William Blair

November 30, 2011

Brian D. Singer, CFA

Dynamic Allocation
Strategies Team

Antecedent Analysis and Strategy Counsel

Now It's Beginning to Get Personal

Antecedent counsel is provided as internal guidance to our portfolio managers and analysts. This counsel is not a forecast and has a longer time horizon than our commentaries. We use this guidance to inform our fundamental analysis, having measurable impact on our model inputs. Antecedent counsel should assist our clients in understanding our analysis and strategies.

In theory, financial institutions should be allowed to fail. Alas, we don't live in theory, we live in reality, and in reality the existence of central banks (and other institutions) systematize financial institution risk by fostering greater connectedness between these institutions. In Europe, the European Central Bank (ECB) systematizes not only financial institution risk, but also sovereign risk. In the presence of systematized risk, it is inappropriate for central banks to ignore the plight of weakened financial institutions as if their problems were unique and unconnected.

In the United States, especially after market participants identified the "Greenspan put" (the willingness of the Federal Reserve to provide liquidity in anticipation of capital market disturbances), the Federal Reserve implied and upheld a too-big-to-fail policy. In Europe, the ECB embraces a Bundesbank heritage and is extremely reluctant to defend financial or sovereign institutions. Buba acts as if none of the 17 members of the European Monetary Union (EMU) is connected in anyway. Yet increased connectedness of financial institutions glows like the white hot metal on the edge of a knife. On the one hand, it supports tremendous resource, trade, and capital efficiency. On the other hand, it is a transport system supporting contagion. In a highly connected system, leaders cannot act solely in direct self-interest and achieve superior outcomes. Rather, leaders must consider direct self-interest, indirect feedback loops, and a nearly unconscionable array of unintended consequences.

Economist Paul Krugman observes that the leaders of closely aligned entities must decide their course not because it would be prudent, but because a rapidly developing climate of mutual fear leads them to conclude it would be prudent to be prudent.[1] It is in this environment that we contemplate the current liquidity and solvency crises that permeate many developed countries.

Liquidity and Solvency – a Dynamic Duo

It is never possible to cleanly separate solvency troubles from liquidity troubles since they usually take place together. However, understanding the relative importance of liquidity and solvency is of the upmost importance for investors, since they result in very different investment opportunities and risks. "Liquidity" refers to the ability to meet current and short-term cash payments. A liquidity crisis would mean that an entity would be unable to acquire enough cash to make upcoming debt interest or principal payments. Sometimes this is referred to as a funding or credit crisis because the entity cannot procure short-term funding (credit) to meet upcoming cash flow obligations.

Insolvency is a longer-term situation in which an entity's liabilities (debt, loans, and other obligations) exceed its assets. Insolvency involves a total debt burden (liability) that is too large to extinguish by liquidating all of the entity's assets at current market prices. Illiquidity could be the inability to meet upcoming interest payments, whereas insolvency could be the inability to extinguish the full debt burden.

A liquidity crisis can quickly produce a solvency crisis. Conversely, a solvency crisis can also engender a liquidity crisis if creditors decide it is prudent to be prudent and

[1] Didier Sornette cites Paul Krugman's use of this phrase in *Why Stock Markets Crash: Critical Events in Complex Financial Systems*, Princeton University Press, 2003, pp. 395, 396.

restrict or refuse to extend credit. This dynamic can result in a vicious cycle of liquidity and solvency getting out of control.

Lastly, the more connected an entity is to others, the more likely a liquidity or solvency issue can compound, leading to a more rapid loss of control and a larger burden on society.

As the 2008 credit crisis showed, a lender of last resort can play a crucial role in breaking the vicious liquidity/solvency cycle. Any institution that can extend enough credit can ensure the liquidity of the market. Currently, central banks primarily fulfill this role for financial institutions and sovereigns, focusing on funding issues that escalated extraordinarily. The 2008 developments obliged the Troubled Asset Relief Program (TARP) Treasury program to authorize $700 billion of asset purchases from financial institutions to stanch the solvency transmission mechanism.

