important to the individual. Second, a threshold must be met, with a minimum number of other linked individuals adopting the new behavior or belief (for good new paper on modeling these transitions, see “From Theory to Simulation: They Dynamic Political Hierarchy in Country Virtualization Models” by Lustick, Alcorn, Garces and Ruvinsky).

In the context of the changes in collective beliefs and behavior that triggers a political legitimacy crisis, we believe the susceptibility criterion is ultimately grounded in a sufficient number of people fearing for their future. In our view, one must have a very powerful motivator to question the legitimacy of a political system, and only fear can provide that. In previous issues, we have written at length about the complex neurobiology of fear, and the role played by the amygdala (a primitive part of our brain). To simplify, there are two key primary fear triggers: the experience of uncertainty, and the experience of loss. The latter can be either absolute, as in the loss of resources, or relative, as in the loss of social standing. Once primary fear is triggered, people also experience a heightened secondary fear of social isolation. All of these emotional reactions probably increased our ancestors’ chances for survival on the East African plain, and are therefore likely hardwired into us as human beings.

With respect to the threshold criterion, research has shown that there is a complicated relationship between the emotions triggered by gains and losses and whether they result from our action or inaction, as shown in the following table:

	Result = Gain	Result = Loss
Action (Commission)	<i>Gain for Self Triggers Pride</i>	<i>Loss for Self Triggers Regret</i>
Inaction (Omission)	<i>Gain for Others (but not Self) Triggers Envy</i>	<i>Loss for Others (but not Self) Triggers Relief</i>

More specifically, human beings' emotional reaction to gains and losses, and preferences for errors of commission and omission, seem to be deeply connected with whether those gains and losses are private or visible to a socially important group. When they know the results will be private, human beings prefer errors of omission, in order to avoid feeling regret. However, when the results will be public, they prefer errors of commission to avoid feelings of envy (see "Interdependent Utilities: How Social Ranking Affects Choice Behavior" by Bault, Coricelli, and Rustichini). Think of this as a switch from a system dominated by negative feedback to one dominated by positive feedback. From this perspective, political legitimacy crises result when a social network passes two critical points: first, feelings of fear in a sufficiently large number of people, and second, a willingness to go beyond our natural preference for errors of omission rather than errors of commission, because enough socially important individuals to whom an individual is linked are adopting new beliefs and behaviors.

This is not to say that all situations that pass the susceptibility and social threshold tests will trigger a legitimacy crisis or meet with success. A full blown crisis requires that collective action is undertaken not just by isolated local networks of individuals, but by many such networks in parallel. In this regard, modern technology has made this transition much more likely, as it has enabled the creation of vastly more network links, both between local individuals and between local networks themselves. So called "flash mobs" are one example of this, as are the "color revolutions" we have seen in recent years. However, as China showed at Tiananmen Square in 1989, and Iran showed more recently, the fact that a legitimacy crisis erupts is no guarantee that it will bring immediate results in a positive direction, particularly when a threatened group has greater willingness and ability to use force to preserve the current system. However, that willingness is itself grounded in a social network phenomenon, whether it was China's use of soldiers from the remote far western region of the country to attack the Tiananmen protestors, or Iran's use of the Basij militia to repress the building Green Revolution. In other cases (e.g., East Germany in

1989), that willingness was undermined when a sufficiently large number of a group capable of using force observed the opposition to this by enough members of their individual networks. In this regard, a common characteristic of both the Chinese and Iranian experience was the relative isolation (either physical, in the case of the Chinese soldiers, or cultural, in the case of the Basij) of the groups employed by the respective regimes to use force to repress political legitimacy crises and the mass collective action they triggered.

