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IMPLICATIONS FOR FINANCIAL MARKETS AND THE U.S. AND WORLD ECONOMIES

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The decision by Standard and Poor's to downgrade the sovereign credit rating of the U.S. government late on August 5 dealt an important psychological and, to a lesser extent, physical blow to the U.S. and world economies. S&P had signaled that a downgrade was likely in response to the political rancor in Washington over raising the debt ceiling and not reducing the medium-term debt-to-GDP ratio sufficiently. But it wasn't expected to make the call three days after the budget deal was signed.

The downgrade represents a largely symbolic act but will create real implications. For example, the world will likely be in search of a new "risk-free" benchmark to analyze credit spreads. However, finding that benchmark won't be easy, given that the U.S. remains the primary reserve currency. On August 8, S&P downgraded government-sponsored enterprises including Fannie Mae and Freddie Mac, followed by downgrades on municipal bonds contingent on Treasuries. Ratings for some state governments may face a similar fate.

The downgrade from AAA to AA+ comes at an inauspicious moment for the U.S. and the world.

- Recent data suggests that advanced economies are stalling and growth in emerging economies is weakening. Having not fully healed from the Great Recession, advanced economies are highly vulnerable to new shocks and have fewer fiscal and monetary tools to address them.
- The ongoing sovereign debt crisis in Europe—which initially appeared isolated to the Eurozone-peripheral nations of Greece, Portugal and Ireland—has spread to Italy and Spain. The commitment of political leaders, and whether they have the financial resources to contain the debt crisis, is in question.
- Equity markets tumbled after the downgrade and the cumulative effect of the recent string of bad news on August 8.

What was the decision and what's it based on?

Leading up to the downgrade, S&P signaled its doubts about the nation's creditworthiness. On April 18, it issued a Negative outlook for the AAA rating. On July 14, the rating was placed on CreditWatch Negative due to the "rising risk of policy stalemate." A deal was reached to raise the debt ceiling on August 2. But after the markets closed on August 5, S&P downgraded the U.S. sovereign credit rating to AA+ and placed it on outlook Negative. The change in status means S&P now views the probability of creditors being paid principle and interest as "very strong" instead of "extremely strong."

“The downgrade reflects our opinion that the fiscal consolidation plan that Congress and the Administration recently agreed to falls short of what, in our view, would be necessary to stabilize the government’s medium-term debt dynamics,” the agency’s statement said. In others words, S&P relied on a qualitative judgment of the American political system as much as a quantitative analysis. Of course, much of the damage was self-inflicted due to the drawn-out, vitriolic process of raising the debt ceiling.

In many respects, S&P painted itself into a corner on July 14, when it stated that only a budget package reducing anticipated deficits by \$4 trillion over the next 10 years would likely be sufficient to avoid a downgrade. The debt-ceiling and deficit-reduction plan that Congress and the President agreed to called for reducing debt by \$2.4 trillion in two phases. In phase I, discretionary spending will be cut by roughly \$900 billion over a decade. In phase II, a 12-member, bipartisan Congressional Joint Select Committee on Deficit Reduction will identify \$1.5 trillion in further reductions through either spending cuts or tax increases. If they can’t agree, the standoff will trigger automatic reductions of \$1.2 trillion in defense spending and Medicare reimbursements to insurers and providers.

As S&P noted, its figures are based on the Congressional Budget Office’s “Alternative Fiscal Scenario,” which assumes Congress will override existing law. The scenario assumes today’s personal income tax rates will remain in place in 2013 and thereafter, even though current law has the 2001 and 2003 rates set to expire. Based on this scenario, the government’s net debt-to-GDP ratio is projected to rise from 74 percent this year to 79 percent by 2015 and 85 percent by 2021.

Was the downgrade justified?

The other two major rating agencies, Moody’s and Fitch, certainly didn’t find justification for downgrading U.S. debt. However, Moody’s did assign a Negative outlook, and Fitch won’t finish its complete review until the end of August.

Of the five key factors used in sovereign debt ratings, S&P cut the nation’s political score the most. It took the dysfunctional political discourse over debt and deficits as evidence that institutional effectiveness in Washington had diminished. Further, S&P correctly points out that future Congresses can’t be handcuffed by agreements reached in the current Congress.