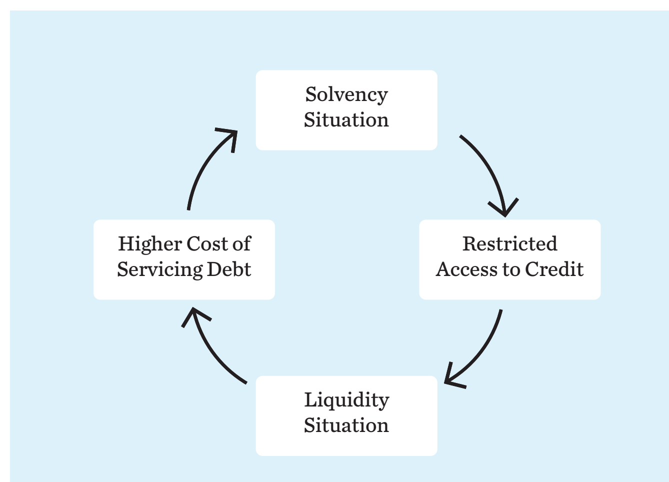
The following table provides guidance with respect to policy response outcomes from liquidity provision by governing authorities. Note that providing liquidity in a liquidity crisis results in positive outcomes, whereas it is negative in a solvency crisis because illiquidity is not the problem, it is merely a symptom. Solvency crises require the adoption of strong growth and debt-management policies. In all instances, the outcomes are bimodally extreme as a result of the significance of the situations and policy responses.

	Provide Liquidity	Do NOT Provide Liqudity
Liquidity Crisis (Outcome)	2008 Credit Crisis (+++)	Great Depression (---)
Solvency Crisis (Outcome)	Japan Lost Decade (---)	1992 Swedish Bank Insolvency (++)

While people are generally knowledgeable about most of these crises, the Swedish insolvency crisis that culminated in 1992 requires some background. Following the financial deregulation in the mid-1980s, Sweden embarked on a rapid expansion of credit, and private borrowing grew by 136% (73% in real terms).[2]

The credit expansion fed both a consumption spree and a boom real estate. The real estate speculation culminated in a bubble that burst in 1990, with prices falling more than 50% in 1990 alone. Interest rates began rising in the late 1980s, peaking in 1990, with another spike in short-term rates occurring in 1992.

Cycle of liquidity and solvency getting out of control



Repo rates spiked to more than 500% in the fall of 1992.[3] The banking system was effectively insolvent. *The New York Times* reports that, "Sweden did not just bail out its financial institutions by having the government take over the bad debts. It extracted pounds of flesh from bank shareholders before writing checks. Banks had to write down losses and issue warrants to the government . . . Sweden spent four percent of its gross domestic product .. . to rescue ailing banks. That is slightly less, proportionate to the national economy, than the $700 billion"[4] that the TARP program was expected to cost the United States. Important elements of the Swedish solution addressed both solvency and liquidity issues to avoid feedback loops[5]:

1. *unlimited guarantee* of losses by depositors and counterparties to Swedish credit institutions
2. mandate for support policies given to new agency, the *Bank Support Authority*, operating at arm's length from the political sphere
3. common framework for deciding *which banks to reconstruct and to liquidate*
4. strict valuation rules to restore confidence; bank *assets had to be marked-to-market* even if the market was exceptionally weak
5. *no measures to rescue or reconstruct nonfinancial companies*

[2] The Swedish Banking Crisis: Roots and Consequences, Peter Englund, *Oxford Review of Economic Policy*, Vol. 15, 1999, pp. 84, 85.
[3] *Financial Crisis – Experiences from Sweden*, Lars Heikensten, July, 15 1998, speech at seminar arranged by the Swedish Embassy, Seoul, Korea.
[4] Stopping a Financial Crisis, the Swedish Way, *The New York Times*, Carter Dougherty, September 22, 2008.
[5] *Financial Crisis – Experiences from Sweden*, Lars Heikensten, July, 15 1998, speech at seminar arranged by the Swedish Embassy, Seoul, Korea.

6. splitting an ailing bank into good and bad parts and transferring the *bad assets to asset management corporations at carefully assessed market values for subsequent sale*

Confidence in the Swedish economy did not return for about two years after implementation of these measures. It is hard to determine if regaining confidence took so long because of the prior policy mistakes or because of standard risk aversion and skepticism. It is likely the case that a political consensus for decisive and transparent action to force the incursion of losses prevented a larger downturn and a longer duration of mistrust.

