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Global Aging 2013: Rising To The Challenge

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Since October 2010, when Standard & Poor's Ratings Services published our last update on the implications of population aging on sovereign credit ratings, the continuing economic and financial difficulties, especially in Europe, have accelerated efforts to improve the sustainability of public finances. The rapid buildup of government debt since 2007-2008--and the resulting large, albeit now mostly shrinking, general government deficits--have focused increasing attention on age-related spending, particularly in advanced economies. Consequently, a number of sovereigns have adopted budget-restraint strategies that include overhauls of public pension or health care systems--the two largest components of age-related programs that typically account for about 40% of government spending.

This may be just the start of a decades-long period of rising tension between two seemingly conflicting priorities: the need to sustain public spending on pensions and health care for aging populations versus the need to hold down or reduce government budget deficits and debt. Complicating the effort to achieve these twin goals, at least for now, is the loss of output many economies suffered from the global financial crisis--which has led to lower employment, higher unemployment, and severe strains on both budgets and social safety nets.

Overview

- We believe that if kept in place, the comprehensive structural changes and budget consolidation many sovereigns have put in place in recent years should improve their prospects for maintaining sustainability of long-term public finances, although additional policy action will be required to fully contain the budgetary implications of future increases in age-related spending.
- That said, the accelerated changes to social security systems that are reducing budget deficits in advanced economies are being offset, to varying degrees, by ongoing economic weakness and diminished employment in some countries. Coupled with higher borrowing costs, such trends are hampering sovereigns' efforts to stabilize debt dynamics.
- Our analysis suggests that the need to alter demographically driven budget trajectories is almost as pressing for some emerging market sovereigns as it is for sovereigns with advanced economies. In the absence of policy action, the median net general government debt in advanced economies will rise by 2050 to almost 220% of GDP, and for emerging markets sovereigns to over 150%.
- According to our simulation of hypothetical long-term sovereign ratings and credit metrics in a no-policy-change scenario, by 2050 nearly 60% of the sovereigns we've analyzed would have credit metrics that we currently associate with speculative-grade sovereign credit ratings, against 20% currently--even though their finances have improved since our 2010 review.

Against a backdrop of recessions or weak economies, in fact, reducing budgets and the cost of public pension and health care systems has proven politically difficult, pointing instead to the benefits of frontloaded overhauls to social programs. In some cases, weak economic performance has delayed the implementation of new policies (in Estonia, Latvia, Lithuania, and Slovenia) or even led to policy reversals (in Hungary). On the whole, however, even sovereigns that have been complacent about restructuring their social security systems are now starting to make headway.

Our current analysis indicates that the structural changes in social safety nets that many sovereigns have undertaken

since 2010 should deliver results over time. Coupled with ongoing budgetary improvements, there will most likely be, in our opinion, a discernible improvement in the long-term sustainability of public finances. The changes so far won't by any means fully contain the financial risks posed by the coming wave of seniors. But the mere fact that sovereigns are changing their policies signals their determination to solve, over time, a potentially intractable problem.

A Long-Observed Phenomenon

Standard & Poor's began analyzing the implications of shifting demographics for sovereign ratings in 2002, starting with across advanced sovereigns. In May 2006, we published simulations that projected an almost universal deterioration of sovereign creditworthiness in a sample of 32 such sovereigns (see "Global Graying: Aging Societies And Sovereign Ratings," published on June 27, 2006 on RatingsDirect on the Global Credit Portal). We updated this study in 2007 (see "What A Change A Year Makes: Standard & Poor's 2007 Global Graying Progress Report," published on Sept. 19, 2007).

In our 2010 report ("Global Aging 2010: An Irreversible Truth," published on Oct. 7, 2010), we widened the geographic coverage of the analysis, by adding information on long-term trends in age-related spending in 17 other--mainly emerging market--sovereigns. Our current report adds Chile and expands that number to 50 sovereigns, so that our latest study covers more than two-thirds of the world's population.

It also incorporates updated, internationally consistent estimates on the future costs of aging, taking into account several pension and health care reforms enacted since mid-2010. It doesn't assess the effects of recently adopted changes that concern the period 2012-2014 in Austria, Belgium, Bulgaria, the Czech Republic, France, Greece, Hungary, Slovenia, Denmark or the Netherlands. The changes in those countries signal that age-related spending might rise more slowly between now and 2050 than this report projects. Pending those updated calculations, we've identified changes--mostly improvements--in the budgetary positions of the sovereigns we've had under review since 2010, and updated our macroeconomic forecasts for those.

Sovereigns Are Paving The Way To Public Finance Sustainability

Since 2007, the global economic and financial crisis has by our reckoning substantially weakened many sovereigns' budgetary positions. This is most noticeable in our view of the decline in creditworthiness indicated by Standard & Poor's sovereign downgrades since then. Countries that initially fought the recession with stimulus spending and higher social outlays to contain the impact of the crisis on the most vulnerable households--including France, Germany, and Sweden--subsequently responded to the deterioration of their finances with medium-term strategies for deficit reduction. These included cuts in social programs to contain future increases in age-related spending. In several countries this has occurred amid a rapid deterioration in labor market conditions, which in turn has put more demands on social security systems and entitlements. Still, our long-term debt projections for these countries are now lower than they were in 2010 (see charts 1 and 2).
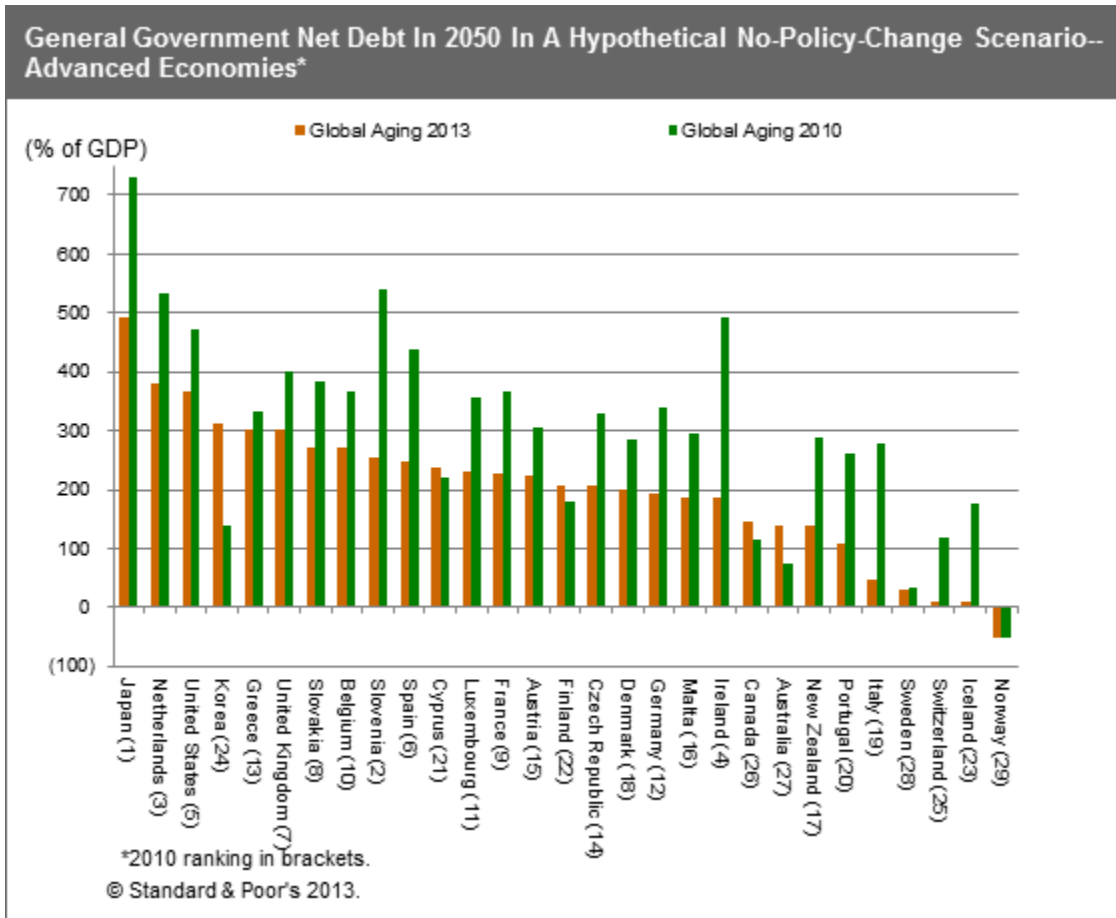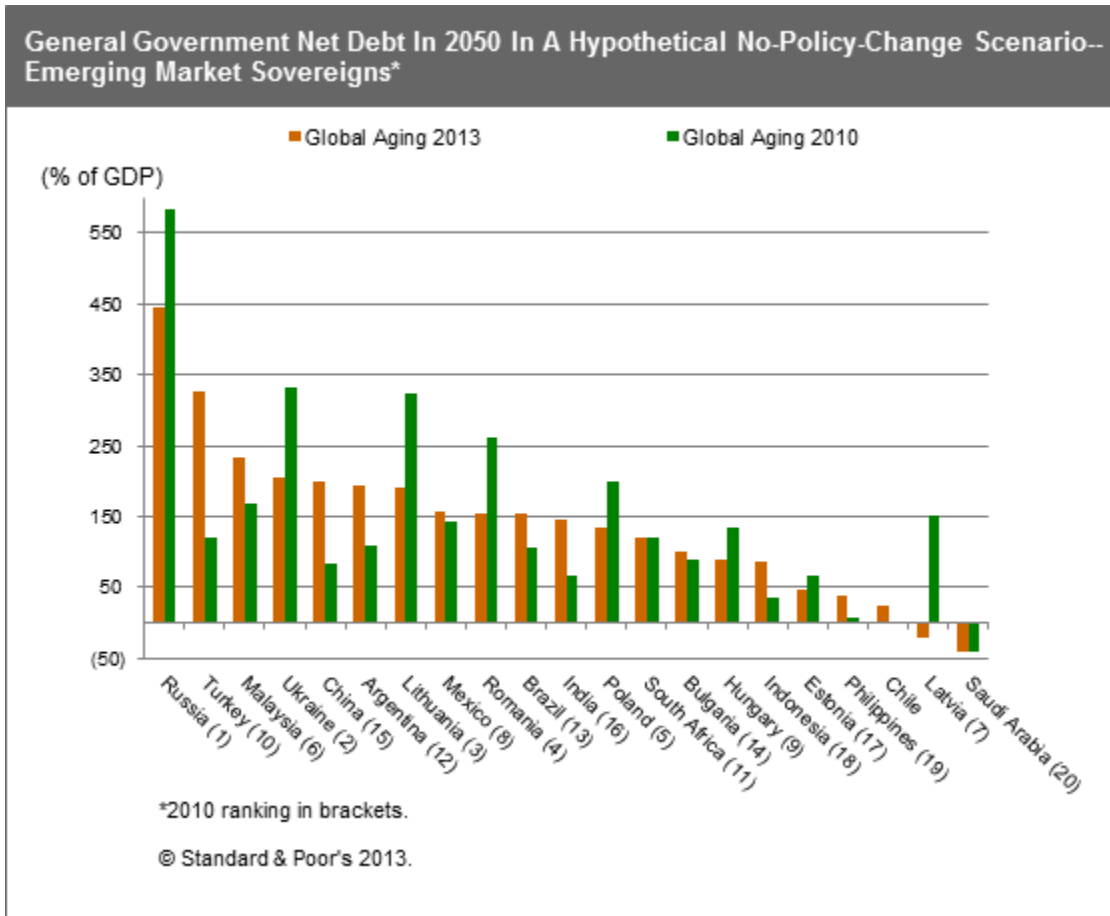
Chart 1

General Government Net Debt In 2050 In A Hypothetical No-Policy-Change Scenario--
Advanced Economies*

*2010 ranking in brackets.
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Chart 2

General Government Net Debt In 2050 In A Hypothetical No-Policy-Change Scenario--
Emerging Market Sovereigns*

A large caveat remains: We expect the vast majority of sovereigns covered in this analysis will have to take what are likely to be unpopular steps in response to negative investor sentiment to cut their budgets. For some sovereigns, the need to overhaul pension and health care systems has already put the relationship between the state and electorate under strain and severely tested social cohesion.

Nevertheless, a number of sovereigns, particularly in Europe, have recently accelerated structural changes linked to age-related spending. Moreover, considering that pension projections by the EU Ageing Working Group (AWG), which we use in our analysis, don't incorporate the effect of changes implemented or planned from 2012-2014 in Austria, Belgium, Bulgaria, the Czech Republic, France, Greece, Hungary, and Slovenia, we expect to see measured but continuous slowing in the erosion of the credit metrics of the countries whose finances we've analyzed on the basis of our hypothetical long-term scenarios.

The picture would be brighter but for nondemographic factors that affect spending and health care expenses, such as the cost of technology or new treatments (see below). We also believe that some emerging-market sovereigns may have a small advantage over their more-advanced counterparts when managing health care expenses. For instance, those in Southeast Asia currently enjoy favorable demographic dynamics and strong economic growth. Consequently, they may have more time to hone their policies as they learn from the experiences of developed economies and design

programs that will be fiscally sustainable as their populations age. In the meantime, some emerging market sovereigns already have as much need to address demographically driven budget pressures as some advanced sovereigns. This group is responding by reducing drug costs, centralizing procurement, raising individuals' social security contributions, reducing wage bills, or tightening eligibility criteria for certain treatments. While the long-term benefits of such measures are difficult to gauge, we've incorporated our estimates of those into our projections for sovereigns' medium-term budget positions.

Other lessons sovereigns are learning stem from the rising social and political tensions in some countries. In our observations, a transparent approach to preparing for and implementing changes in the social safety net is crucial to success. We believe that proceeding otherwise could lead to poor restructuring decisions, heighten resistance to future changes, and eventually even force countries to rescind initiatives that would improve their financial health.

Encouraging Progress, But Daunting Tasks Lie Ahead For The Eurozone Periphery

For several sovereigns in the eurozone (European Economic and Monetary Union), the financial strains caused by shifting demographics are being compounded by the current economic and financial troubles, which are both strangling growth and increasing the need for social safety net spending.