S&P also cited the U.S. fiscal trajectory compared to those of other AAA sovereigns such as Canada, France, Germany and the U.K. By 2015, Canada’s debt-to-GDP ratio is expected to be 34 percent and Germany’s modestly higher, compared to 79 percent for the U.S. However, both France and the U.K. are projected to have higher debt-to-GDP ratios than the U.S. by 2015. Perhaps France and the U.K. will be the next sovereigns to merit an S&P downgrade. However, S&P counters that debt-service ratios for the two countries are expected to decline after 2015, warranting retention of their AAA status.

While most analysts agree that \$4 trillion in deficit reduction is necessary to achieve fiscal sustainability—defined as reducing the cyclically adjusted budget deficit to approximately 2 percent of GDP—the grand bargain necessary to achieve it was not possible so close to the 2012 presidential election. The August 2 agreement should be seen as a down payment on future deficit reduction.

S&P is correct that Washington must slow the growth in entitlement spending (Medicare, Medicaid, Social Security, etc.) and reform the tax system (reducing tax expenditures, but cutting marginal rates). But the compromise was about the best that could have been expected. It achieves modest cuts to discretionary spending in the near term while the economy remains weak, then executes more substantive reductions in the medium term.

There is ample reason to believe that S&P was premature in its downgrade of U.S. debt. The International Monetary Fund has identified the point at which debt-to-GDP becomes unsustainable and causes a default. It studied the historical debt dynamics of 23 OECD countries, and identified what it calls a nation's [fiscal space](#). The IMF uses panel data from 1970 to 2007 with the primary balance (government net borrowing or net lending, excluding interest payments) to GDP being the dependent variable in the specification. Explanatory variables include potential long-term real GDP growth, output gap, inflation, trade openness, and demographic factors such as the dependency ratio and political stability measures. The fiscal space is the difference between the debt limit—the point where fiscal solvency is called into question—and current debt.

The mathematics of this calculation can be a bit daunting, but Moody's Analytics has plugged in their forecasts of the independent variables and performed the calculations for the U.S. and other OECD countries. Moody's Analytics emphasizes that it included conservative estimates of economic growth and interest rates. It also assumed that policymakers would behave as they had in the past. No extraordinary fiscal actions were included.

Based on the current debt-to-GDP ratio of 74 percent, the U.S. still has fiscal space of roughly 150 percentage points because 225 percent is the tipping point for insolvency and default. Looking at the U.S. in isolation isn't very helpful, but comparing it to other AAA-rated countries is illustrative. *Germany, France, the U.K., Canada and Australia have less fiscal space than the U.S.—all countries that S&P rates AAA.* The bad news is that, based on this calculation, Greece, Ireland, Italy, Japan and Portugal have run out of fiscal space.

Fiscal space

Difference between actual debt-to-GDP ratio
and debt-to-GDP ratio that results in a default

Country	Space
South Korea	252
Luxembourg	232
Australia	221
Singapore	214
Norway	214
Sweden	201
Finland	178
U.S.	149
Canada	145
Austria	141
Great Britain	140
Germany	127
France	126
Belgium	125
Spain	118
Greece	No space
Ireland	No space
Italy	No space
Japan	No space
Portugal	No space

Source: Moody's Analytics.

Should we really care what S&P thinks?

S&P certainly harmed its case for a downgrade when it included questionable assumptions on the budget outlook in the original credit analysis. Prior to the downgrade, Treasury officials warned S&P that the deficit projections were too high.

It turns out that S&P analysts projected government spending to rise at the same rate as nominal GDP rather than inflation. That would include the inflation-adjusted growth rate of the economy in addition to the rate of inflation. After 10 years, this amounts to a \$2 trillion difference—hardly a rounding error. The mistake would be inexcusable for anyone completing Macroeconomics 101, let alone the credit agency that is considered the top expert in the default risk of sovereign debt.

S&P later acknowledged its mistake and stated that the U.S. debt-to-GDP ratio will rise to 85 percent within a decade rather than the incorrect figure of 93 percent. In federal budget

projections, this represents a material difference. Nevertheless, after reconvening its sovereign debt review committee, S&P issued its downgrade anyway.