There is no such thing as a free lunch

While illiquidity and insolvency are not mutually exclusive, most of the immediate crisis in Europe is primarily an acute liquidity or funding event. Unfortunately, German Chancellor Angela Merkel remains staunchly against allowing the ECB to provide sufficient liquidity to defuse the situation. Similarly, Chancellor Merkel does not support the issuance of Eurobonds to relieve funding problems. Chancellor Merkel's reluctance is understandable as these solutions do not adequately address solvency problems of profligate EMU members and also impose financial burdens on the German populace, an unwanted obligation subsequent to the pain of absorbing East Germany.

The Great Depression provides a rough window into the outcome of restricted liquidity during a liquidity crisis. During the Great Depression, the contraction of credit was so large that insolvency swiftly followed. Monetary aggregates, due to the dedication of policymakers to preserving the gold standard and their attachment to policy guides that gave erroneous information about monetary conditions, declined by about one-third from the late-1920s peak to the early-1930s trough.[6]

Lessons from the Great Depression early in the last century and the Swedish bank insolvency near the end provide perspective and guidance for our contemplation of the world today.

No doubt, liquidity backstopping via the ECB or issuance of Eurobonds would relieve the overwhelming immediate uncertainty that blankets global equity and bond markets and currencies. The potential for staunch Teutonic discipline is terrifying for markets, and the knowledge from prior experience that constrained liquidity can launch a vicious cycle of illiquidity, insolvency, and asset price declines has led many investors to conclude that it is prudent to be prudent and exit risky assets.

We believe that world leaders are well aware of the fire with which Chancellor Merkel is playing. While nobody knows her precise motivation, we believe that she is playing a high-stakes game to extract fiscal concessions that address chronic solvency issues for Germany's compromise with respect to the acute problems of liquidity. Of the main players, we grade liquidity and solvency problems as follows: (The more ×'s by a country, the worse the liquidity or solvency situation.)

	ILLIQUIDITY	INSOLVENCY
Germany		×
France	××	××
Portugal	×××	×××
Italy	×××	××××
Ireland	××	×××
Greece	×××××	×××××
Spain	×××	×××

For reference, we would assess the United States as follows: illiquidity (Ø) and insolvency (×××)

While this game could go terribly wrong, we believe that Merkel's resolve to extract concessions and to resist alleviating the liquidity problem will break before EMU collapse under the strain of global economic pain and political pressure. Anecdotally, we observe the following recent comments and observations:

- Jacek Rostowski, Polish finance minister, has called for "extremely forceful" action "to stabilize the markets in a very decisive way."
- Mario Draghi, president of the ECB, commented in a December 1 speech that, "Fundamental questions are being raised and they call for an answer. At the heart of these questions are not only the credibility of governments' policies and the actual delivery of the promised reforms, but also the overall design of our common fiscal governance." Further, he said, "Other elements

[6] "Monetary Policy in the Great Depression: What the Fed Did, and Why," David C. Wheelock, St. Louis Federal Reserve Research Publication, March/April 1992.

might follow, but the sequencing matters. And it is first and foremost important to get a commonly shared fiscal compact right. Confidence works backwards: if there is an anchor in the long term [think of addressing the chronic fiscal/solvency issues], it is easier to maintain trust in the short term [think of solving the acute liquidity issues]." Lastly, in what appears to be a pointed attack on Chancellor Merkel, Mr. Draghi said, "Far-reaching Treaty changes [like those for which Merkel is holding out] should not be discarded, but faster processes are also conceivable."

- The 10-year German bund yield relative to the U.S. 10-year note increased from a spread of -0.30% to a high of +0.30% in November, flagging an emerging confidence deficit in German leadership.
- The Financial Times revealed the following, "For a summit with a continent in crisis, this week's meeting between Barack Obama and European leaders was a strangely low-key affair. Behind the scenes, there is a morbid fear about a Eurozone meltdown and its flow-on impact on the US economy and the president's re-election chances. Mr. Obama was diplomatic. His ambassador to the European Union, William Kennard, was more blunt, saying: 'The president has made clear repeatedly he would like to see bolder, quicker, more decisive action by European leaders.'" Note that the political election game the Financial Times opines President Obama is playing has a different objective than the liquidity/solvency game being played throughout most of Europe.
- "Everyone knows what needs to be done to ensure financial stability," Jean-Claude Juncker, the Eurogroup president, told reporters. "I cannot speak, however, on behalf of the European Central Bank."