This environment can result in tighter financing conditions amid private-sector deleveraging, plus cuts in public investment leading to a reduction in total investment and consequently the stock of capital. At the same time, the decline in investment activity will likely hurt total factor productivity (a measure of an economy's technological innovation). Adding to these adverse trends, low employment and net emigration from several sovereigns implies a smaller contribution of labor to future economic growth, a continuing threat if unemployment becomes structurally high.

A robust labor market is key to maintaining strong social security systems. Many sovereigns have since 2007 suffered a significant decline in employment and rising unemployment. For eurozone sovereigns (see chart 3), this has led to a decline in social security contributions. Combined with higher social spending, this has strained social safety nets faster than policymakers expected some years ago. This situation is at times further aggravated by increasing emigration of young citizens in search of (better) jobs. Such dynamics can amplify demographic shifts, raise a country's old-age dependency ratio (the number of over 65s relative to the population aged 15-64), and increase the burden on the remaining taxpayers who fund social security systems. And that's without considering what the outflow of human capital means for future GDP growth.

Citizens who stay put may suffer consequences beyond having to make higher contributions and accept reduced benefits. The young unemployed are, for example, unable to start acquiring future pension rights. And those who are employed are likely to be faced with the lower wages, as the economies in such countries rebalance. Overall, the demographic shift, compounded by the economic crisis, is likely to put pressure on the so-called replacement ratio--the proportion of life-time average earnings that retirees will receive in the form of pensions--which in turn raises the question of pension adequacy. To prevent the elderly from suffering a significant decline in their standard of living or even the risk of poverty, policymakers will be hard pressed to find the balance between providing sustainable social security systems and ensuring that those deliver adequate incomes to recipients.

With that task looming large, sovereigns on the eurozone periphery have been implementing unprecedented budgetary restraint--including deficit-reducing restructuring of pension and health care systems. The tradeoff they've made is to accept the negative impact of those moves on near-term economic growth in the hope that their economies will be better off in the long-term, with more affordable debt and better-balanced government budgets.

Chart 3
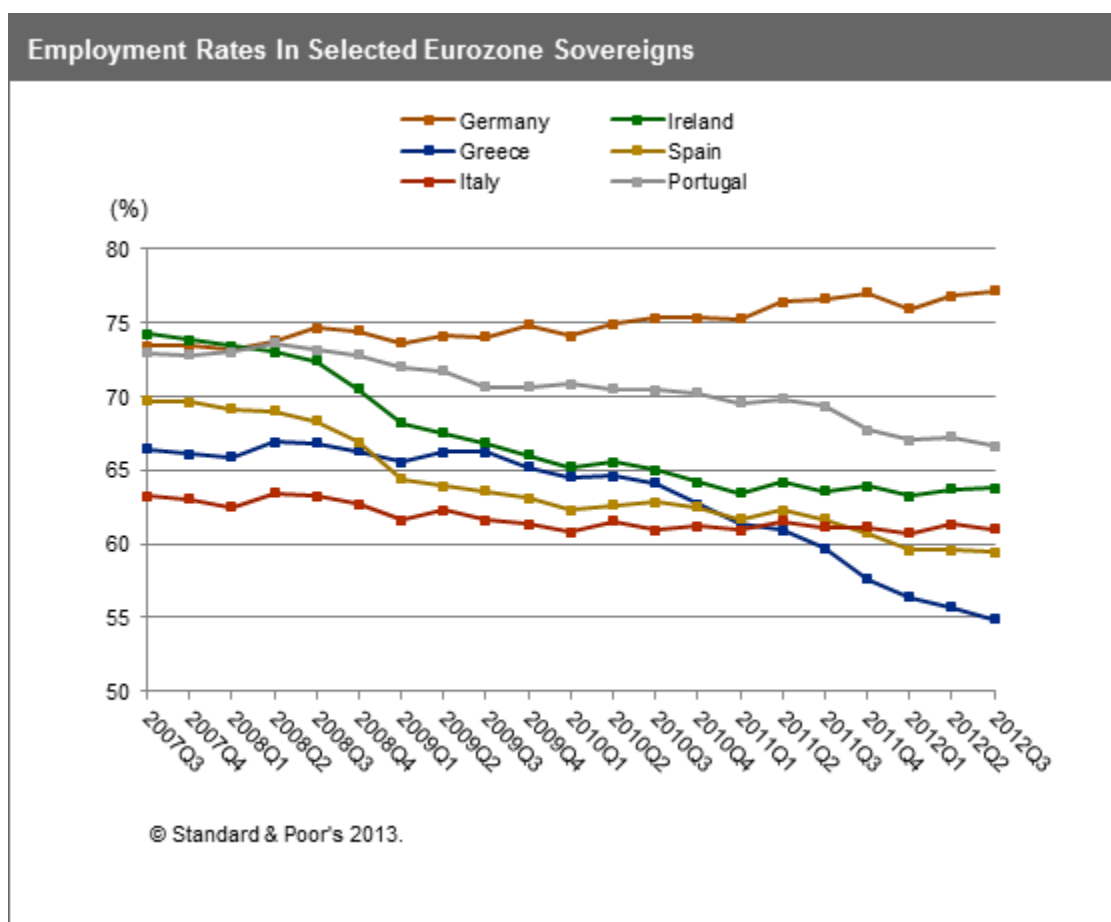
No matter how skillfully sovereigns respond, in our view population aging will lead to profound changes in economic growth for countries around the world--compounded by heightened budget pressures from greater age-related spending. In the absence of budgetary belt tightening, continuing restructuring of pension and health care systems, or structural measures to improve sovereigns' growth potential, our projections show the future fiscal burden will increase significantly across the board.

While most sovereigns have made important changes in pension and health care programs in recent years--improving the long-term outlook for public finances--we believe that these are still insufficient to keep budgets on an even keel for an extended period. Nearly all countries will face a steep, demographically driven deterioration in public finances in the absence of adjustments in social safety net costs combined with policies that boost growth. We believe our updated study shows that despite the progress made to date, the projected magnitude of the future fiscal burden will require additional measures.

The projected deterioration in public finances over the period 2010-2050 is particularly significant in the advanced economies and emerging market economies in Europe. These countries, in our view, face a rapidly worsening demographic profile plus relatively expensive social programs. In emerging market sovereigns, the degree of change in

demographics is likely to be similar, although the proportion of the elderly in the population will be lower, reflecting an overall younger demographic structure compared with that of the advanced sovereigns. As these sovereigns also tend to have relatively smaller welfare networks, their projected fiscal burden will be lower than in advanced economies, in our view. Nevertheless, as these economies develop, the likely demand from their citizens for better and expanded social systems will put pressure on their budgets.

Under our hypothetical no-policy-change scenario, incorporating the dynamics of aging-dependent public expenditure programs and interest payments, the financial burden on most sovereigns will gradually increase, leading to deteriorating fiscal indicators as of the mid-2020s, with significant differences among sovereigns. These estimates include:

- A typical country's deficits may initially fall from 4.6% of GDP (advanced sovereigns median, 5.3% of GDP; emerging market sovereigns median, 3.5%) on the back of budget cutting. But by the middle of the century, these deficits will rise to 14.9% (15.1%; 12.4%) as according to our projections, the interest cost of the increasing debt burden exacerbates the budgetary impact of demographic spending.
- The median general government net debt (as a percentage of GDP) burden may increase to 52% (71%; 43%) by the mid-2020s--and then likely accelerate to nearly 190% (216%; 153%) of GDP by 2050.
- As a result, overall government spending of the typical sovereign may increase significantly. Government spending may rise to about 52% (57%; 47%) of GDP in 2050, from 43% (49%; 39%) today.

Taking into account these expected future budgetary imbalances and projected economic growth dynamics, we introduced a simplified analytical model to simulate the impact on sovereign credit metrics (as explained in detail in "Global Aging 2010: An Irreversible Truth--Methodological And Data Supplement," published on Oct. 7, 2010). The model is based on a very limited number of variables compared with those in our sovereign rating criteria (see "Sovereign Government Rating Methodology And Assumptions," published on June 30, 2011) and as such is not as comprehensive as the methodology underlying our current sovereign ratings. The hypothetical ratings this simplified model generates are not to be misunderstood as Standard & Poor's view on likely future ratings trajectory. Instead, they only illustrate the intensity and the profile over time of the challenge that demographic change poses for sovereign solvency, assuming no mitigating policy action were to be undertaken. Since the results of this simulation are not sovereign ratings derived by applying our current criteria, we present them in lower case ('aaa', 'aa', etc.). On the basis of the simulation results, we anticipate that our hypothetical future ratings for our entire sovereign universe would generally be below their present levels. Under our first scenario, which assumes no further policy actions to counter demographic fiscal pressures, we see a general downward slide in investment-grade sovereign ratings from the mid-2020s, accelerating through 2030 and thereafter. However, improving prospects for the long-term sustainability of public finances would lead to a relative stabilization of the ratio between investment-grade and speculative-grade ratings until the late 2030s.

Our projections show that on the whole, the median emerging market sovereign would hypothetically retain investment-grade ratings throughout the period, due to relatively high potential economic growth, moderate projected increases in age-related costs (as fewer entitlements in often relatively immature systems have been accumulated), and relatively smaller current budget imbalances. By contrast, we believe the median advanced sovereign would be less likely to retain investment-grade ratings. This is because of relatively lower economic growth prospects plus higher

age-related spending, and relatively wider budget imbalances at the beginning of the simulation period.

We emphasize that these scenarios do not represent a Standard & Poor's prediction that the sovereign ratings of many governments will inevitably fall because of demographically related fiscal pressures. In our view, it's unlikely that governments will allow debt and deficit burdens to spiral out of control in the manner outlined above--even if creditors would be willing to underwrite such huge debt. Nevertheless, the scenarios do indicate the scale of the task that governments face in pruning benefits granted by unfunded, state-run social security systems and achieving further budgetary consolidation as well as growth-enhancing policies.

Future Trends In Age-Related Public Spending

In the absence of further policy measures, we generally expect that population aging will lead to increases in overall expenditures that are sensitive to demographic change, although according to our estimates the impact will differ significantly among the countries in our sample. The age-related factors we considered in this study are old-age pensions, health care, and, where data is available, long-term care for the frail, plus unemployment benefits. We didn't include education as an age-related spending category. Although the number of pupils and students likely will decline in most countries, it's also likely that spending per student will rise to help ensure satisfactory productivity growth by investing in human capital. We also excluded child benefits due to the lack of information. Although shrinking child-age cohorts could have a dampening effect on public spending thanks to lower benefit outlays, comprehensive data is unavailable. Moreover, the cohort effect may be offset by more generous benefits to encourage the dual objectives of boosting labor market participation and fertility.

Overall, pensions remain the biggest spending item, followed by health care and long-term care. Projected declines in unemployment benefits are typically very small and, we believe, will not produce significant relief for government spending.

Pensions (including early retirement, surviving relative, and disability pensions) will rise on average by slightly more than 2% of GDP by 2050, in our estimation, to slightly above 11% of GDP. However, the differences among countries could be large. Intuitively, the more distorted a country's demographic profile, the higher the increase in age-related spending is likely to be. This is, however, not always the case, because a country can significantly cushion the budgetary effects of aging by restructuring the revenue and spending side of a pension system.

Chart 4

Advanced Sovereigns Composition Of Changes In Age-Related Spending 2010-2050
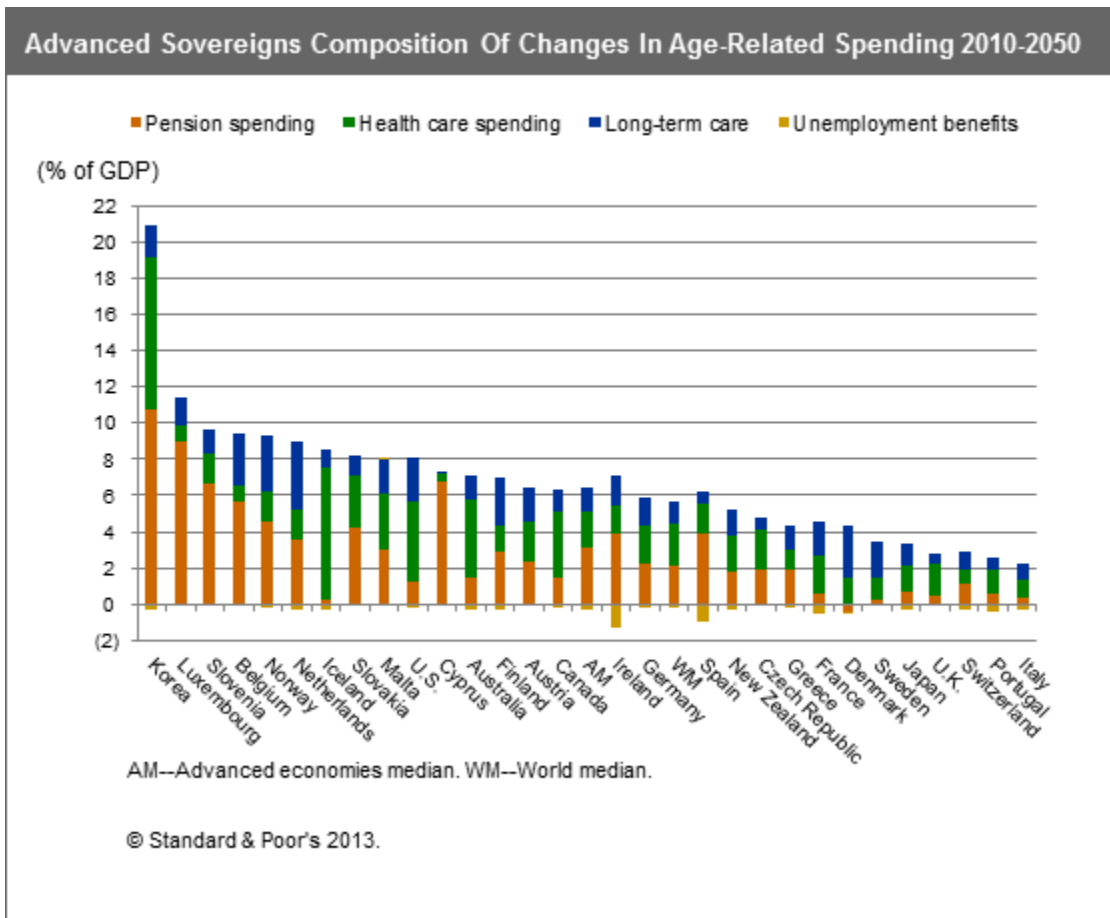
For most sovereigns, demographers expect the old-age dependency ratio (the number of over 65s relative to the population aged 15-64) to double by 2050. In Eastern Europe, Asia, and Latin America, demographic dynamics appear to be particularly affected by what has been a steadily rising old-age dependency ratio. However, the projected dynamics don't fully illustrate the variations in the ratio, which for Eastern European sovereigns by 2050 is projected by Eurostat to be substantially higher than in other regions, due to more pronounced declines in fertility rates plus increases in life expectancy as well as emigration of younger workers. In general, the strongest pressure on government budgets is expected in Brazil, Korea, Luxembourg, Russia, Turkey, and Ukraine.