The irony is that we are relying on the same credit agency that managed to rate over 50 percent of subprime mortgage originations as AAA after they were securitized. This allowed public pension funds, insurers and municipalities to purchase them as if they were low-risk instruments. One can't have much confidence in S&P's credit analysis when it is based on an erroneous assumption about the trajectory of government spending. Perhaps S&P is seeking atonement for contributing to the 2008-2009 financial crisis, so it wants to appear on top of a crisis in U.S. sovereign debt.

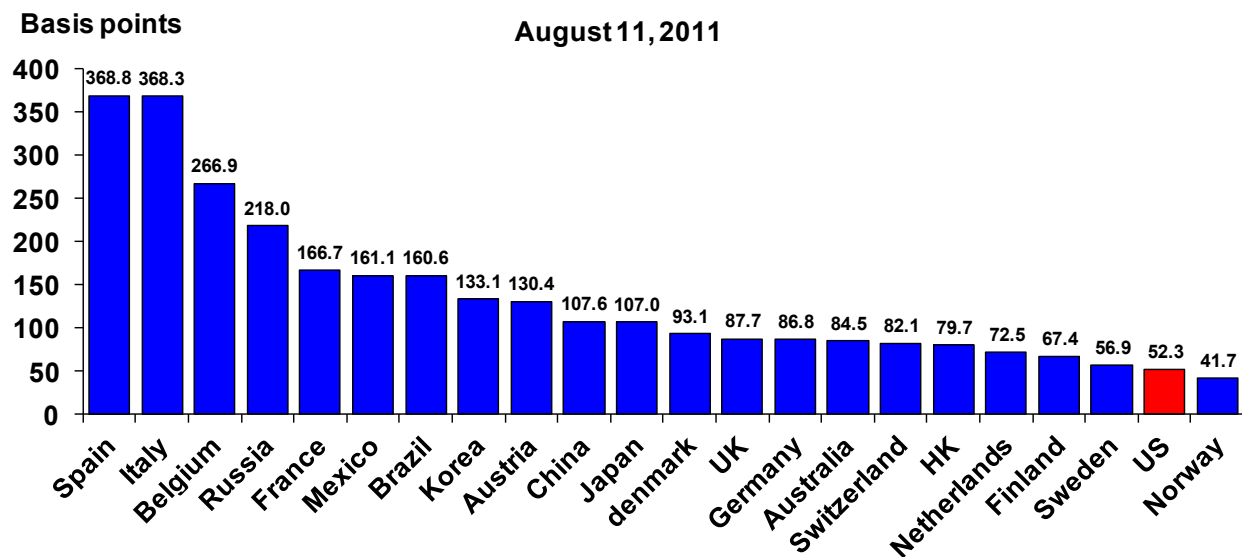
S&P's downgrade was reckless at worst and irresponsible at best, given the turmoil in financial markets. The prudent course would have been to wait for the results of the Joint Congressional Committee on Deficit reduction in November. If it doesn't reach an agreement on the \$1.5 trillion in deficit reduction, a downgrade would be justified.

The circumstances call into question why we rely so much on one company with a staff of around 80 people to perform our credit analysis. Independent auditors of credit soundness are necessary, but they should not be a substitute for performing your own due diligence. The Chinese don't need a credit-rating agency to inform them that holding more than \$1.3 trillion in U.S. Treasuries is a risk.

What do markets think about the downgrade?

The most direct way to examine the impact of the downgrade is to look at how the risk of default is priced into credit default swap (CDS) spreads—that is, the cost of buying insurance on a bond default. Only Norway had lower CDS spreads than the U.S. does as of August 11. Norway's CDS spread was at 41.7 basis points, and the U.S. was at 52.3. Furthermore, the CDS markets lend support to the fiscal space analysis developed by IMF researchers. Germany, France, the U.K., Canada and Australia all have CDS spreads wider than the U.S. does. Among them, France's was the widest at 167.

Sovereign CDS spreads in select countries



Source: Bloomberg.

Has the risk of default risen since the downgrade? It doesn't appear so. Since the decision, 10-year Treasury yields have fallen substantially. On August 9, yields fell as low as 2.04 percent before closing at 2.18 percent. However, there are other factors at work such as lower expectations for second-half economic growth, forecasts of a double-dip recession and the ongoing sovereign debt crisis in the Eurozone that escalated last weekend. U.S. 10-year yields are lower than those in the U.K. and slightly higher than those in Germany. So despite the downgrade, investors still perceive the U.S. Treasury market to be a safe haven. U.S. Treasuries are the most liquid in the world with \$11.2 trillion in debt outstanding. Germany is next with less than \$1.7 trillion outstanding.