The inexorable pull of fundamental values gets blurred behind the noise of this multiplayer brinksmanship of daily political games. Absent a terrible miscalculation, we suspect that the likely path will be a protraction of the wild volatility that we have experienced in recent months followed by a resolution of European liquidity problems—not full resolution of solvency problems—sharply higher equity prices, and a reversal of the safe-haven demand for U.S. and German sovereign debt.

We would love to wake up one morning to read about news supporting ongoing strong economic growth and solid fundamentals and to have the opportunity to buy risky assets at prices well below fundamental values. Unfortunately, an investor's life is never one of free lunches. The opportunity for superior returns comes at the cost of great uncertainty. Usually, investors' uncertainty is associated with the intrinsic values of the assets they buy and sell. Today, it is about not only asset values, but also game theory in the guise of political gamesmanship. Moreover, these are high-stakes games that have bimodal outcomes. Resolution relieves uncertainty and fosters tremendous asset price strength. Miscalculations can lead to significant asset depreciation.

However, the unrelenting uncertainty that began in 2008 and continues through today has likely been the source of an overwhelming portion of current discrepancies between prices and fundamental values. Consequently, we believe that market fear is nearly, if not fully, reflected in equity prices between current levels and September lows.

From Act One to Act Two of *The "Debt" Tempest*

Our strategies are designed to benefit from the rapid appreciation of risky assets that will likely ensue when Chancellor Merkel and other European leaders finally "capitulate." In the interim, volatility is the price we pay for the opportunity to participate in tremendous equity mispricings. We should always remind ourselves that our value beacons suggest higher equity prices and our understanding of game theory suggests ultimate capitulation, but only after the maximum benefit can be derived from gamesmanship. We are in the midst of the illiquidity crisis endgame.

Over the longer term, we are not too sanguine about a smooth transition from current or even sharply higher equity prices and fundamental values. Conversely, the safe-haven status of certain bond markets, the United States, Germany, and Japan in particular, could not only fall from grace, but also become the new PIIGS. The end of Europe's liquidity problems will provide interim relief, but attention will rapidly shift to unresolved solvency problems. The focus will change and the games will change.

The issues will be less urgent and the downward price pressure will shift from equities to sovereign bonds.

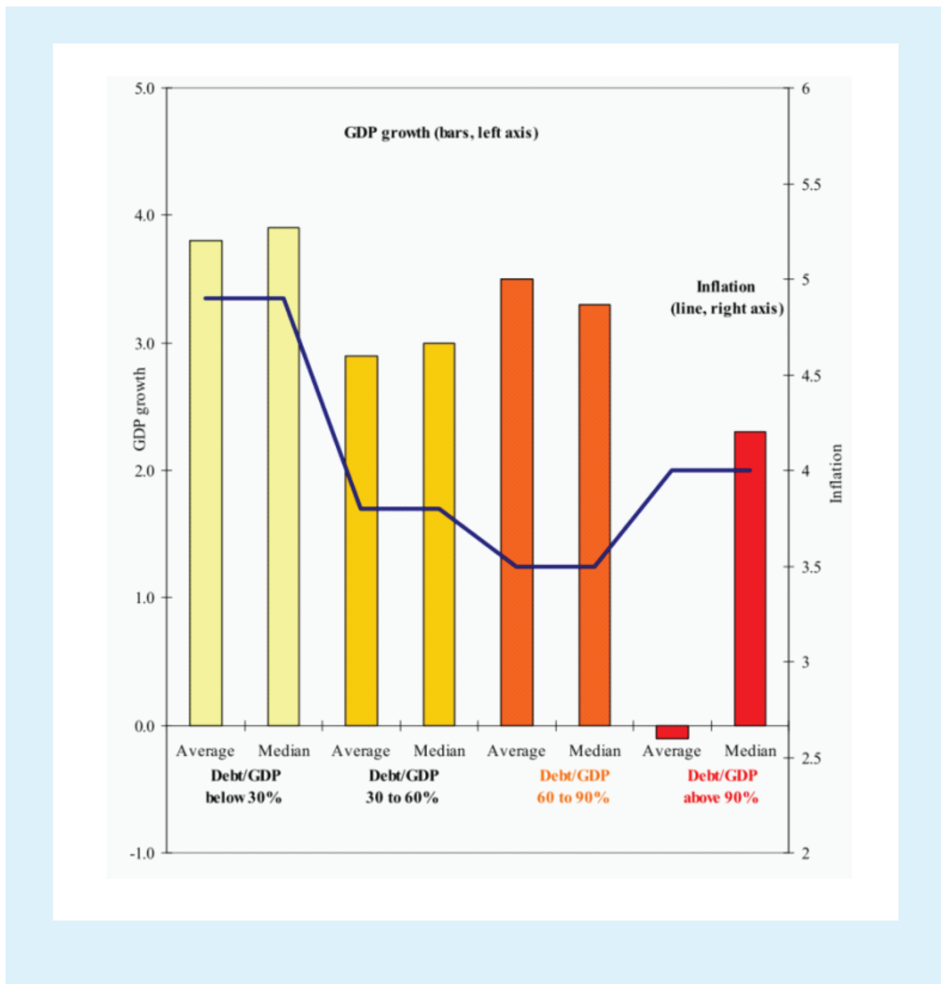
Who will the solvency victims be as the demographic passenger train continues its slow motion collision with the social welfare freight train? Reinhart and Rogoff undertook seminal research that identified an "important marker" of gross public debt-to-GDP above 90% puts growth and stability at risk.[7] This specific number is more arbitrary than current media and market dialogue is willing to acknowledge, but there is no strong relationship below 90% and there is surely a danger zone to heed as debt-to-GDP ratios approach 100%. The chart from Reinhart and Rogoff illustrates the point for advanced economies using data since 1946.