Let us now turn from deductive to inductive frameworks for understanding legitimacy crises. Perhaps the best of these has been developed by the Political Instability Task Force, a group of scholars that was originally formed in 1994 and whose work was funded by the U.S. Central Intelligence Agency (the task force's public website can be found at <http://globalpolicy.gmu.edu/pitf/>). In their paper "Modeling Transitions To and From Democracy", Ulfelder and Lustik summarize the key factors that are associated with these two types of political legitimacy crises (see also, "How to Construct Stable Democracies" by Goldstone and Ulfelder):

<i>Transitions from Authoritarian to Democratic Systems</i>	<i>Transitions from Democratic to Authoritarian Systems</i>
<ul style="list-style-type: none"> • Improving economic conditions, when country has previous experience with democracy (when it does not, improving economic conditions lower the probability of transition). Decreasing economic performance increases probability of transition. 	<ul style="list-style-type: none"> • Increasingly factionalized political competition increases the probability of transition. This is characterized by (1) heightened parochialism (major political parties focus on interest of narrow group, rather than nation as a whole); (2) heightened polarization (competition over central authority increasingly a winner-take-all struggle); and (3) rising mobilization (rival groups pursuing interests through collective action)
<ul style="list-style-type: none"> • Higher share of state revenues from 	<ul style="list-style-type: none"> • Deteriorating economic

<i>Transitions from Authoritarian to Democratic Systems</i>	<i>Transitions from Democratic to Authoritarian Systems</i>
minerals or hydrocarbons reduces probability of transition	performance increases the probability of transition
<ul style="list-style-type: none"> • Higher civil liberties increases probability of transition 	<ul style="list-style-type: none"> • Risk for new democracies is highest between years 2 to 15
<ul style="list-style-type: none"> • Non-violent collective actions within past three years increases probability of transition 	
<ul style="list-style-type: none"> • Recent leadership change increases probability of transition 	

Let us now move from theoretical frameworks for predicting the onset of legitimacy crises, and look at evidence that is not consistent with the hypothesis that we will not face political legitimacy crises over the next few years.

From a complex adaptive systems perspective, there is ample evidence that selection pressures have been increasing in recent years. In labor markets, workers have found their jobs and incomes under growing pressure from the twin forces of more intense global competition and more effective information technology (see, for example, Acemoglu and Autor's excellent new paper, "Skills, Tasks, and Technologies: Implications for Employment and Earnings", and David Autor's must-read, "The Polarization of Job Opportunities in the U.S. Labor Market" – both of which can be found on www.ssrn.com). The result has been a widening income distribution in many countries, the consumption and political effects of which were, until 2008, somewhat reduced by rising levels of household debt. But now those chickens have come home to roost. In the markets for goods and services, companies in an ever widening number of sectors and countries have faced intensifying competition, and constant pressure to deliver ever more value to customers while increasing the returns they provide to their investors – or else. One could even argue that selection pressures have increased at the level of the nation-state itself, with an increasingly

fierce struggle to capture or hold a share of declining global aggregate demand and/or maintain access to resources that are in increasingly short supply (e.g., possibly entrepreneurs, probably oil, and certainly rare earth metals).

There is also evidence that in many cases, either fitness metrics are increasingly at odds with selection criteria, and/or that fitness improvement in the face of intensifying selection pressure has been constrained by political paralysis caused by factional competition. For example, in the United States, there has been a sharp increase in public anger at the poor value for money produced by public schools, and at the teachers unions that are perceived to be a central obstacle to progress. Recent years have seen a substantial increase in public critiques of the U.S. public school system. To cite but one, in 2005, the National Academies published a landmark report (“The Gathering Storm”) that focused on “the ability of America and Americans’ to compete for jobs in the global economy.” It concluded that “a primary driver of the future economy and concomitant creation of jobs will be innovation”, and it “assessed the principal ingredients of innovation and competitiveness: knowledge capital, human capital and a creative ecosystem...The most pervasive concern was considered to be the state of United States’ K-12 education, which on average is a laggard among industrial economies, while costing more per student than any other OECD country.” Indeed, as President Obama recently noted, (in his speech to the National Urban League), “education is an economic issue, if not the economic issue of our time.”