What were the impacts of previous sovereign downgrades from AAA to AA+?

The United States is the 10th nation S&P has downgraded from AAA to AA+. It joins, in chronological order, Australia, New Zealand, Japan, Canada, Sweden, Denmark, Belgium, Italy and Finland. Each country has a unique story, but no compelling inverse relationship is discernable: a downgrade doesn't equal higher yields.

Another way to examine a possible outcome for the U.S. is to examine the track record of downgrades from AAA to AA in non-financial corporate bonds. During the past decade, yields on AAs have averaged 16 basis points higher for five-year paper than yields on AAAs. Currently, those spreads are 24 basis points higher. The bottom line is that any price the U.S. pays in terms of higher yields should be a minor one.

What will be the likely impact on related agency debt, sub-federal debt and interest rates?

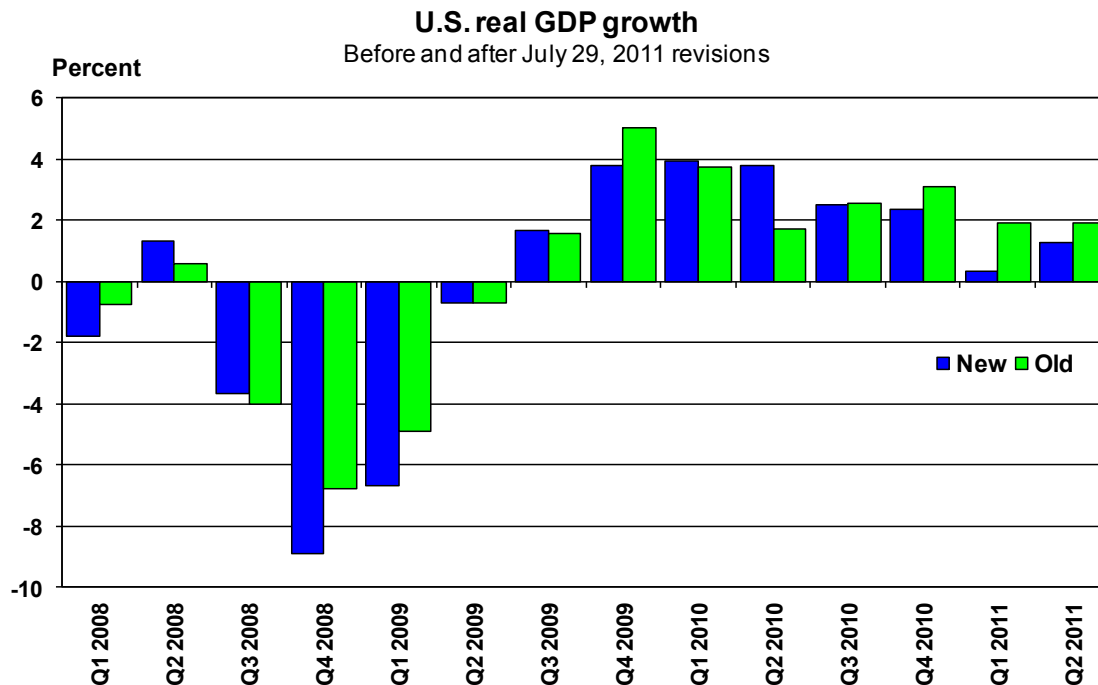
S&P has already cut the rating of government-sponsored enterprises such as Fannie Mae and Freddie Mac. This may reduce liquidity in the mortgage securitization market and lessen the flow of funds into home loans, at least temporarily. In the longer term, mortgage rates will likely be as much as 20 basis points higher than before the downgrade. But with today's 10-year Treasury yields, the near-term impact will be marginal.