In other words, such pressure will more likely arise in sovereigns with growing financial imbalances in social programs, where changes to pay-as-you-go pension or health care systems are still pending, or where the demographic profiles appear to be the most unfavorable. Numerous changes in pension systems implemented in the advanced economies have contributed to a significantly smaller projected increase in future pension entitlements than in our 2010 analysis. In the short term, many sovereigns have temporarily frozen pensions by changing or freezing their pension cost-of-living indexation formulas or cutting pensions or eliminating pension supplements. More systemic measures have included reducing income replacement rates (in Austria, Bulgaria, Finland, France, Greece, Portugal, Slovenia, and Spain), tightening eligibility rules (in Belgium, Bulgaria, the Czech Republic, Denmark, Germany, Greece, Ireland,

Italy, Japan, the Netherlands, Slovenia, Spain, Turkey, the U.S., and U.K.), or increasing the incentives for older workers to remain in the labor force (EU members, U.S., New Zealand, and Australia).

Chart 5
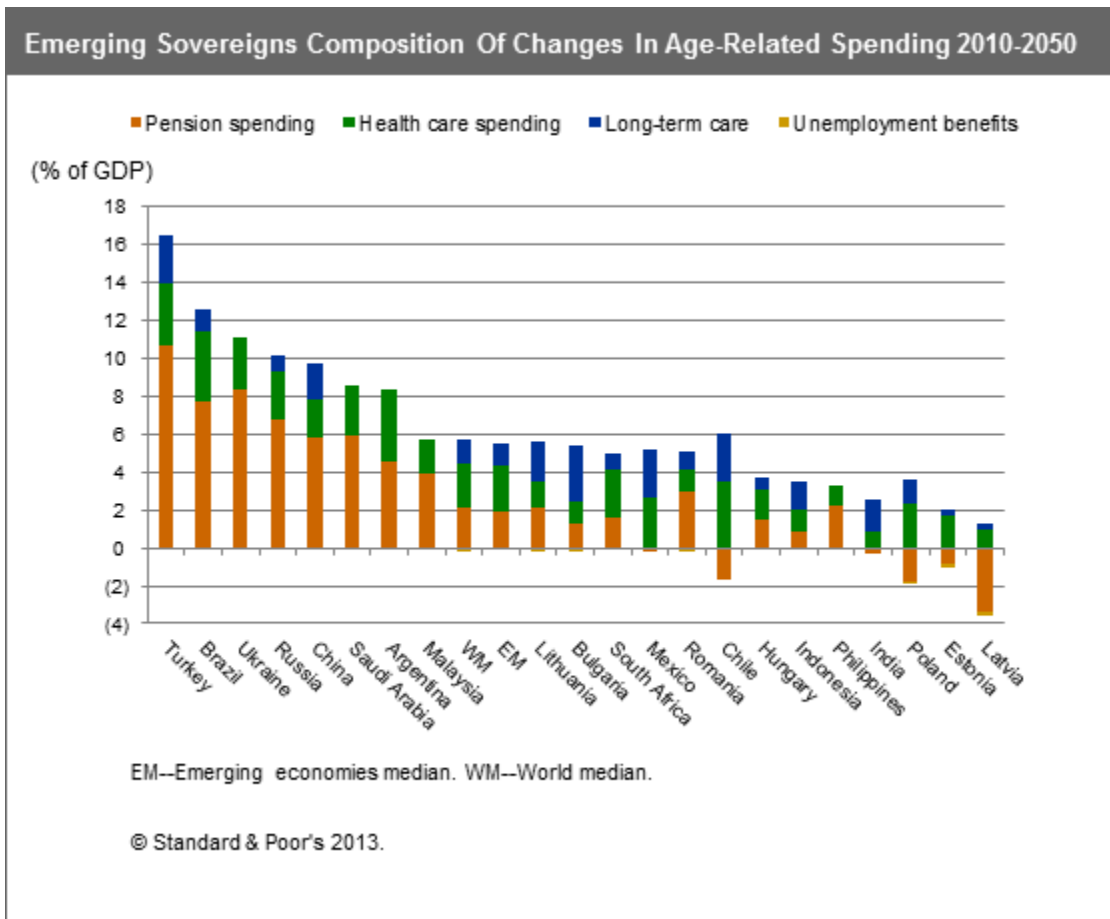
On average, emerging market sovereigns appear in our view to be in a relatively better position for now because of their current demographic structure, their earlier stage of economic development, and relatively lower publicly funded pension system coverage. With a few exceptions, these sovereigns have significantly lower pension spending to GDP than advanced economies. Nevertheless, in our view they still face a number of future pension risks. Given their currently generally younger populations and falling fertility rates, their old-age dependency ratio is likely to rise even faster than for a typical advanced economy--even though by 2050 they may still have relatively lower old-age dependency ratios than developed economies. It's important to note, however, that these long-term pension projections are based on the assumption that pension coverage and adequacy won't change through the period. Eventual broadening of the coverage of the pension system is thus not incorporated in the projections. Yet as these economies develop and their social fabrics change, government welfare spending may grow faster than GDP--as happened in advanced economies during the last half of the 20th century. If this occurs, we believe the current projections are likely to be proven optimistic.

For example, in Chile, Estonia, Latvia, and Poland, the projections of a fall in future pension costs, relying on the

establishment of a practically mandatory private funded pension pillar, may be both optimistic and politically unsustainable if based on significant reductions in income replacement rates--which would in turn increase the risk of poverty among the older population. At the other end of the spectrum, Brazil, Russia, Turkey, and Ukraine could post the highest increases in pension costs among all sovereigns, because their pension systems remain unchanged for now, and because Russia and Ukraine have particularly rapidly deteriorating demographic profiles. By contrast, Romania, formerly a member of this group, has significantly revamped its pension benefits and cost structure, thus improving the prospects for sustainability of public finances.

While in some countries pension reforms were accelerated, in others they slowed or stalled due to the financial crisis. Estonia, Latvia, Lithuania, and Poland temporarily suspended or reduced diverting government contributions to the usually mandatory private pension pillar of their pension systems. Hungary decided to divert government contributions toward the first public pillar while making the second funded pillar voluntary and creating incentives for individuals to contribute to the first pillar. On the whole, while the decisions improve the near-term position of public finances, they interrupt a process to reduce the long-term impact of pension outlays on the government's financial position.

All the attention on pensions notwithstanding, we expect age-related health care spending to grow even faster than retirement costs by 2050. According to our analysis, we estimate the median increase in public health care spending in our entire sample will be 2.3 percentage points between 2010 and 2050, when it will peak at 7.5% of GDP. New medical technologies and forms of health care delivery will account for much of this increase. For the EU sovereigns and Norway, we applied the "AWG risk scenario" projections that include excess cost growth through technological and institutional changes. As indicated by alternative long-term projections of health care spending (less-favorable AWG projections for nondemographic drivers as well as the long-term health care spending projections by the International Monetary Fund or IMF), there are real risks that nondemographic drivers could lead to further increases in health care outlays, beyond the AWG risk scenario. This confirms the idea that health care costs will likely be the biggest driver of higher age-related spending in coming decades. Health care spending already represents the majority of the increase in age-related spending in numerous sovereigns we've reviewed. To us this is yet another indicator that, in general, policymakers have focused more on other areas of age-related spending--particularly pensions--while the focus should be now shifting toward improving the design of health care systems and containing health care spending. In our view this is explained by the fact that it is technically easier to strengthen pension systems by modifying one or two key parameters. Politically it is also more attractive as the sacrifices for the population are usually many years away and myopic voters often can disregard this impact far into the future or do not fully comprehend it to begin with. In contrast, health sector reform tends to be technically much more complex, involves ethically highly charged trade-offs, and the reduction of service levels can be immediately witnessed by voters.

We project that in a typical advanced economy health care costs will likely rise by about 2% of GDP by 2050. A number of advanced sovereigns have taken steps to contain health care spending. These include constraining pharmaceutical expenses, centralizing procurement, raising health care contributions, cutting public health care sector wage bills, or changing the balance between public- and private-sector financing and delivery of services. The sovereigns in the eurozone periphery have been in particular active in implementing these measures.

Consistent with the broader trend, we project that emerging market sovereigns will likely increase their health care spending faster than their spending on pensions, typically by 2.4% of GDP by 2050, compared with 1.9% of GDP for pensions. This trend suggests that the challenge of containing future health care costs should be addressed sooner rather than later (see charts 6 and 7). This task will be made more daunting by the likely expansion of health care coverage to a wider section of the population in light of the emerging market sovereigns' growing income levels and increasing demand for wider health care coverage.

Chart 6

Advanced Sovereigns Increase In Health Care Spending 2010 And 2050

AM--Advanced economies median. WM--World median.

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Chart 7

Emerging Sovereigns Increase In Health Care Spending In 2010 And 2050

EM--Emerging economies median. WM--World median.

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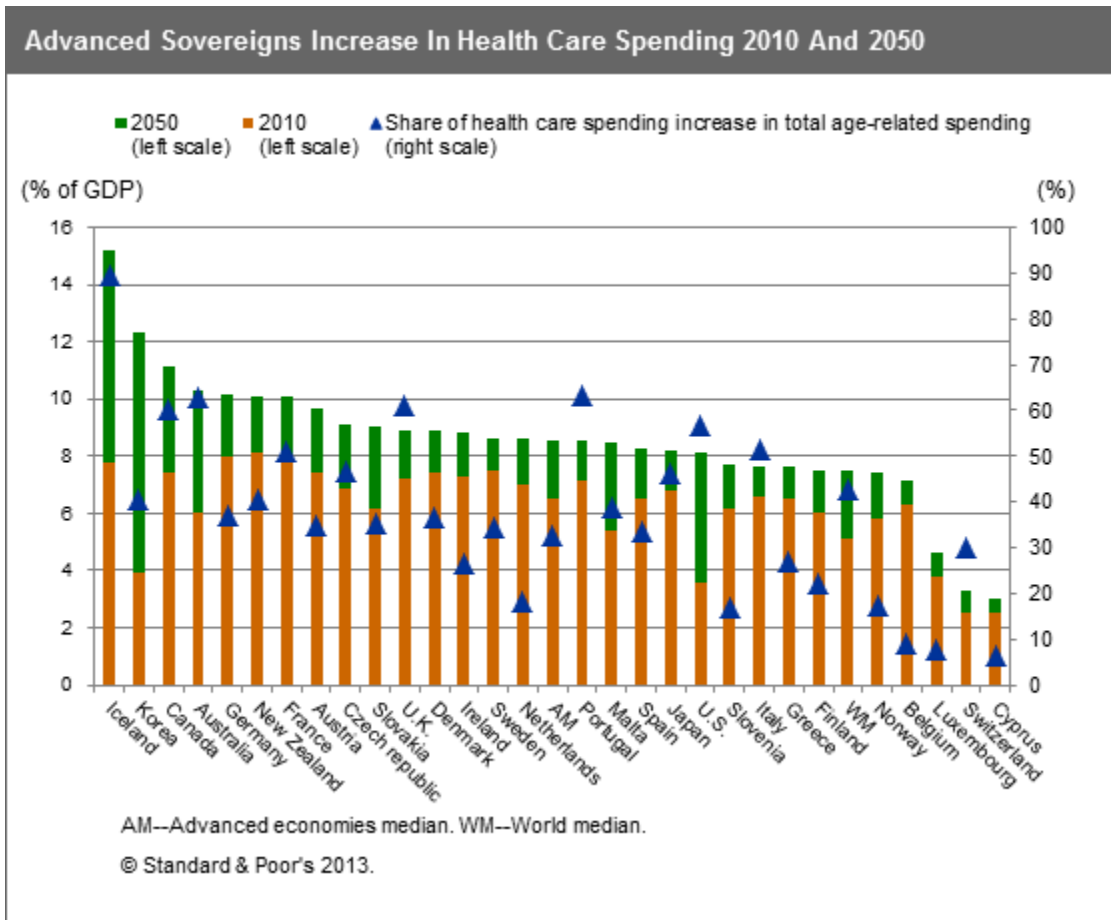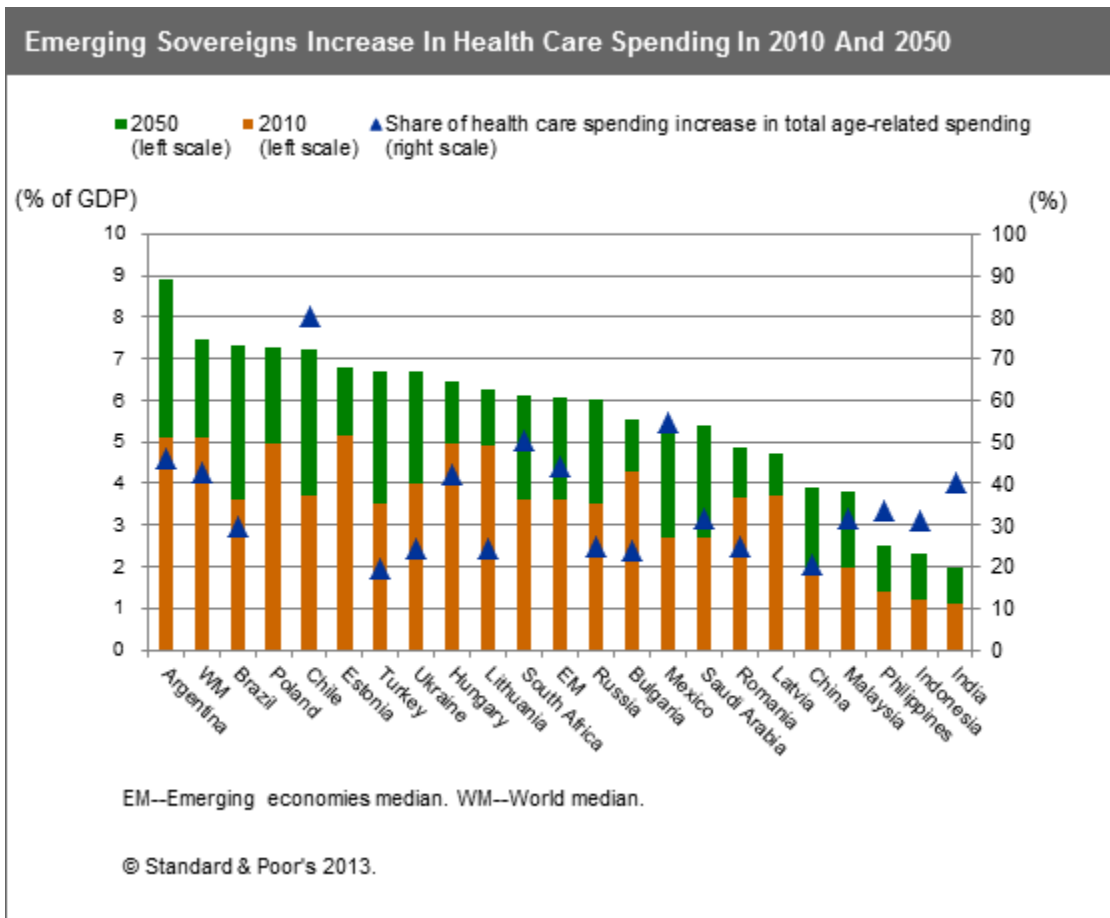
By 2050, we also project that the median cost of long-term care for the frail and elderly will increase by another 1.3% of GDP to 2.7% of GDP for a typical advanced economy. As in the case of health care projections, for the EU sovereigns and Norway we applied the AWG risk scenario for long-term care, which in addition to demographics and health status, includes the impact of additional costs, and, among other things, the implications of growing income levels. Projections of long-term care dynamics aren't available for all emerging market sovereigns. Currently, in many of those, long-term care depends on informal family networks, rather than formal assistance. Still, the increase in median long-term care costs for advanced countries constitutes an upside risk for emerging economies as they expand and as demand for government-financed support grows. At the same time, potential savings from lower spending on education, given the shrinking younger segment of the population pyramid, are likely to be negligible. And the median decline in unemployment benefits, anticipated by experts in advanced sovereigns as a consequence of tightening labor markets, could be on the whole only 0.3% of GDP by 2050, while slightly higher in countries with very high unemployment at the moment--Ireland, Portugal, and Spain.