This year, the “Gathering Storm” report was updated. “The unanimous view...is that [the United States’] outlook has worsened...Our public school system...has shown little sign of improvement, particularly in mathematics and science...[and that] the outlook for America to compete for quality jobs has further deteriorated over the past five years.” The report somberly concludes that “the Gathering Storm increasingly appears to be a Category 5” (see “Rising Above the Gathering Storm, Revisited” published by the National Academy of Sciences). Despite these reports, America’s teachers unions have resisted changes that would differentially compensate teachers on the basis of performance, and make it easier to terminate poor performers and implement new innovations in public schools. At the same time, teachers unions have

continued to demand ever higher compensation and benefits from already overstretched and uncertain taxpayers. Evidence of the growing public resentment of teachers that these trends have produced is found not only in polling data (where respect for them has plummeted), but also in a just released new movie, “Waiting for Superman”, that was made by Davis Guggenheim, who also made “An Inconvenient Truth.” From a social network perspective, growing doubts about the legitimacy of public school governance (and in particular, the role played by teachers unions) reflects both a susceptibility trigger (fear for your children’s future standard of living, and/or fear for the country’s future ability to compete) and a threshold trigger (realization that others in your social network, as well as the broader society share your frustration, shared agreement on the source of the problem). What we have yet to see are opportunities for collective behavior to change this situation; however, it seems clear that all the preconditions for this to occur have been met.

America’s public school experience is just one part of a growing conflict throughout the developed world between public sector employees who are generally unionized, well-compensated, and fiercely resistant to change, and a much larger public that is demanding much more effective, efficient and adaptable government that they know is critical to their ability to cope with the rising selection pressures they face in different aspects of their lives (e.g., see “America’s Public Servants are Now Its Masters” by Mort Zuckerman in the 9Sep10 *Financial Times*). Again, all the precursors for a legitimacy crisis seem to be in place, from a mismatch between fitness and selection metrics (e.g., politicians who give in to union demands to get reelected, even as those demands are slowly bankrupting governments); well-organized interest groups that frustrate change in the face of growing selection pressure; and fearful people who increasingly realize that others in their network share their frustration and who are ready to engage in collective behavior to change the threatening situation.

In turn, this has led to growing frustration in many countries with political systems and politicians that seem unable to either create legislative majorities for, and/or ensure bureaucratic implementation of, changes that are critical to coping with intensifying selection pressures (see, for example, Peggy Noonan on “Why It’s Time

for the Tea Party” in the 17Sep10 *Wall Street Journal*, Tom Friedman on “The Tea Kettle Movement” in the 28Sep10 *New York Times*, David Brooks on “The Responsibility Deficit” in the 23Sep10 *New York Times*, and Joel Kotkin’s “The Golden State’s War on Itself” in the Summer 2010 *City Journal*). From a social network perspective, more and more people are fearful for their jobs and their futures, and increasingly frustrated by the inability of the political system to respond in a manner that reduces these fears. More important, they increasingly realize that many other people in their social networks – and in similar networks around their countries, if not the world – share their fear. The Tea Party movement in the United States is a logical result of this situation, and shows that for a growing number of people, the collective action threshold has been passed.

However, this still begs the question of the extent to which these growing frustrations and signs of collective action are translating into a growing crisis of political legitimacy. In our view, there is evidence that this is, in fact, occurring. For example, a growing number of commentators have noted the sharply widening gap in the United States, and likely in other countries as well, between the views of the elite and the views of the masses. For example, the pollster Scott Rasmussen has found that 68% of likely voters “say the political class doesn’t care what most Americans think”, while 84% say that America is headed in the wrong direction. In contrast, 67% of what Rasmussen terms the “political class” thinks America is headed in the right direction (for more of his analysis, see Rasmussen’s recently published book, [In Search of Self Governance](#)). Peggy Noonan also captured this sentiment in a recent *Wall Street Journal* column (“America Is At Risk of Boiling Over”, 6Aug10). She notes that “The biggest change in my political lifetime is that Americans no longer assume that their children will have it better than they did. This is a huge break with the past, with assumptions and traditions that have shaped us.” She then asks, “but do our political leaders have any sense of what people are feeling deep down? They don’t act as if they do. I think their detachment from how normal people think is more dangerous and disturbing than it has been in the past...I’ve never seen the gap wider than it is now. I think it is a chasm...When the adults of a great nation feel long term pessimism, it only

makes matters worse when those in authority take actions that reveal their detachment from those concerns – even from the essential nature of their fellow citizens. And it makes those citizens feel powerless. Inner pessimism and powerlessness: That is a dangerous combination.”