The biggest impact will likely be on state and municipal bonds tied to federal government debt. S&P has downgraded more than 11,000 municipal bonds to AA+ in the \$2.9 trillion in the municipal bond market, according to data compiled by Bloomberg. They include debt backed by a federal lease in Miami; a bond series for multifamily housing in Oceanside, California; and school construction bonds in Irving, Texas. This may hinder the ability of many quasi-government agencies to issue new debt, which would force them to offer higher yields. Mutual funds required to invest in AAA bonds may have to liquidate some holdings. Student loan, credit card and auto loan rates are tied to the prime and should remain relatively unaffected.

What do recent events mean for the U.S. and world economies?

United States. In July, the media, financial markets and Main Street were focused on the debt ceiling and deficit reductions talks under way in Washington. This distraction meant insufficient attention was paid to the preponderance of weaker-than-expected U.S. and world economic data being released. Eurozone sovereign debt problems also flew under the radar until Italy and Spanish bond spreads widened and the markets took notice again.

The Bureau of Economic Analysis on July 22 released revised national income and product accounts going back to 2008 that showed real GDP had declined by 1.1 percentage points more during the recession than previously estimated. Additionally, it revealed that the economic recovery was softer than previously thought. By the second quarter of 2011, real GDP had not reached its prior peak—contradicting previous estimates that the expansion point had been reached in the fourth quarter of 2010. Significant downward revisions were made to the first quarter, with real GDP rising at an annual rate of just 0.4 percent. With second-quarter growth of 1.3 percent, economic growth was at an annual rate of 0.8 percent in the first half of 2011. These revisions indicated that the economy had far less momentum as it entered 2011 and had faltered from there.



Sources: Bureau of Economic Analysis, IHS Global Insight.

Other high frequency data indicated further weakening. Consumer spending declined 0.2 percent in nominal terms in June but was flat in real terms as prices fell. Gasoline prices declined, and auto sales were depressed by supply-chain disruptions in Japan that slowed the delivery of popular models. Consumer confidence fell throughout the second quarter in most surveys as job growth diminished and news of the possible U.S. default spread.

New orders for durable goods declined in June, although non-defense, non-transportation orders—a good gauge of business capital spending—rose 0.4 percent. Most unnerving was that the Purchasing Managers Index (PMI) for manufacturing fell to 50.3 in July from 55.3 in June. Sinking below 50 would signal a decline in manufacturing output. The non-manufacturing PMI also edged down to 52.7 in July from 53.3 in June. Compounding that were declines in the manufacturing PMI in China, the rest of Asia and Europe in July, which harms U.S. export prospects.

But not all the economic tea leaves for July were discouraging. Consumers were spending more in July. U.S. sales of light vehicle rose to an annual rate of 12.2 million, up from 11.7 million in June. Same-store sales at large retailers rose 4.5 percent year-over-year in July. The establishment survey showed that the private sector added 154,000 jobs in July, an improvement from an upwardly revised 80,000 gain in June. Overall 117,000 jobs were added in July as governments (mostly state and local) cut jobs. Furthermore, weekly jobless claims for the first week of August fell to 395,000, the lowest level since the week ended April 2. Released on August 11, this is the most recent reading on the status of U.S. labor markets.

In addition, housing starts and permits were up in June, primarily in the multifamily sector. New households are being formed at a rate of almost 1 million per year, while new housing units are being added at half that pace. The building activity is being fueled by rising rents and fewer apartment vacancies. The economic data released so far for July doesn't suggest it was the start of a new recession.

The cumulative impact of all the negative developments over the past two months will take its toll on business and consumer confidence. Businesses will likely defer some capital investment and delay hiring to see what happens with sales. Consumers will dig in after watching their 401(k)s tumble in value. At best, they will see home prices stabilize.

Equity markets are going through discovery, attempting to price in the latest economic and credit market information. With current S&P 500 stocks' price-to-earnings ratios below 11, a bottom should be found soon. *An important guidepost for recession territory is if the S&P falls below 1,000 and stays there for a month.* However, that's not the baseline outlook.

Declining oil and other commodity prices will provide some cushion for the U.S. economy. Each \$10 decline in the price of oil boosts U.S. real GDP growth by 0.2 percentage point within four quarters. So the \$20 decline in prices from the peak, if sustained, adds 0.4 percentage point to real GDP growth. Furthermore, lower gas prices at the pump will bolster consumer confidence. Inflation will be lower, providing space for greater growth in real disposable income. The consumer balance sheet is in much better shape now; her debt-servicing burden is where it was in 1995. The increase in third-quarter auto production schedules will add 1.0 percent to real GDP growth.