Our spending projections for this study are based on national estimates, or on multilateral research projects conducted by the European Commission, the Organization for Economic Cooperation and Development, or the IMF. When interpreting the data and the fiscal consequences simulated below, it's important to keep in mind that they may not be

perfectly comparable from one country to another. Although these international organizations and Standard & Poor's aim to correct for undue optimism or pessimism in nationally compiled figures, the success of these harmonization attempts can only be partial (see the 2010 "Methodological And Data Supplement" for further details). Nevertheless, we believe the methodologies underpinning the national and multilateral projections are sufficiently consistent for our analytical purposes, especially over longer timeframes. Nevertheless, where differences exist between international organizations' projections of trends for the same spending item (e.g. health care), these ranges can quantify upside or downside risks to the projections.

Assumptions In Our Simulations

Based on the 2010-2050 country-specific profiles of age-related government spending (see charts 1 and 2), including all the intermediate years not presented, we calculated various scenarios to assess the importance of demography on government budgets, debt burdens, and sovereign credit ratings.

The simulations share two assumptions, unless stated otherwise:

The "fiscal autopilot"

In this scenario, we assume that government primary balance positions in 2014, as currently forecast by Standard & Poor's, are maintained every year throughout the simulation period, excluding the effect of incremental future age-related expenditures after 2014 and changes to interest payments originating from fluctuating government debt levels relative to 2014. In other words, the primary balance of 2014 sets the level of total revenues and non-age-related expenditure as constant throughout the projection period. We selected the 2014 cut-off because we believe it provides an appropriate starting point for simulations of long-term budgetary trends, considering the budgetary consolidation underway among most sovereigns currently.

The "surplus ceiling"

We base this assumption on our expectation that, at least for the majority of sovereigns, maintaining a large budget surplus (defined as more than 2% of GDP) on a sustained basis would be politically unfeasible in the countries covered in the sample. If a higher surplus appeared likely, we assume that taxes would be cut to bring the budget back toward the 2% ceiling. We have made an exception to this rule of politically unsustainable surpluses for Norway and Saudi Arabia, where we believe that more substantial surpluses, driven by revenues from oil and gas, will continue to be realistic policy options.

Unless adjusted specifically for a scenario analysis, the sovereigns' converge to real interest rates that we've set at 3% as of 2020 and that apply to all sovereign debtors. Similarly, we assume 2% annual inflation over the projection period.

From these assumptions, we then simulate debt and deficit trajectories for all sovereigns under a variety of scenarios. Based on the fiscal outcomes, we derive a "hypothetical sovereign rating." In practice, we take a larger number of factors into consideration when deriving our actual sovereign credit ratings (see "Sovereign Government Rating Methodology And Assumptions," published on June 30, 2011). Over the very long term, however, prolonged fiscal imbalances, together with economic growth trends, tend to become dominant factors, which we have captured in our simplified hypothetical sovereign ratings model. As we expanded the scope of our study to include more rated

sovereigns, which makes the sample more heterogeneous, we included GDP per capita as a variable in the hypothetical sovereign rating simulations. To arrive at our anticipated direction of sovereign ratings, we believe it's appropriate to consider each country's simulated general government balance alongside the median budget balance for each rating category, averaged over the 2000-2009 period, together with the level of outstanding debt and the GDP per capita on an annual basis (see the 2010 "Methodological And Data Supplement" for details).

No-Policy-Change Scenario: What Is Unlikely To Occur

Under our no-policy-change scenario, the government refrains from adjusting either its fiscal stance as described above or any policies governing age-related spending. In other words, the government takes no additional steps after 2014, which is our cut-off year, except for borrowing for any budget shortfall that may materialize. We selected 2014 because we believe that the size of current budget deficits in many countries will gradually improve and an earlier year could in many cases imply a much higher deficit, which would overstate the magnitude of the long-term challenge. As age-related outlays creep upward, followed by the additional interest costs of rising national debt, total government expenditures gradually increase. Currently, the median of the sample for general government spending to GDP is about 43%. Following the fiscal consolidation we expect spending to GDP will remain fairly stable until the mid-2030s, reflecting moderate age-related spending increases. This delicate balance will, by our projections, break down in the mid-2030s, however, as age-related spending starts to accelerate, leading to higher deficits and interest payments. By 2050, we anticipate that total government spending would account for about 52% of GDP (see chart 8).

Chart 8
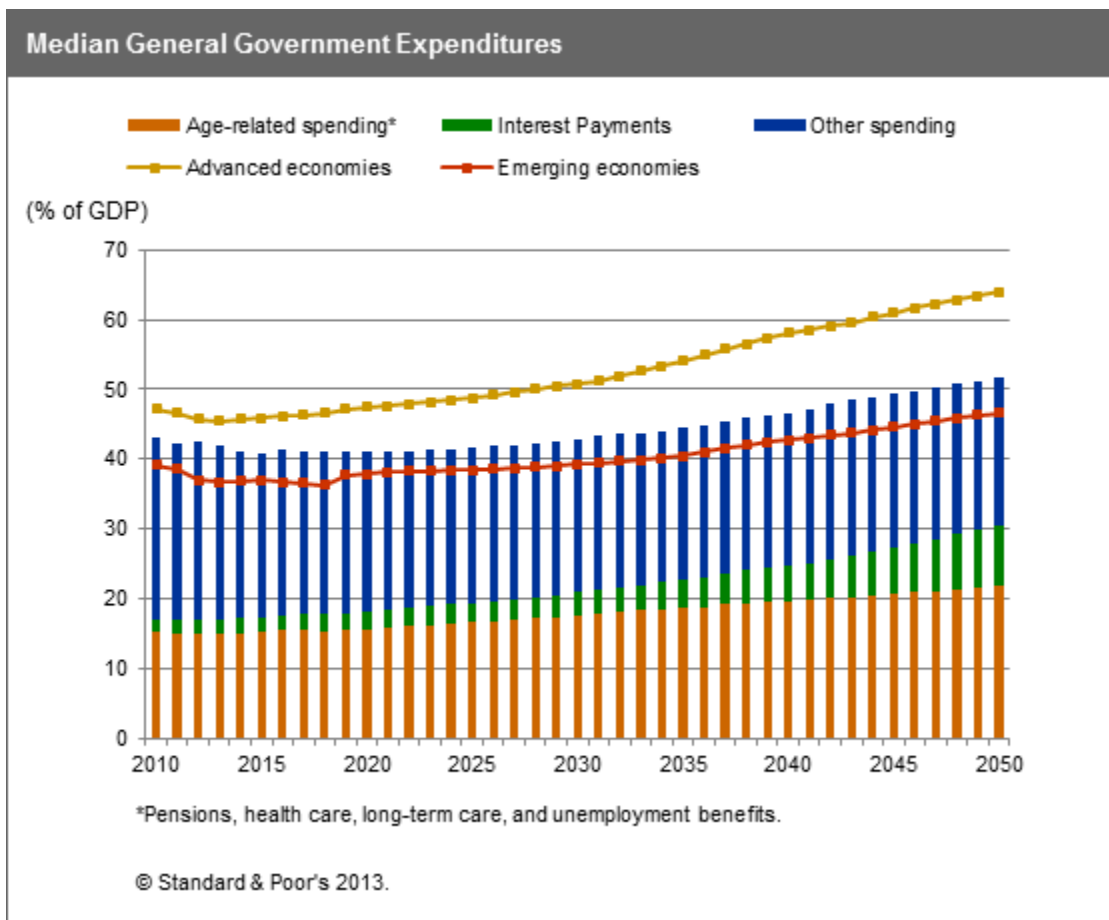
As a result of the higher costs in age-related spending by advanced sovereigns than for emerging market sovereigns, on the basis of our current projections and assumptions the difference in government spending profiles between the two groups is significant. The ratio of government spending to GDP for the advanced sovereigns breaches 50% in the late 2020s, hitting 64% by 2050. For emerging market sovereigns, this ratio is stable until the 2030s, at which point it starts rising, but remains below 50% of GDP throughout the projection period. In a number of advanced economies, under our no-policy-change scenario, we project the state sector to consume close to or more than 65% of GDP in Belgium, Denmark, Finland, France, the Netherlands, Russia, Slovenia, Ukraine, and the U.S.

Based on the assumptions of unchanged revenues and the dynamics in age-related spending above, a typical advanced sovereign would likely reduce annual deficits until the late 2010s (see chart 9 below). Thereafter, we project that deficits will start rising gradually at first, and then, as interest payments increase due to higher debt levels, accelerate above 15% of GDP in 2050. For emerging market sovereigns, we expect deficits to stay stable until the late 2010s, partly due to our future interest rate assumption, which for some governments is lower than current borrowing costs, thus offsetting the growing budgetary burden of population aging. After 2030, the projected deficit widens rapidly from 4.3% to above 12% of GDP in 2050.

Chart 9

Median General Government Balance

- "No policy change" scenario
- "No aging" scenario
- "Higher growth" scenario
- "Balanced budget in 2016" scenario
- "Lower interest rate" scenario

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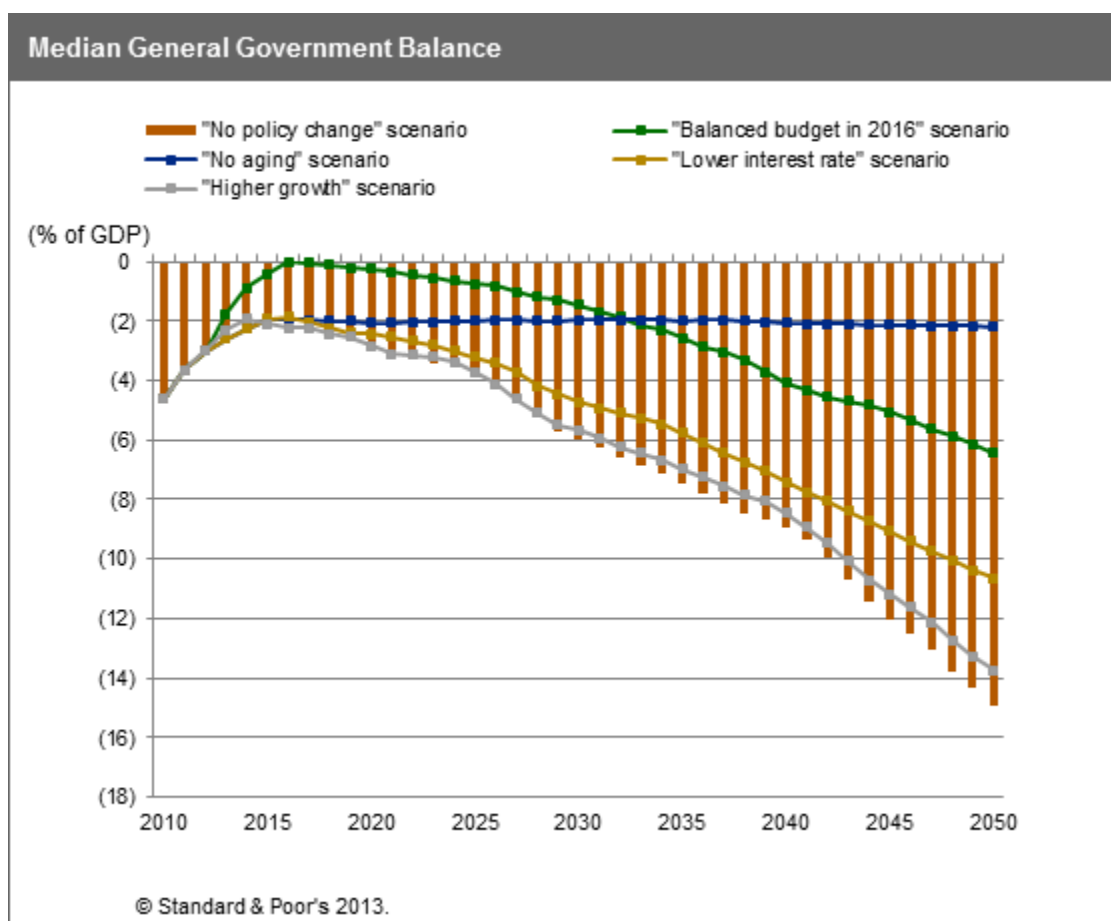
For all sovereigns in the study, we project that burgeoning deficit ratios will push the median net debt ratio to about 190% of GDP in 2050, from less than 40% of GDP currently, as the snowball effect of rising interest payments accelerates the negative budgetary impact (see chart 10 below). During the same period, the median debt for advanced sovereigns under the no-policy-change scenario increases more than three-fold to nearly 220% of GDP, and about five-fold in emerging market sovereigns to 153% of GDP. In 2050, we project that eight sovereigns will have net debt levels above 300%--most of them advanced--with Japan, the Netherlands, Russia, and the U.S. having significantly higher net debt.