Data for debt-to-GDP in 2010 masks the real problem; at issue is not as much *current* as it is *future* debt that arises from massive social welfare commitments. Public policies and demographics have set in motion a solvency challenge that will dominate the thinking of investors over the coming decades. The Bank for International Settlements (BIS) published an interesting set of projections that provide powerful insight into the developing solvency crisis. U.S. policy commitments stand out as particularly onerous.[8]

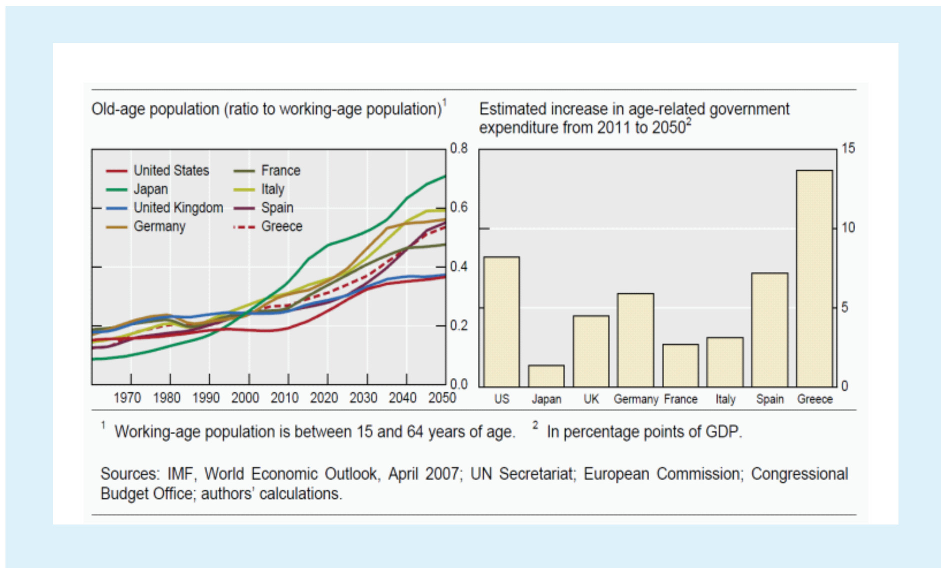
In addition, the authors of this study used this information to project public debt-to-GDP ratios for 12 countries. Clearly, brushing up against 90% is not the issue; poor policy and aging populations are the issues.

The bottom line is that even when the current liquidity crisis is resolved

Reinhart and Rogoff chart



Projected population structure and age-related spending



7 Reinhart, Carman and Kenneth Rogoff, "Growth in a Time of Debt," paper prepared for the *American Economic Review Papers and Proceedings*, January 7, 2010.