Business investment in equipment is strong and should remain so, given that U.S.-based multinationals need to add domestic capacity for export markets. Businesses are investing heavily in information processing equipment and software to enhance productivity growth. Even business investment in structures has stopped falling and appears to be heading higher. Export growth has slowed somewhat in recent months but is still in the 6 percent to 8 percent range, thanks to generally undiminished economic growth in Asia and Latin America. As mentioned, multi-family housing construction is recovering.

U.S. banks are well-capitalized and not nearly as weak as in 2008. The Fed has already announced that it will keep short-term rates steady for two more years. It will likely implement other extraordinary measures—but nothing called QE3. Among them will be shifting more of its security purchases toward the long end of the yield curve, assuming they are reinstated.

Overall, U.S. real GDP growth should be around 2.0 percent in the second half of 2011 and 1.8 percent for the year. That's a departure from the range of 3.0 percent to 3.5 percent we projected back in April. U.S. growth should be 2.9 percent in 2012 (see the table below). This translates into monthly job gains of around 80,000 in the third quarter and roughly 100,000 in the fourth quarter. Job growth should average 125,000 per month in 2012. *If equity market*

valuations remain in today's range, the U.S. faces a 35 percent probability of a double-dip recession.

International economic forecast*

GDP, year-over-year percent change

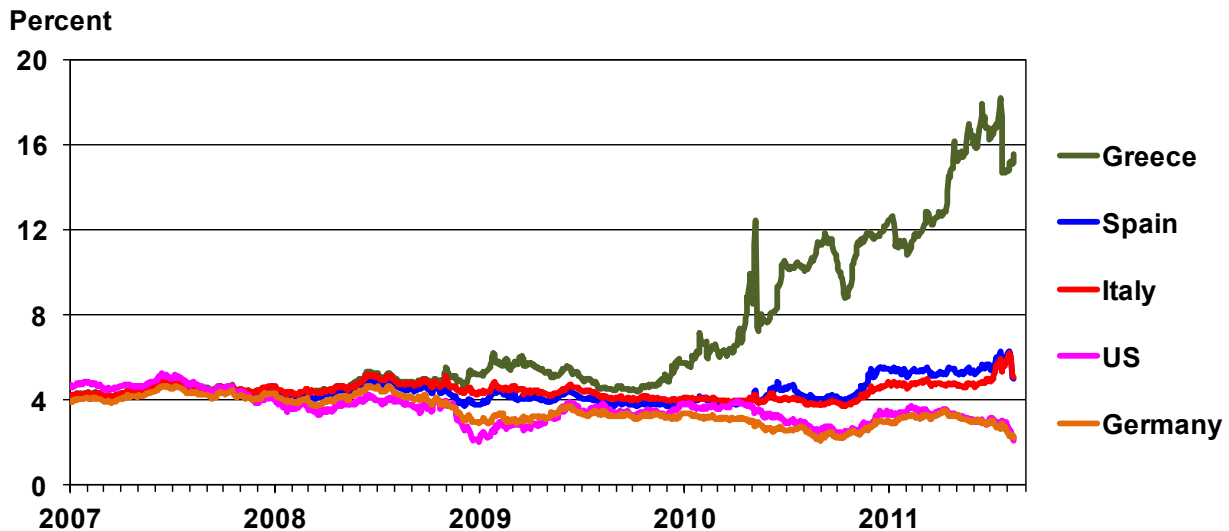
	2010	2011	2012
Global (PPP weights)	4.9	3.8	4.0
Global (Market exchange rates)	3.7	2.6	2.9
<i>Advanced economies**</i>	2.9	1.7	2.6
U.S.	3.0	1.8	2.9
Eurozone	1.7	1.9	1.7
U.K.	1.4	1.4	1.9
Japan	4.0	-0.8	3.4
Korea	6.2	4.4	4.0
Canada	3.2	2.9	3.1
<i>Developing countries**</i>	7.3	6.1	5.9
China	10.4	9.4	8.5
India	8.5	7.6	7.9
Mexico	5.0	3.8	4.4
Brazil	7.5	4.1	4.3
Russia	4.0	4.5	3.7

* Forecast as of August 10, 2011; ** aggregated using PPP weights.