Putting these high debt ratios into perspective, both New Zealand and Australia had government debt burdens in excess of 150% of GDP on the brink of World War II, while the U.K.'s debt reached 252% in 1946, up from 30% in 1913. Of course, these were isolated instances related to sudden shocks such as war and the Great Depression and were often mitigated in the aftermath through high levels of growth due to positive demographic trends or rising inflation. More recently, in 2011, the gross general government debt ratio in Greece has been hovering at more than 170% of GDP, before the country's 2012 sovereign debt restructurings, while government debt in Japan is currently above 230% of GDP. Our current projections, in contrast, suggest a generalized and sustained fiscal deterioration due to a well-understood and predictable phenomenon: population aging.

Chart 10

Median General Government Net Debt

Legend:
- "No policy change" scenario
- "No aging" scenario
- "Higher growth" scenario
- "Balanced budget in 2016" scenario
- "Lower interest rate" scenario

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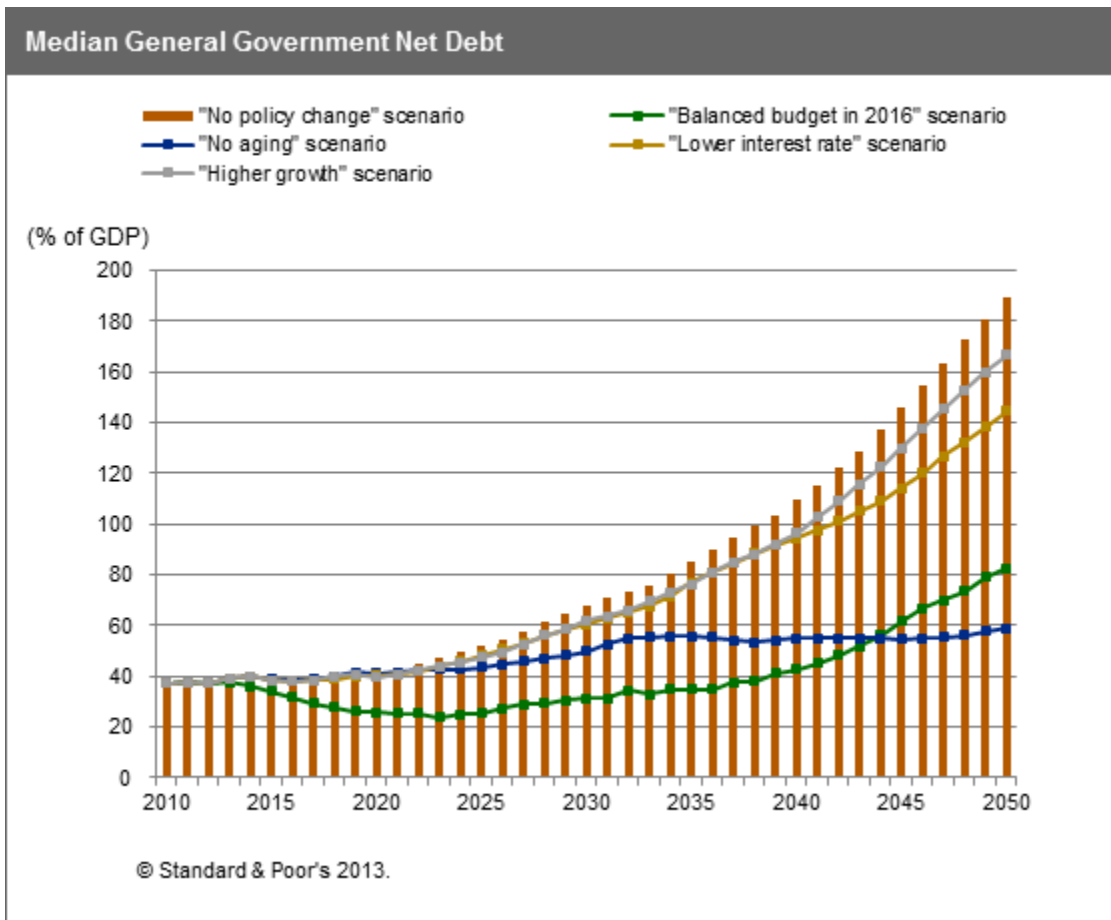
Getting Better: Comparison With Previous Standard & Poor's Global Aging Reports

For the sovereigns covered in our previous reports, the difference between this year's results and those published in 2010 appears sizable (see charts 11 and 12 below). First and foremost, there appears to be a gradual ongoing improvement in general government balances due to budgetary consolidation in most sovereigns following the economic and financial crisis, especially since 2010. While the budgetary situation actually improved between 2006 and 2007, we've observed a widening of fiscal gaps and substantial rises in debt outstanding in the aftermath of the crisis.

In general, our analysis indicates improvements in long-term projections of hypothetical trends in long-term sustainability of public finances in several sovereigns. This is particularly true among the advanced sovereigns in Italy, Spain, Slovenia, Luxembourg, and Ireland, and among the emerging market sovereigns in Russia, Ukraine, Lithuania, and Latvia. In part, this can be ascribed to an improved budgetary position compared to what was expected in our 2010 Global Aging report, an element which is relevant in particular for Italy, Slovenia, Russia, Romania, and Lithuania. Given the long-term budgetary projections' substantial sensitivity to the sovereigns' gradually improved budgetary position in this report compared to the 2010 one, even a small reduction in budget deficit at the beginning of the projection period has a significant amplifying impact on the long-term government debt trajectory.

This report also includes updated long-term projections on real GDP and individual age-related spending items. In this context, there is a change in the long-term projection of pension and health care spending in the EU sovereigns. Changes to the revised underlying pension spending projections, in particular in Greece, Spain, Slovenia, Latvia, Italy and Romania, reflect adjustments to these sovereigns' pension systems. The revised set of population projections by Eurostat also contributed to a lower projected increase in future pension spending, though lower dependency ratios in Spain, Italy, Slovenia, and Lithuania. Compared to the 2010 report, the lower increase in future pension spending in Russia and Ukraine as projected by the IMF has a positive impact on their long-term credit metrics, although the underlying challenge remains a very significant one. Improvement in Italy's projected government debt trajectory, beyond the medium term risks to its creditworthiness, reflects relatively high primary budget surplus, and only a mild expected increase in age-related spending, resulting from social security reforms.

The health care and long-term care spending projections by the EU Ageing Working Group for the EU sovereigns and Norway, incorporated in this analysis, differ methodologically somewhat from those in our 2010 report. Compared to 2010, the current assumptions incorporate relatively more benign future dynamics in health care and a more adverse trend in long-term care outlays, as indicated by the "AWG risk scenario" projections for both items. This is particularly relevant for projections of long-term government debt dynamics in Ireland and Luxembourg. However, even when controlling for these methodological changes, changes to social security systems by a number of European sovereigns have, on average, contributed significantly to lower growth in overall age-related spending than we anticipated in 2010. This, in turn, implies a lower government debt burden throughout the projection period compared with our 2010 results.

As illustrated by the 2013 median general government balance trajectory, efforts undertaken by governments in recent years have contributed to repairing about half of the long-term budget damage until 2030 that has been created since the onset of the financial crisis. As of mid-2030s, however, the 2013 median approaches our 2006 and 2007 estimates as the modifications to the social security system adopted over recent years improve the time profile of age-related spending.

Chart 11

Median General Government Balance*

Legend:
- 2013 Global Aging Report
- 2010 Global Aging Report
- 2007 Global Graying Report
- 2006 Global Graying Report

(% of GDP)

*Median of the countries mentioned in the 2006 Global Graying Report.

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Chart 12

Median General Government Net Debt*

*Median of the countries mentioned in the 2006 Global Graying Report.

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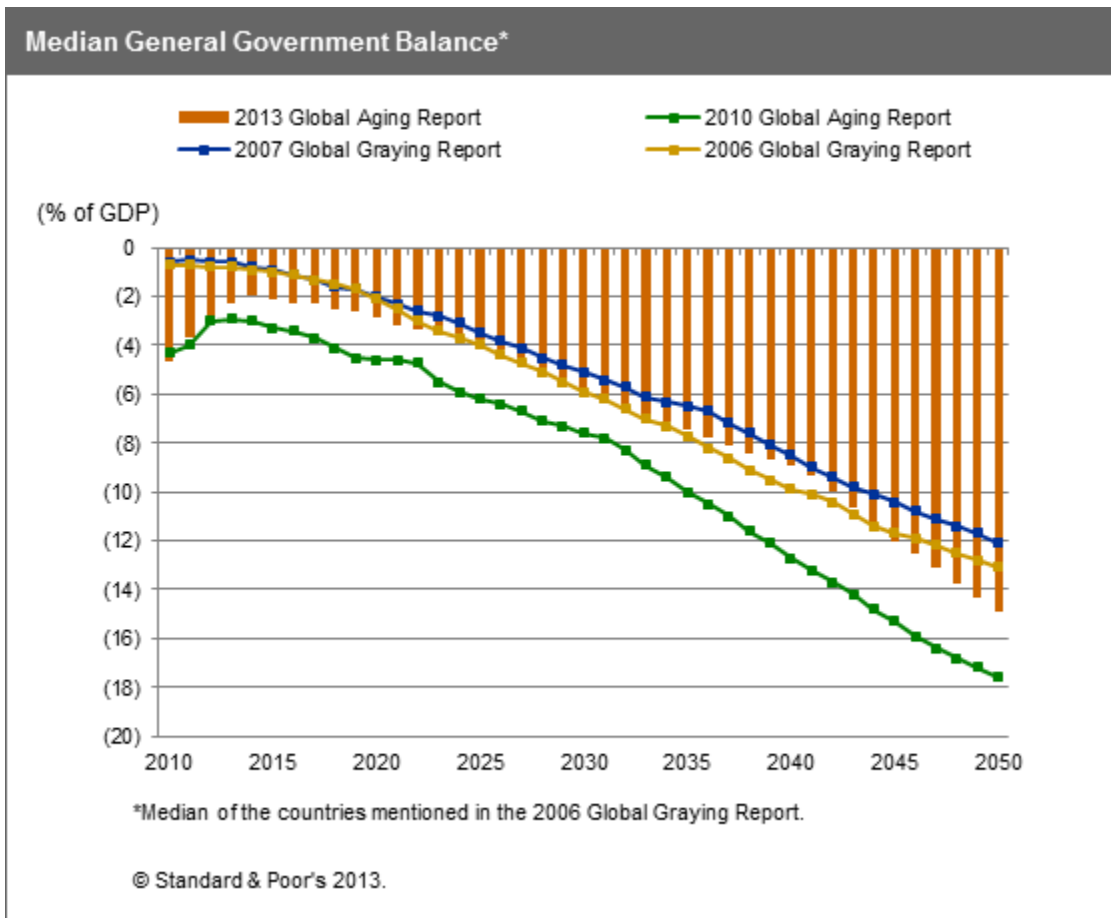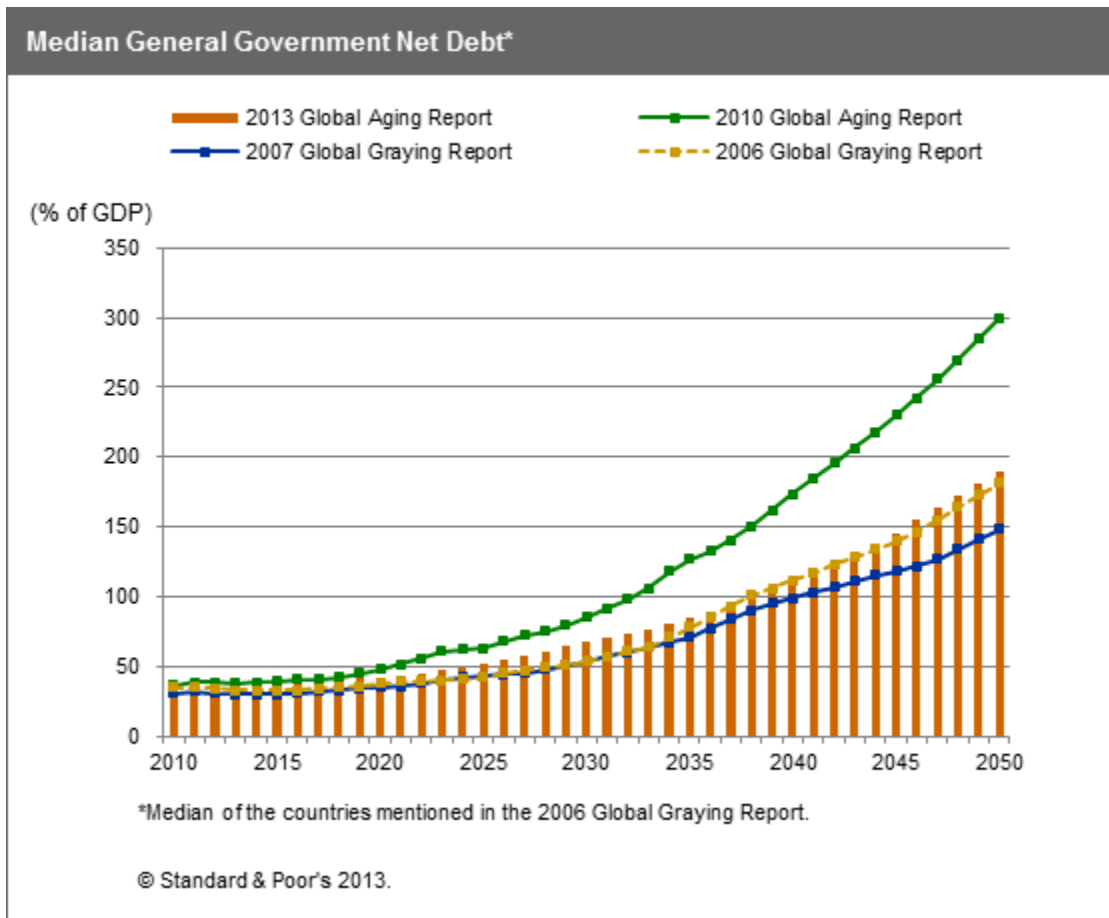
Trends in hypothetical long-term creditworthiness