8 "The future of public debt: prospects and implications," Stephen Cecchetti, M Mohanty, and Fabrizio Zampolli, BIS Working Papers, No. 300, March 2010.

and markets rally on the renewal of certainty, a much larger solvency problem looms in the offing. The problem is determining when the market shifts from the acute liquidity problem and becomes preoccupied with the chronic solvency problem.

Merkel Versus the People

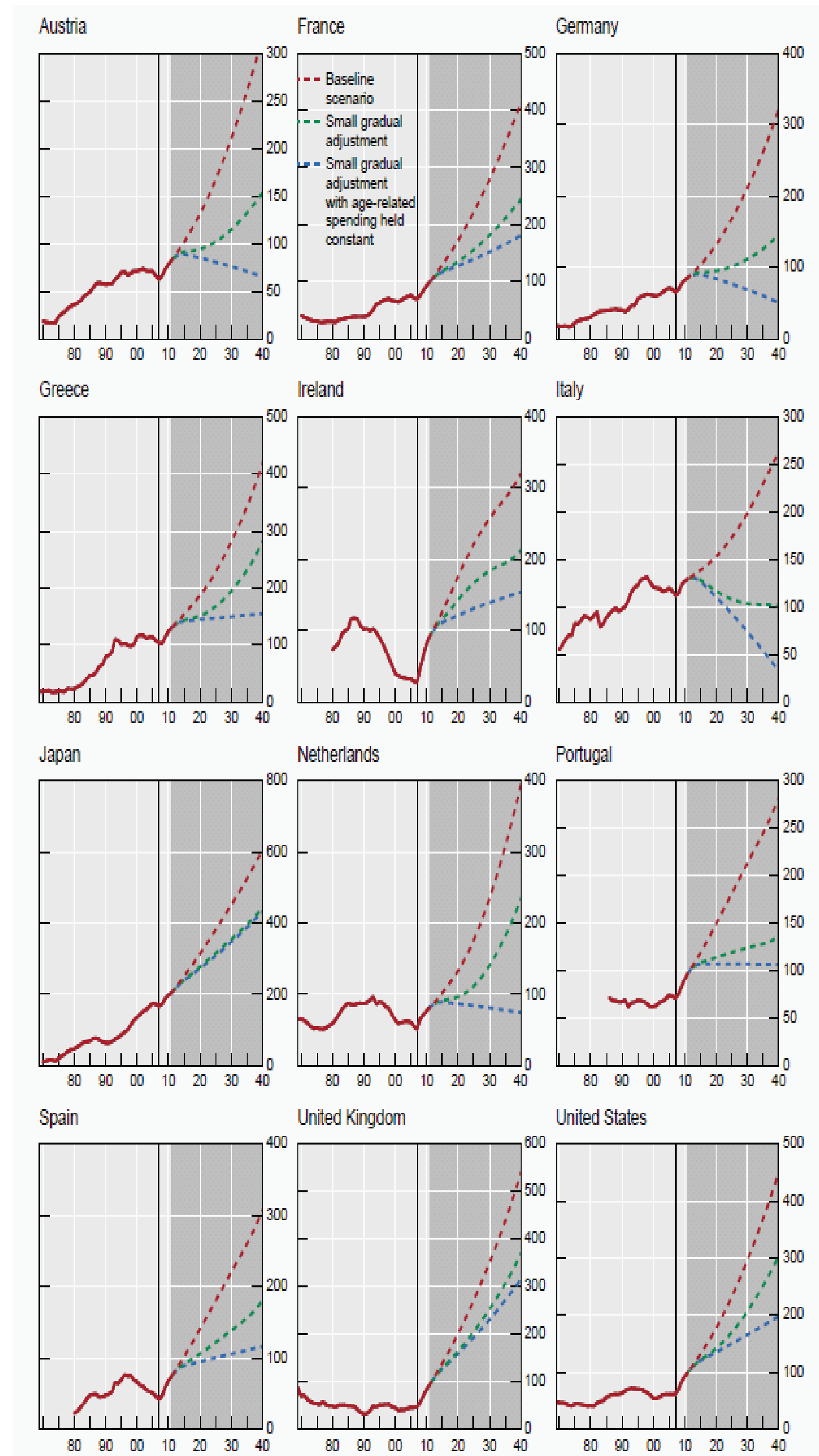
Subsequent to a meeting between the German chancellor and Pope Benedict in Berlin in late September, Chancellor Merkel said they "spoke about the financial markets and the fact that politicians should have the power to make policy for the **people**, and *not be driven by the markets* [emphasis ours]." according to Gideon Rachman of the *Financial Times*.[9]