Sources: Wells Fargo Securities, LLC., Milken Institute.

World. Europe, not the U.S., is the biggest downside risk for the U.S. and world economies. Europe refocused on its ongoing sovereign debt problems after spreads on 10-year government bonds widened in Italy and Spain. Those governments announced steps to accelerate budget balance and institute economic reforms. Additionally, the European Central Bank altered its previous position and began to purchase Italian and Spanish government debt in an attempt to push yields lower.

Ten-year Treasury yields for select countries



Source: Bloomberg.

The **Eurozone** won't address the crisis in a meaningful way until the European Financial Stabilization Fund (EFSF) is operational and is increased to €600-700 billion. This will require Germans to conclude that they are better off bailing out profligate spending countries than risking a Eurozone collapse. Why? Because if Germany went back to the Deutsche mark, it would likely be set at a very high exchange rate versus other currencies, harming its export-led economic growth engine. France will need to contribute more to the EFSF as well to give the Merkel government political cover. Greece and Portugal will probably need to break away from the Eurozone in a couple of years, devalue in their old currencies, institute structural economic reforms, and export their way out of the debt problems. Regardless, some European banks are going to have to take a haircut and be recapitalized.

The PMI results in the Eurozone have declined more than in the U.S. in recent months. Nevertheless, Germany still is propelling growth, although it is highly dependent on export markets outside Europe continuing to expand. The Eurozone will see economic growth of 1.9 percent in 2011 and 1.7 percent in 2012. The probability of recession approaches 40 percent.

The **U.K.** has been aggressive in implementing fiscal austerity, and its growth has been weaker than in the Eurozone. The PMI for manufacturing slipped below 50 in July, signaling contraction. The service-sector PMI remains in expansion territory. The U.K. should see real GDP growth of 1.4 percent in 2011 and 1.9 percent in 2012.

Japan's primary export sectors—auto and electronic components—are suffering the effects of the earthquake and tsunami. There are indications that production is resuming and that Japan will experience a mild contraction of 0.8 percent in 2011. The good news is that Japan will see a

3.4 percent recovery in economic growth in 2012 as reconstruction projects get under way and production of exports resumes.

South Korea's economy remains stable. After surging 6.2 percent in 2010, real GDP growth is pegged at 4.4 percent in 2011 and 4.0 in 2012.

Canada has been a solid performer among developed nations. It hasn't had sovereign debt issues or housing woes, and its banks are in solid financial shape.

China continues to grow in the 9.0 percent range. Inflation is still rising, but falling commodity prices should help its fight against inflation. Property markets are beginning to cool. However, manufacturing is benefitting from high growth in exports. GDP growth should be 9.4 percent in 2011 and 8.5 percent in 2012. This will support continued expansion throughout Asia and will bolster export growth in the U.S. and Europe.

India witnessed a slowdown earlier this year but seems poised for stronger growth in 2012 of 7.9 percent.

Mexico witnessed economic growth of 5.0 percent in 2010, but with the U.S. and Brazilian economies slowing in 2011, growth will slip to 3.8 percent. In 2012, some acceleration of growth in the U.S. in 2012 will bolster Mexico's performance as well.

Brazil recorded torrid growth of 7.5 percent in 2010 and risked overheating. It implemented capital controls in 2010 to slow the surge of hot money that caused the currency to appreciate and harm export gains. The controls were largely successful in slowing growth. Expect real GDP growth of 4.1 percent in 2011 and 4.3 percent in 2012.

Russia is projected to grow 4.5 percent in 2011 and 3.7 percent in 2012.

Overall, advanced economies will expand by 1.7 percent in 2011 and 2.6 percent in 2012. The probability of recession is at 30 percent for the second half of 2011. Developing economies will see growth slow from a rapid 7.3 percent in 2010 to 6.1 percent in 2011 and 5.9 percent in 2012. ***World economic growth at PPP weights is projected at 3.8 percent in 2011 and 4.0 percent in 2012.***

The risks to the outlook are asymmetrical on the downside, but further policy errors would be required. Given recent events in Washington and the capitals of Europe, these risks should be considered for contingency planning purposes.



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