Rising deficits would likely lead to downward pressure on our hypothetical sovereign ratings. This would be the case even if debt ratios remained at relatively low levels because of the sharp upward trajectory of fiscal deficits. When presented graphically, the collective deterioration in the hypothetical ratings on the 50 sovereigns in our sample becomes evident (see chart 6). The erosion in sovereign ratings would start about 2020, when hypothetical ratings on a number of highly rated sovereigns would come under pressure (see the 2010 "Methodological And Data Supplement" for explanations of the model). Although the downward drift is impressive, equally noteworthy is the nonlinearity of the change in theoretical ratings over time. Hypothetical ratings would weaken somewhat as of 2020, especially at the upper end of the rating scale, while the number of sovereigns with speculative-grade ratings would, after initial falling, stabilize until the late 2030s. From that moment onward, the full budgetary impact of population aging would kick in and the projected downward transition in sovereign ratings would become predominant. A comparison with our 2010 simulation of hypothetical sovereign ratings shows that the budgetary consolidation and structural reform efforts made since then have positive implications for future creditworthiness, since the projected deterioration in our hypothetical sovereign credit ratings is much slower. Moreover, the latter is true despite the fact that we've seen a general decline in creditworthiness since 2010, reflected in a larger number of negative versus positive sovereign rating actions.

We derived the hypothetical ratings evolution shown here by taking into account GDP per capita, general government

balances, and net debt levels. We don't intend them to serve as a prediction of actual outcomes (see chart 13 below). In practice, the hypothetical ratings may overstate the changes in creditworthiness. They are benchmarked against budget balances, net debt, and GDP per capita levels today, whereas it is of course possible that the medians themselves could worsen as more and more rated sovereigns are squeezed by the costs of their aging populations. Moreover, Standard & Poor's may give more credence to mitigating credit strengths than we've assumed in this simplified model for simulation of sovereign credit ratings. As mentioned above, the methodology underlying the simulation of hypothetical long-term sovereign credit ratings cannot be directly compared with our methodology for assigning sovereign credit ratings, on which current ratings are based. The hypothetical ratings should therefore be regarded as a mere illustration of the credit dimension and profile of the demographic challenge that governments face and not as an indication of expected credit performance.

Chart 13
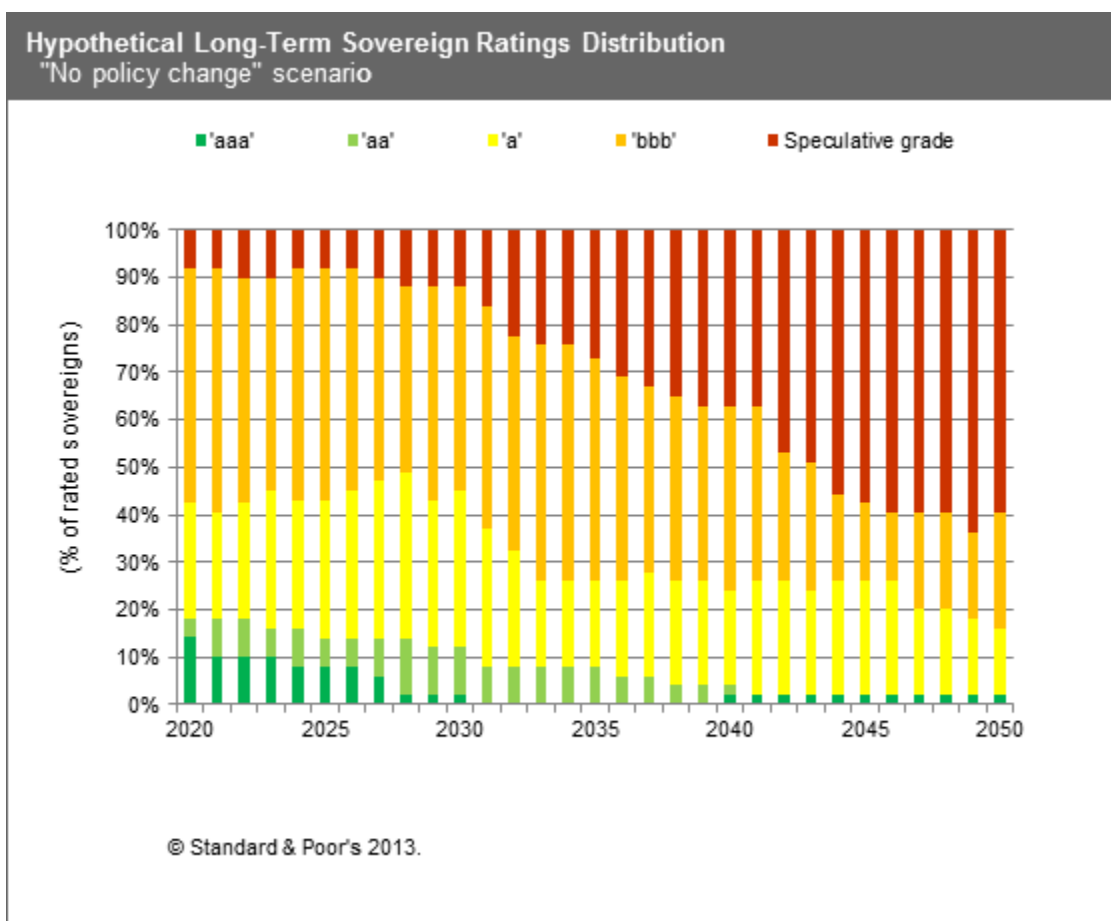
Alternative Scenarios

Analysis of variations from our base-case scenario is helpful in assessing the relative power of the multiple forces at work that determine future fiscal performance and hypothetical rating trends. The first two scenarios deviate from our "fiscal autopilot" assumption and illustrate the importance of policy strategies, resulting either from budgetary

consolidation or implementation of structural reforms, in dealing with the budgetary impact of population aging. The other scenarios gauge the impact of external influences.

The "balanced budget" scenario

In this scenario we assume that budgetary adjustments lead to a balanced budget in 2016 for all sovereigns. Once this is achieved, the governments revert to "fiscal autopilot" and take no further action, except for borrowing to pay for incremental age-related (and interest) expenditures as they occur. Deficits and debt will be much more contained, but, for the majority of sovereigns, the containment is insufficient to prevent unsustainable results later on. The improvement compared to the base-case scenario is particularly marked in countries that currently have large general government imbalances, since the main assumption requires these sovereigns to take relatively larger budgetary steps by 2016. Overall, this scenario illustrates the power that budgetary consolidation has in offsetting the projected adverse effects of age-related spending (see chart 14).

Chart 14
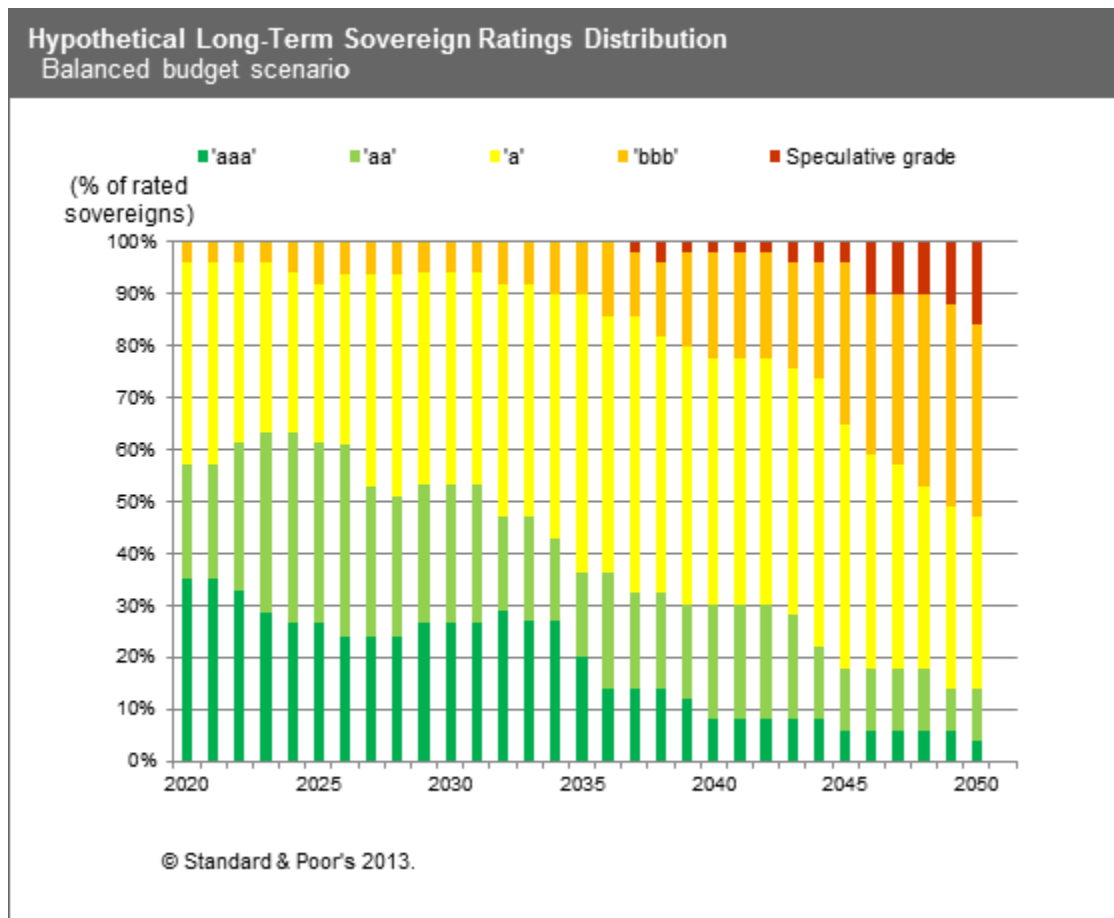
For governments generating surpluses, this scenario is equivalent to a loosening of fiscal policy and therefore has a negative budgetary impact. For those running deficits up to 1% of GDP, the difference in results from the base-case scenario is relatively small. The hypothetical credit metrics initially hold up better than in the base case and despite the overwhelming age-related spending pressures kicking in after 2020, such a policy scenario eventually leads to a higher

share of hypothetical ratings in the investment-grade category by 2050. The results show that, despite balancing their budgets by 2016, governments with significant increases in age-related costs would still end up with very high net debt. Nevertheless, the situation is much better than in our no-policy-change scenario.

"No aging" scenario

In this scenario we assume that governments enact legislation to fully contain future increases in age-related spending over the projection period, illustrating the benefits of related restructuring measures. As such, the scenario captures in isolation the effect of the sovereigns' starting budgetary positions. Besides the effect of the current outstanding stock of government net debt on future budgets, the government balance is of particular relevance because it's assumed unchanged from 2014 onward. Thus, while overall debt at the end of this scenario will be lower, sovereigns with relatively high expected government deficits in 2014 will see their debt burden grow faster than those of their peers with more balanced budgets, despite having eliminated future increases in age-related spending (see chart 15).

Chart 15
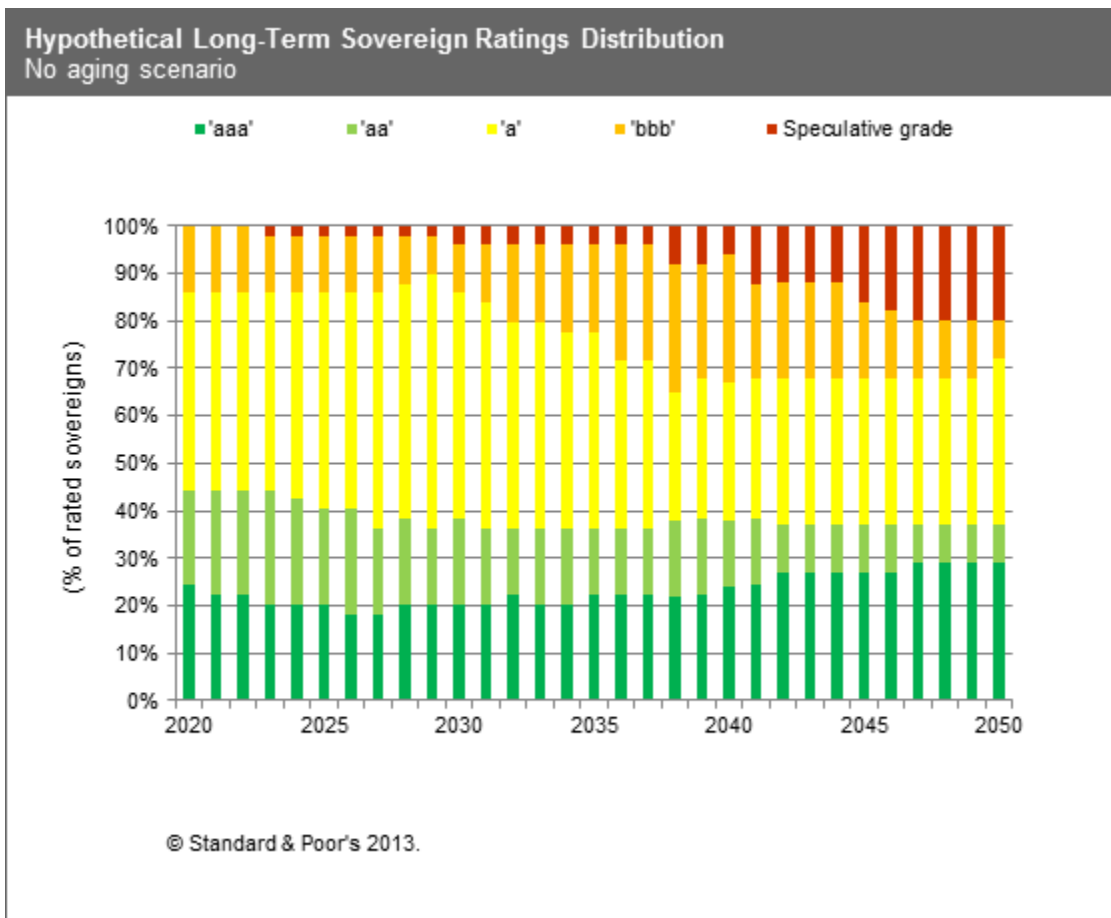
Unsurprisingly, given the magnitude of the projected increase in age-related spending over the next 40 years, the median in the "no-aging" scenario compares favorably with that in the no-policy-change or "balanced budget" scenario. Deficits and debt would in our view remain well contained under such a robust policy approach, despite budget deficits at the beginning of the projection period, and would in most cases effectively underpin the maintenance of the

sovereigns' hypothetical ratings or even lead to hypothetical upgrades. Given the larger projected increase in age-related spending by advanced sovereigns compared with the emerging markets group, this scenario implies a more substantial and positive impact for a reduction in their future debt burden than for emerging market sovereigns.