Mr. Rachman elaborates, saying that last year Angela Merkel said, "There is a kind of battle over what power the financial markets have and how much room for policymaking the politicians have." It was vital, she added, to assert the "primacy of politics." Mr. Rachman goes further to counter cogently Chancellor Merkel's assertion:

> *The markets are not the enemy of European politicians. They are their friends. In fact, they are all that stands between political leaders and angry citizens. If the markets will not lend money to governments, politicians can only get it from one other place – the voters. As Europe is discovering, that means either higher taxes or cuts in public spending.*

The separation between political, and sometimes corporate, elite and the broader population and the public manifestations of these separations

Public debt/GDP projections



[9] *The Financial Times*, Gideon Rachman, November 21, 2011.

> As we interpret economic and political developments and the games played by governing leadership, we must keep overarching background of liquidity and solvency in mind. Resolution of the acute liquidity problems experienced today will likely result in equity price rallies and sovereign debt declines as the current safe-haven status is shed.

provide clues and cultural bases to anticipate developments over the coming years and decades. The clues are reminiscent of the Vietnam War era. On the one hand, we have politicians lashing out at markets and people whom they feel do not understand their grand visions and aspirations for those very same markets and people. For example, during a protest of about 200,000 demonstrators on Washington Mall, then-President Nixon leaned over to an aide and commented, “I simply cannot permit foreign policy to be made on the streets of Washington.” While Nixon’s comment may have been true, it epitomized the divide between a class of people and an elite leadership.

Not unlike Nixon’s 1969 denial of the inevitable policy influence of the voters, Chancellor Merkel has wandered into the same vacuum of leadership, an ivory tower that doles out mandates to the populace assuming it knows better than the unwashed masses.

On the other hand, we have markets functioning as a real-time referendum on public policies and popular protests around the globe, whether it is riots in Greece or the Tea Party or Occupy Wall Street. During the Vietnam War, college students protested the war because they were personally engaged. Almost every student had friends or family fighting in the jungles of Vietnam and they felt estranged by a leadership that seemed void of objective, to them at least. Compounding the estrangement was the realization that the politically connected were able to avoid combat. Yes, the political elite were different.

In the current debt crisis, the communications by politicians and the protests of disaffected peoples are beginning to take on a feel similar to that of the Vietnam War. We do not forecast war, as that is not the basis of the similarity. Rather, culturally and anthropologically, we see growing disaffected classes of people that can and will oppose progression into the future cast by their governing bodies. In particular, as with the Vietnam War, the young disproportionately incur the burden of these policies and it is the young who will, as they have in the past, usher in a new world order.

As the future burden of government liabilities begins to weigh heavily on markets and the younger generation, and the burden of future liabilities becomes personal, we expect increased expressions of anger and public demonstrations. In the United States, the Tea Party and Occupy Wall Street are two manifestations of this anger. To date, most of the political elite have attempted to align with one group or the other, clueless as to the underlying motivation or simply incapable of action in a calcified political process.

In Europe, absent Greece, a stronger culture of collective responsibility limits public displays of anger. In most instances, protests are international, providing local leadership with the ability to avoid immediate displays of accountability.

In the coming decade, probably in the next two to six years, we believe that the mantra of protest will emerge on college campuses. Unlike the current sets of protestors, college students will be reflecting anger at a personal burden and will not have the responsibility of adulthood to inhibit the venting of their anger. It is when these public displays occur that we believe the current clash of growing social welfare encumbrances and public debt colliding with declining labor forces will capture the attention of the political elite and garner resolution. Until then, a patchwork of policy actions, market volatility, and disorganized public displays will remain the norm.

Investment Guidance

As we interpret economic and political developments and the games played by governing leadership, we must keep overarching background of liquidity and solvency in mind. Resolution of the acute liquidity problems experienced

today will likely result in equity price rallies and sovereign debt declines as the current safe-haven status is shed. Witness the 100% S&P 500 rally after the resolution of the 2008 credit crisis. The financial system's funding viability was restored, despite a significant worsening of the U.S. solvency situation. This will not be a sustainable norm. The palliative resolution of the acute liquidity crises will be euphoric but unsustainable.