In the July/August 2010 edition of the *American Spectator*, professor Angelo Codevilla offers an extensive analysis of this growing split in his article “America’s Ruling Class – And the Perils of Revolution.” He begins with an examination of the nature of what he terms the United States’ “ruling” or “political class” and the widening gap between the nation’s leaders and the led – what Codevilla terms the Country Class. He also shows how difficult it will be to use existing institutions to enact the Country Class’s agenda, in large part because of America’s “lost capacity for self-governance” due to the takeover of local governments by public sector unions, the limits placed on local action by federal regulations and judicial decisions, and the “takeover of the federal government by interest groups.” Codevilla darkly concludes that, “for the foreseeable future, American politics will consist of a prolonged confrontation between the Ruling Class and the much larger Country Class.”

Is this increasing tension unique to the United States? There is growing evidence that is not. To cite just a few examples, the imposition of austerity to solve the problem of excessive leverage has led to riots and street demonstrations in Europe, improving electoral results for far right parties, and a large number of articles questioning the sustainability of the Euro and perhaps the European Union itself. On the other side of the world, there are increasing indicators of threats to the legitimacy of domestic Chinese political institutions, from growing concerns with corruption, environmental degradation and income inequality, to rising labor unrest and demands for higher wages, to complaints about property price rises that put middle class aspirations increasingly out of reach, to growing worries about the social impact of rising unemployment as China’s export model is hobbled by a weak global economy, to the policy paralysis induced by competing interest groups that has been well-described by analysts like Andy Xie and Michael Pettis. We have previously noted our belief that China’s growing nationalism and aggressive military actions are a direct

result of its growing domestic legitimacy crisis. This theme has also been the subject of an increasing number of recent articles, including “The Remilitarization of Beijing” by Gordon Chang in the 21Sep10 edition of *The Diplomat*, “China’s Muscle Flexing is a Sign of Weakness” by David Holslag in the 27Sep10 *Financial Times*, “A Recipe for Trouble in China’s Backyard” by David Pilling in the 29Sep10 *Financial Times*, and Gillian Tett’s brief review of how economic and political crises led to the radicalization of Japan in the 1930s (“A Cautionary Tale About Exit Strategies from 1930s Japan” in the 2Sep10 *Financial Times*).

In our view, the most likely short-term consequence of the legitimacy crises that are developing around the world will be a change in the nature of the institutions governing the international monetary and trade systems. That these are under great pressure today is undeniable. As foreseen by John Maynard Keynes in the 1930s, the great weakness of the current monetary system is that it cannot force adjustment on a country with a large current account surplus and rapidly growing foreign exchange reserves that is intervening to keep its exchange rate artificially low, and in so doing sapping both aggregate demand and employment from its trading partners. Commentators such as the *Financial Times*’ Martin Wolf have repeatedly noted that this description perfectly fits China today, that current trends cannot continue indefinitely, and that there is a rapidly rising probability that they will end badly. For example, Brazil’s Finance Minister, Guido Mantega, recently declared that “we are in the midst of an international currency war, a general weakening of the currency [that] threatens us because it takes away our competitiveness” in a world where governments are competing to reduce their exchange rates in order to boost export sales to avoid the need for austerity in a world of high leverage and weak aggregate demand. As Martin Wolf notes in “Currencies Clash in a New Age of Beggar-My-Neighbor” (*Financial Times*, 28Sep10), today “we are seeing a form of monetary warfare: in effect, the U.S. is seeking to inflate China, and China to deflate the U.S. Both sides are convinced they are right; neither is succeeding; and the rest of the world suffers.” In a recent column, Robert Samuelson writes about where this process is likely to lead (“Risking a Trade War With China” *realclearpolitics.com*, 27Sep10),

noting that “the trouble is that China has never genuinely accepted the basic rules governing the world economy. China follows those rules when they suit its interests and rejects, modifies, or ignores them when they don’t...Most other countries support the legitimacy of the rules” even when that requires short term sacrifices on their part. Samuelson continues, “the post-World War Two trading system was build on the principle of mutual advantage, and that principle, though often compromised, has endured. China wants a trading system subordinated to its needs: ample export markets to support the jobs necessary to keep the Communist Party in power; captive sources for oil, foodstuffs and other essential raw materials; and technological superiority. Other countries win or lose, depending on how well they serve China’s interests. The collision is between two concepts of world order. As the old order’s main architect and guardian, the United States faces a dreadful choice: resist Chinese ambitions and risk a trade war in which everyone loses; or do nothing and let China remake the trading system. The first would be dangerous; the second, potentially disastrous.”