"Lower interest rate" scenario

Instead of assuming a 3% real interest rate, we substitute a rate of 2%, which is more in line with that observed during the period of ample global liquidity in the first decade of this century. This benign interest rate environment likely would by 2050 lead to lower median net debt for the whole sample--144% of GDP (advanced economies 183%; emerging market economies 122%) compared with 189% (216%; 153%) in the base case. The ratings distribution (not shown) at the end of the simulation is somewhat more favorable than in the base-case scenario, although not by a significant margin.

"Higher GDP growth" scenario

In this scenario, projected GDP growth is 1 percentage point higher across the projection period. A more buoyant growth environment would by 2050 lead to slightly lower median net debt for the whole sample--167% of GDP (advanced sovereigns, 196%; emerging market sovereigns, 130%) compared with 189% (216%; 153%) in the base case. The ratings distribution (not shown) is somewhat better than in the base-case scenario, although not by a significant margin.

The Policy Implications Of Closing The Gap

To better illustrate the budgetary adjustments that we believe are likely to keep public finances on sustainable footings, we analyzed what we term as sovereigns' "sustainability gap" indicators. More specifically, based on methodology published by the European Commission (2009; see the 2010 "Methodological And Data Supplement" for details), the sustainability gap reveals the difference between the current structural primary balance and that which would lead to fulfilling intertemporal budgetary constraints over an infinite time horizon. In other words, it indicates the permanent budgetary adjustment required to make public finances sustainable. The gap thus represents the difference between the constant revenue ratio as a share of GDP that indicates the actualized flow of revenues and expenses over an infinite horizon, and the current revenue ratio.

Overall, the resulting sustainability gaps appear significant. In the absence of restructuring and budgetary consolidation, a gap of 5.1% of GDP emerges for the median of advanced countries. This is nevertheless much lower than the 8% of GDP in our 2010 report. To assess the potential impact of policy action on the future budgetary burden, we examined sustainability gaps assuming sovereigns balanced their budgets by 2016. Unsurprisingly, the results show a huge decline in sustainability gaps as the median for advanced economies almost halves to 2.6% of GDP, while for emerging markets it falls from 4.3% to 2.8% of GDP. The shrinkage of the gap affects sovereigns across the sample, as the initial budgetary position contributes favorably to this reduction. Thus, the narrowing of the gap is most significant for sovereigns for which this component contributes relatively more to the gap in the base-case scenario. Conversely, the balanced budget scenario affects least the sovereigns with large sustainability gaps due to the long-term change component. The only exceptions are Saudi Arabia and to a much lesser extent Iceland, Korea, Sweden, and Switzerland, where a gap emerges as the budgetary consolidation implies fiscal loosening (see charts 16 and 17).

Chart 16

Advanced Economies Sustainability Gap
"No policy change" and "balanced budget" scenarios

AM--Advanced economies median. WM--World median.

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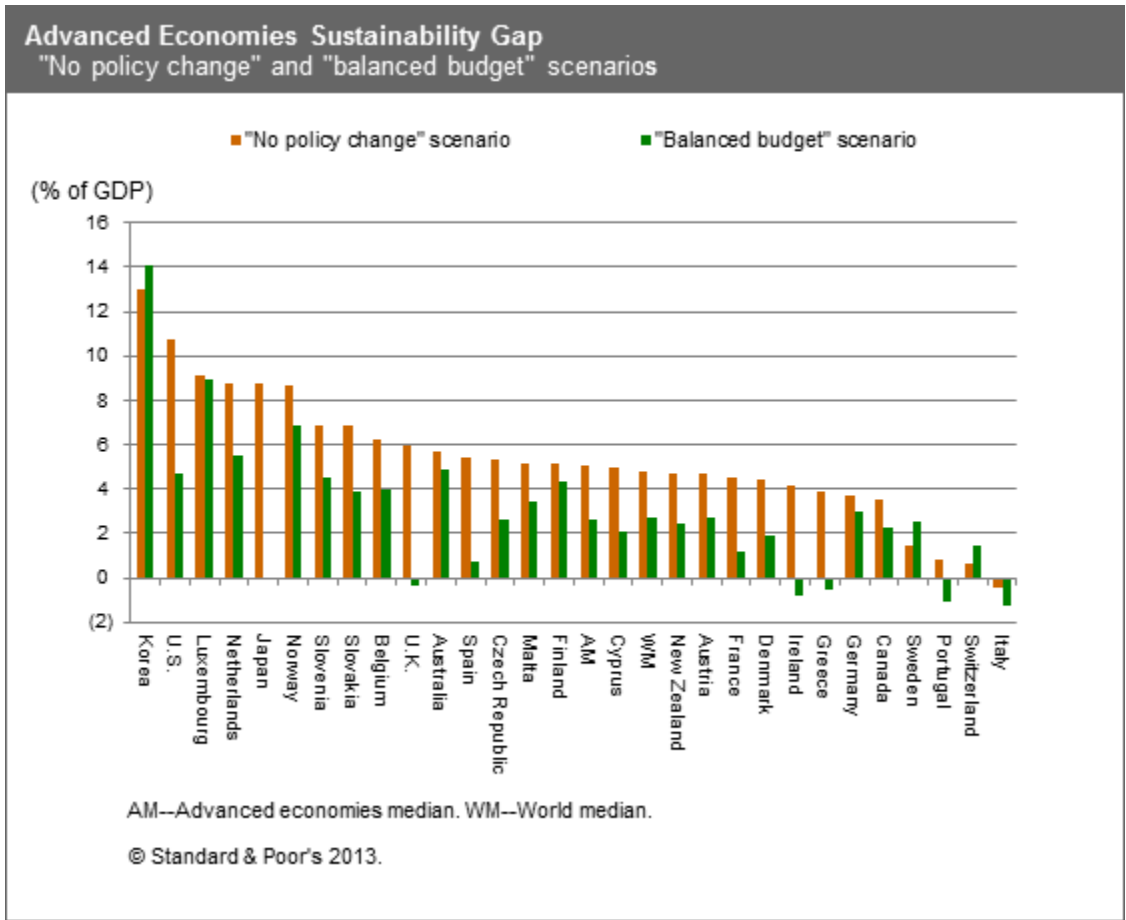
Chart 17
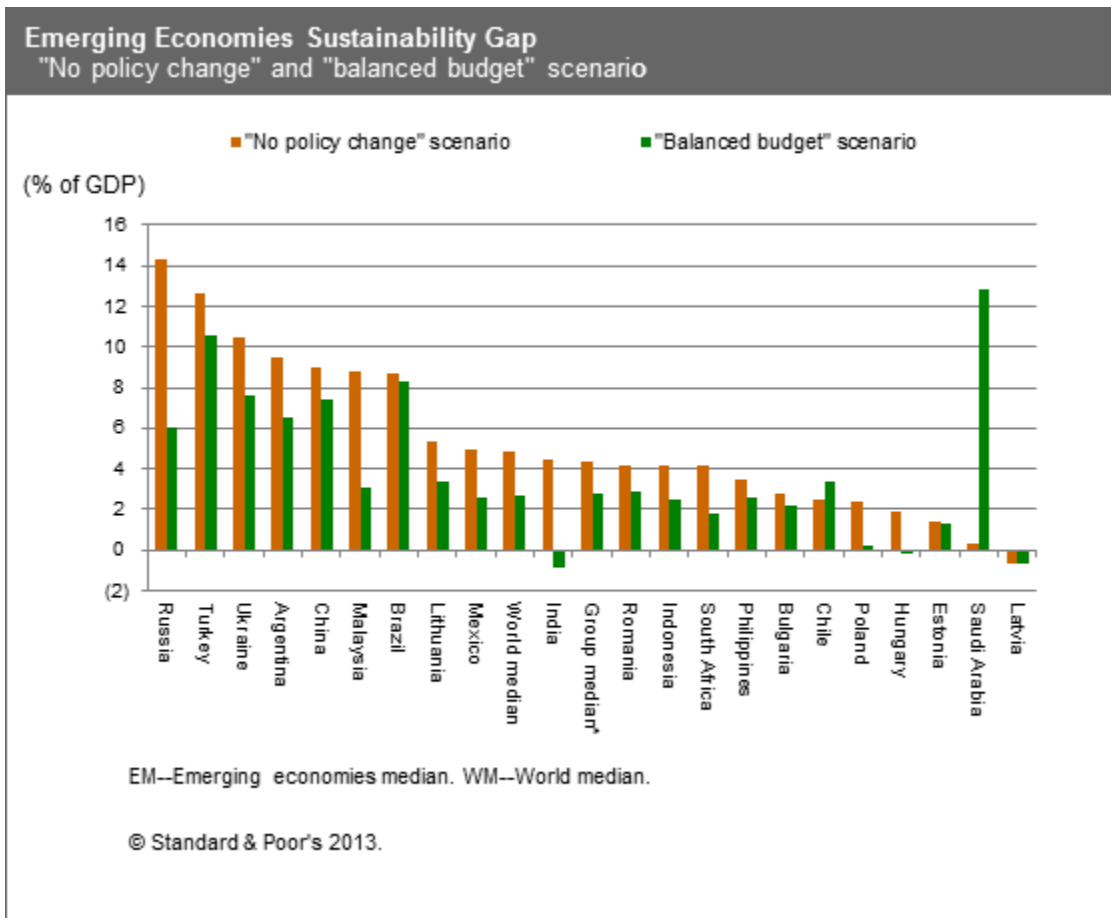
Having identified a range of potential gaps and what we believe to be their causes, we can consider the possible policy implications. Based on our framework, we believe that governments can deal with the future imbalances in two main ways (besides structural reforms aimed at raising employment for older workers and boosting economic growth): through a sustained consolidation in budgetary positions, or changes to social security and publicly-funded health care systems.

Given the growing urgency of tackling the budgetary implications of population aging and the capacity of governments to influence the outcomes of policy, these two options have been deployed by policy makers in recent years. To show more clearly how the sustainability gaps indicate the permanent structural budgetary change we believe is likely to ensure sustainability of public finances at the current juncture, we obtained the sovereign-specific no-policy-change sustainability gap indicators as reflected in chart 18 below.

Chart 18

Sovereign Policy Priorities
Policy balance
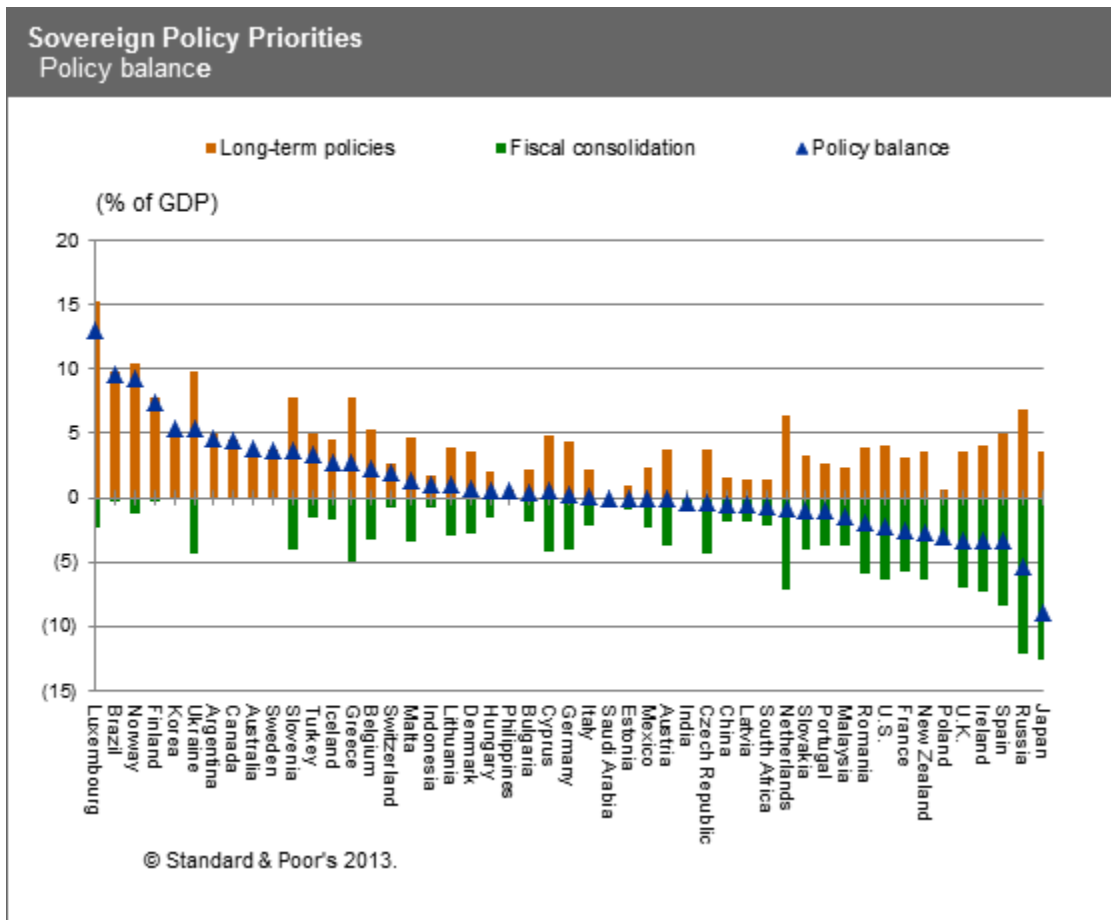
At one end of the spectrum, for sovereigns which we expect in 2015 to be relatively close to fiscal balance, such as Luxembourg, Brazil, Norway, Korea, or Finland, the marginal extra consolidation to reach balance would have a very limited effect on the future trajectory of the debt burden. On the other hand, if they were successful in preventing age-related spending from rising in the future they would effectively reduce their sustainability gaps. Conversely, Japan, Russia, U.K., Spain, India, Malaysia, and the U.S. have more to gain for fiscal sustainability from consolidating their budgets quickly, given their relatively high structural primary balances. For most countries, a combination of the two directions is likely to be effective, but the relative mix is likely to differ. The absolute length of the bars in the chart is also important, indicating both the magnitude of the problem and suggesting the extent to which a sovereign likely can deal with the reduction in the sustainability gap through either policy option. For example, even if Slovakia fully contained the projected increase in its aging costs, it could still face a sustainability gap without further consolidation. A combination of the two policy options of course unleashes a much more powerful effect. Finally, the length of the bars indicates the relative debt reduction potential.