We suspect that popular realization that the end of social welfare as previously envisioned and the final political engagement to resolve its societal burden will lead to lower prices for risky assets. The laborious process of resolving policy uncertainty and the resource shifts required for companies to optimally position for a new world order will restrain cash flow growth. Moreover, in a period of restrained growth and high debt burdens, central banks of advanced economies will be pressured to debase their currencies (inflate), diminishing their debt burdens to more manageable levels. The adjustment period could be painful if political dithering such as witnessed in recent years persists. While our valuations reflect slow growth and high debt burdens, most market participants will be shocked and market sentiment could turn very negative. Sovereign bond yields are likely to experience substantial increases as huge debt burdens and fears of future inflation overwhelm any safe-haven considerations.

In the interim, we must be nimble and take advantage of asset price extremes. Portfolios positioned today for resolution of the liquidity crisis will need to be repositioned for future inflation, restrained growth, and policy uncertainty in most developed economies. Based on our outlook, we believe that select considerations should be factored into the portfolio decision process.

- Large-capitalization, multinational corporations in these developed economies afford the greatest ability to navigate these tough times.
- Emerging markets do not suffer such burdens, and growing connectedness among the countries, markets, and corporations are safe-havens of a sort.
- It won't pay to be on the opposite side of public debt when the debtor controls the value of the currency. Lending to sovereigns by purchasing public debt seems to be a particularly risky strategy. To be on their side of the trade, short sovereign debt is appropriate.
- Emerging market currencies provide protection against erosion of purchasing power and, therefore, possess good long-term investment advantages. ■

About the Author

Brian Singer, CFA, is the Head of the Dynamic Allocation Strategies Team. Prior to joining William Blair and Company in 2011, he was the Head of Investment Strategies of Singer Partners, LLC. Mr. Singer was the former head of Global Investment Solutions and Americas Chief Investment Officer for UBS Global Asset Management. He was a member of the UBS Group Managing Board and Global Asset Management Executive Committee. Brian is a board member and former chair of the CFA Institute Board of Governors and is also a former member of the Research Foundation of CFA Institute Board of Trustees. He was elected to the Board in 2004 and previously served as chair of the Candidate Curriculum Committee. Brian serves on the Exeter College at Oxford University Endowment Investment Committee and is the chairman of the Milton Friedman inspired organization 'Free To Choose Network.' In 1991, Brian co-wrote a landmark update to one of the pioneering studies on asset allocation, '*Determinants of Portfolio Performance II: An Update,*' with Gary Brinson and Gilbert Beebower. In 2009, Brian was the lead author of '*Investment Leadership and Portfolio Management*', Wiley Publishing.

Important Disclosure

This material is provided for general informational purposes only and is not intended as investment advice. Any discussion of particular topics is not meant to be comprehensive and may be subject to change. Any investment or strategy mentioned herein may not be suitable for every investor. Information has been taken from sources we believe to be reliable, but its accuracy, completeness or interpretation cannot be guaranteed. Information and opinions expressed are those of the Dynamic Allocation Strategies Team and may not reflect the opinions of other investment teams within William Blair & Company, L.L.C.'s Investment Management division. Information is current as of the date appearing in this material only and subject to change without notice.

Alternative investments strategies, including strategies using options, futures, hedge funds and leverage, are speculative and typically involve a high degree of risk. These investments are intended for experienced and sophisticated investors who are willing to bear the loss of their entire investment and may not be suitable for all investors. Performance of these products may be volatile, and while they may provide the potential for positive returns in both rising and declining markets, the potential for loss is equal. Some alternative investments can be highly illiquid, may not be required to provide periodic pricing or valuation to investors, and may involve complex tax structures and delays in distribution of important tax information. Certain alternatives are not subject to the same regulatory requirements, charge higher fees and may have limited opportunity for early redemption or transference of interests. Alternative investment strategies are not intended as a complete investment program. Each investor should consult their own advisors regarding the legal, tax, and financial suitability of alternative investments.

William Blair & Company is a global investment banking and asset management firm. We are committed to building enduring relationships with our clients and providing expertise and solutions to meet their evolving needs. An independent and employee-owned firm, William Blair is based in Chicago, with office locations in 10 cities including London, New York, Shanghai, and Zurich. For more information, please visit williamblair.com.

William Blair | +1 312 236 1600 tel | 222 West Adams Street
Chicago, Illinois 60606