Samuelson isn’t alone in these thoughts. The growing legitimacy crisis for the international monetary and trade system was also the subject of a recent report from the U.S. National Intelligence Council, titled “Global Governance 2025: At a Critical Juncture”. It begins by noting that while on the one hand, “the effects of rapid globalization are driving demands for more effective global governance,” on the other hand, “the gap between increasing disorder and weakening governance structures is widening.” The report describes four scenarios for the possible future outcomes of these trends:

- **“Scenario 1: Barely Keeping Afloat.** In this scenario, seen as the most likely one over the next several years, no one crisis will be so overwhelming as to threaten the international system...Crises are dealt with ad hoc, and temporary frameworks or institutions are devised to avert the most threatening aspects of them...Formal institutions remain unreformed...This

future is not sustainable over the longer term, as it depends on no crisis being so unmanageable as to overwhelm the international system.”

- **“Scenario 2: Fragmentation.** Powerful states and regions try to wall themselves off from outside threats. Asia builds a regional order that is economically self-sufficient. Global communications ensure that globalization does not die, but it slows significantly. Europe turns its focus inward as it wrestles with growing discontent and declining living standards...The U.S. might be fiscally constrained if its budgetary shortfalls and long-term debt problems remain unresolved.”
- **“Scenario 3: Concert of Europe Redux.** Severe threats to the international system prompt greater cooperation on solving global problems, and significant reform of the international system becomes possible... The U.S. shares power, while China and India increase their burden sharing and the EU takes on a bigger role...Although less likely than the first two scenarios in the immediate future, this scenario might prove the best outcome over the longer term.”
- **“Scenario 4: Conflict Trumps Cooperation.** This scenario is among the least likely, but the possibility cannot be dismissed. The international system becomes threatened due to domestic disruptions, particularly in emerging powers such as China. Nationalistic pressures build as middle class aspirations are stymied. Tensions build between the United States and China, but also among some of the BRICs [Brazil, Russia, India, China] as competition grows for scarce resources and clients...Suspicious and tensions make reforming global institutions impossible; budding regional efforts, particularly in Asia, are also undermined.”

In sum, we see widespread evidence today of an accelerating decline in the perceived legitimacy of the political institutions that govern the behavior of critical aspects of the global economic system. We believe that this legitimacy crisis is most visible today at the international level. However, there is also evidence that domestic legitimacy crises are also building in the United States, China and the European Union. This trend represents a significant source of increased uncertainty for the operation of financial markets and the future returns on different asset classes. For the past few years, our downside scenario has included a return to a world of de facto or de jure blocs, including the Anglosphere nations (possibly allied with Japan, India and Latin America), the Sinosphere, and a greatly weakened Eurozone (with Russia's allegiance an uncertainty, and the Middle East, a battleground, in the absence of a biofuels or vehicle electrification breakthrough). Today, we believe the probability of this scenario developing is higher than it ever has been before. If it does come to pass, there is a high likelihood of increased restrictions on international capital movements. A world of competing blocs would also likely see increased portfolio allocations to real and nominal return government bonds, gold, and perhaps energy vehicles (e.g., stocks and MLPs), commercial property and timber as more investors seek a combination of liquidity and long-term stores of real value. Asset classes more dependent on growth, and especially on global growth, such as commodities and equities, are likely to perform poorly under this scenario (though industries seeing a shift from foreign to domestic production, as well as defense-related stocks, may be the exceptions to this rule). Cross border investments would likely see either increased correlations (within blocs) or declining attractiveness (across blocs).

In sum, while the threats posed by deleveraging, inadequate aggregate demand, and deflation are more visible, it may well be that rising threats to political legitimacy will have the greatest impact on asset class returns over the next five to ten years.

Global Asset Class Valuation Analysis

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