A Hostile Political Climate Could Thwart Governments' Reform Agendas

Like our previous reports on aging, our latest study suggests that without further gradual changes, fiscal pressures will become increasingly unsustainable for sovereigns, although clear advances toward the long-term sustainability of public finances have been made. At the same time, the aging of these countries' electorates, coupled with country-specific political developments, could well make the political climate for pension and health care reform more difficult, as shown during the past couple of years in Europe. To the extent that advanced sovereigns, in particular, delay steps to improve economic growth, the opposition to pension and health care entitlement reductions will grow wider and may prove socially and politically costly. Moreover, where reductions in entitlements were adopted without sufficient consultation with stakeholders, policy reversals or mistakes could result, reinforcing opposition to future adjustments.

Containing the risks to the sustainability of public finances is an important policy issue--and not just from the standpoint of maintaining sovereigns' creditworthiness. As critical, in our view, is that sustainable government budgets and safety nets may be vital to maintaining social stability, by ensuring adequate social transfers to reduce the risk of poverty, which has been on the rise in the sovereigns most affected by the economic and financial crisis. In this context, we observe that rationalizing public pension and health care systems can, if embraced soon, help spread the impact of such unpopular policy measures over an extended period, with the consequently lower burden of adjustment shared across generations of taxpayers and voters. We have seen that such policy behavior is important for managing the expectations of economic agents, thus avoiding sudden policy shifts that could alienate electorates or undermine economic growth performance.

For emerging market sovereigns, the policy issues are also complex. In these countries, population aging will likely take place against a background of relatively high rates of economic growth. This growth, coupled with greater economic convergence with today's more prosperous sovereigns, should in our view make the social and fiscal pressures arising from population aging relatively more manageable.

However, if the experience of Europe and North America over the past century is any guide, rising prosperity is also likely to increase domestic pressures on emerging market sovereigns to provide more generous social security provisions in the future. These governments may have more time to consider their policy options than today's more economically advanced sovereigns, but we expect they will still need to design programs that are fiscally sustainable as their populations continue to age. Already, our analysis suggests that the need to tackle demographically driven budget deficits is almost as pressing for some emerging market sovereigns as it is for the sovereigns in advanced economies.

Related Criteria And Research

Reports by Standard & Poor's
- Mounting Medical Care Spending Could Be Harmful To The G-20's Credit Health, Jan. 26, 2012
- Sovereign Government Rating Methodology And Assumptions, June 30, 2011
- Global Aging 2010: An Irreversible Truth, Oct. 7, 2010

- Global Aging 2010: An Irreversible Truth--Methodological And Data Supplement, Oct. 7, 2010
- What A Change A Year Makes: Standard & Poor's 2007 Global Graying Progress Report, Sept. 19, 2007
- Global Graying: Aging Societies And Sovereign Ratings, June 27, 2006
- Western Europe Past Its Prime--Sovereign Rating Perspectives In The Context Of Aging Populations, Jan. 9, 2002
- Western Europe Past Its Prime--Sovereign Rating Perspectives in the Context of Aging Populations: Methodological and Data Supplement, Jan. 9, 2002

Other references

- Congressional Budget Office, "Long-Term Budget Outlook," The Congress of the United States Congressional Budget Office, June 2012, http://www.cbo.gov/publication/43288
- Duval, R. and C. de la Maisonneuve, "Long-Run GDP Growth Framework And Scenarios For The World Economy," OECD Economics Department Working Papers, No. 663, 2009, OECD Publishing, Doi: 10.1787/227205684023, http://www.oecd-ilibrary.org/economics/long-run-gdp-growth-framework-and-scenarios-for-the-world-economy_227205684023
- Economic Policy Committee and European Commission, "The 2012 Ageing Report: Economic And Budgetary Projections For The EU-27 Member States (2008-2060)," European Economy, No. 2/2012, http://ec.europa.eu/economy_finance/publications/european_economy/2012/pdf/ee-2012-2_en.pdf
- European Commission (2012), "Fiscal Sustainability Report 2012," European Economy, No.8/2012, http://ec.europa.eu/economy_finance/publications/european_economy/2012/fiscal-sustainability-report_en.htm
- Eurostat (2011), "A Century Long View Of Aging In European Populations," Statistics In Focus, No. 23/2011, http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-SF-11-023/EN/KS-SF-11-023-EN.PDF
- Federal Finance Administration, "Long-Term Sustainability Of Public Finances In Switzerland," Federal Department of Finance of Swiss Confederation, 2012, www.efv.admin.ch
- IMF, "The Challenge Of Public Pension Reform In Advanced And Emerging Economies," 2011, http://www.imf.org/external/np/pp/eng/2011/122811.pdf
- Coady, D., Clements, B., Gupta, S.: The Economics of Public Health Care Reform in Advanced and Emerging Economies, IMF, 2012
- New Zealand Treasury, "Challenges and Choices. New Zealand's Long-Term Fiscal Statement," 2009.http://www.treasury.govt.nz/government/longterm/fiscalposition/2009/ltfs-09.pdf
- New Zealand Treasury, "How does the Treasury's Long-Term Fiscal Model work, and what is our initial analysis showing?", speech by Girol Karacoglu, 2012
- Treasury of the Commonwealth of Australia, "Australia To 2050: Future Challenges," Intergenerational Report 2010 http://www.treasury.gov.au/igr/igr2010/report/pdf/IGR_2010.pdf
- UN (2012), "World Population Prospects: The 2010 Revision Population Database," December 2012 Update, http://esa.un.org/wpp/

Appendix: Aging Data And Scenario Results

Table 1

Population And Old-Age Dependency									
	--Population (mil.)--					--Old-age dependency ratio (%)--			
	2010	2020	2030	2040	2050	2010	2020	2030	2040	2050
Argentina	40.4	43.9	46.8	49.0	50.6	16.0	18.0	21.0	24.0	30.0
Australia	22.3	25.2	27.8	29.8	31.4	20.0	25.0	31.0	36.0	39.0
Austria	8.4	8.6	8.9	9.0	9.0	26.1	29.8	38.8	46.8	48.6
Belgium	10.9	11.6	12.2	12.7	13.1	26.0	30.3	36.7	41.0	42.5

Table 1

Population And Old-Age Dependency (cont.)									
Brazil	194.9	210.4	220.5	224.4	222.8	10.0	14.0	20.0	27.0	36.0
Bulgaria	7.5	7.1	6.6	6.2	5.9	25.4	32.5	38.7	46.0	56.1
Canada	34.0	37.2	39.9	41.9	43.6	20.0	28.0	38.0	41.0	42.0
Chile	17.1	18.6	19.8	20.4	20.7	13.0	18.0	27.0	34.0	38.0
China	1,341.3	1,387.8	1,393.1	1,360.9	1,295.6	11.0	17.0	24.0	37.0	42.0
Cyprus	0.8	0.9	1.0	1.0	1.1	18.6	24.9	30.8	33.3	39.8
Czech Republic	10.5	10.8	10.8	10.7	10.7	21.6	30.4	34.3	40.1	50.1
Denmark	5.5	5.7	5.9	6.0	6.0	24.9	31.4	37.0	41.9	41.8
Estonia	1.3	1.3	1.3	1.2	1.2	25.2	30.1	35.8	40.5	48.3
Finland	5.4	5.6	5.7	5.7	5.7	25.6	36.2	42.7	43.5	44.9
France	64.9	68.0	70.4	72.3	73.2	25.7	32.7	39.1	44.4	45.5
Germany	81.7	80.0	77.7	74.6	70.6	31.3	35.8	47.2	56.4	58.1
Greece	11.3	11.5	11.6	11.6	11.6	28.4	32.6	37.7	47.8	57.5
Hungary	10.0	9.9	9.7	9.4	9.2	24.2	30.0	33.6	39.5	50.2
Iceland	0.3	0.4	0.4	0.4	0.4	18.0	23.0	30.0	35.0	39.0
India	1,224.6	1,386.9	1,523.5	1,627.0	1,692.0	8.0	9.0	12.0	15.0	20.0
Indonesia	239.9	262.6	279.7	290.2	293.5	8.0	10.0	15.0	22.0	30.0
Ireland	4.5	4.8	5.3	5.8	6.2	16.8	22.8	27.6	33.1	39.7
Italy	60.5	63.0	64.6	65.7	65.9	30.8	34.8	41.1	51.7	56.3
Japan	126.5	124.8	120.2	114.3	108.5	35.0	48.0	53.0	63.0	70.0
Korea	48.2	49.8	50.3	49.4	47.1	15.0	22.0	37.0	52.0	61.0
Latvia	2.2	2.1	2.0	1.9	1.8	25.2	28.8	36.2	43.3	54.3
Lithuania	3.3	3.2	3.0	2.9	2.8	23.3	26.6	35.2	41.8	47.3
Luxembourg	0.5	0.6	0.6	0.7	0.7	20.4	23.1	30.0	37.1	41.9
Malaysia	28.4	33.0	37.3	40.8	43.5	7.0	11.0	16.0	19.0	23.0
Malta	0.4	0.4	0.4	0.4	0.4	21.3	31.8	39.2	40.2	46.5
Mexico	113.4	125.9	135.4	141.5	143.9	10.0	12.0	17.0	25.0	31.0
Netherlands	16.6	17.2	17.6	17.6	17.3	22.8	30.8	40.3	47.3	46.5
Norway	4.9	5.4	5.8	6.1	6.4	22.5	27.4	33.0	38.5	40.3
New Zealand	4.4	4.8	5.2	5.5	5.7	20.0	25.0	33.0	38.0	39.0
Philippines	93.3	109.7	126.3	141.7	154.9	6.0	8.0	10.0	13.0	16.0
Poland	38.2	38.4	37.5	36.0	34.5	19.0	26.9	35.2	39.9	53.0
Portugal	10.6	10.7	10.8	10.8	10.6	26.7	31.3	37.9	46.7	55.6
Romania	21.4	21.0	20.2	19.4	18.4	21.4	25.7	30.2	40.7	53.8
Russia	143.0	141.0	136.4	131.3	126.2	18.0	23.0	29.0	31.0	39.0
Saudi Arabia	27.4	33.5	38.5	42.2	44.9	4.0	7.0	9.0	13.0	22.0
South Africa	50.1	52.6	54.7	56.0	56.8	7.0	9.0	12.0	12.0	15.0
Slovakia	5.4	5.6	5.6	5.5	5.3	16.9	23.6	31.4	38.0	51.4
Slovenia	2.1	2.1	2.2	2.1	2.1	23.8	30.4	38.8	46.1	55.1
Spain	46.1	48.1	50.1	51.8	52.7	24.7	28.9	35.5	46.7	56.9
Sweden	9.4	10.1	10.6	10.9	11.2	27.7	33.5	37.2	40.5	41.7
Switzerland	7.7	7.9	8.1	8.0	7.9	25.0	31.0	41.0	52.0	56.0

Table 1

Population And Old-Age Dependency (cont.)										
Turkey	72.8	80.8	86.7	90.3	91.6	9.0	12.0	17.0	22.0	30.0
U.K.	62.2	66.5	70.4	73.6	76.5	24.9	29.6	34.8	38.9	39.4
Ukraine	45.4	43.0	40.5	38.1	36.1	22.0	25.0	30.0	33.0	40.0
U.S.	310.4	337.1	361.7	383.5	403.1	20.0	25.0	33.0	35.0	35.0

Table 2

Real GDP Growth						
	--2013 Global Aging Report--			--2010 Global Aging Report--		
(%)	2010	2050	2010-2050 average	2010	2050	2010-2050 average
Argentina	9.2	2.9	3.4	4.5	2.9	3.3
Australia	2.3	2.3	2.6	3.0	2.3	2.7
Austria	2.1	1.3	1.5	1.5	1.5	1.6
Belgium	2.4	1.7	1.5	1.3	1.7	1.8
Brazil	7.5	2.0	3.0	7.5	3.2	4.0
Bulgaria	0.4	0.8	1.3	(1.0)	0.3	1.6
Canada	3.2	1.9	1.7	3.0	1.9	2.3
Chile	5.2	1.9	3.4	N.A.	N.A.	N.A.
China	10.4	2.2	4.9	9.8	2.4	4.4
Cyprus	1.3	1.6	1.5	(0.2)	1.8	2.7
Czech Republic	2.5	1.1	1.6	1.7	0.7	1.7
Denmark	1.3	1.7	1.4	1.8	1.9	1.7
Estonia	3.3	0.9	2.1	1.0	0.6	1.9
Finland	3.3	1.4	1.5	1.0	1.5	1.6
France	1.7	1.6	1.6	1.6	1.8	1.8
Germany	4.2	0.8	1.0	2.5	1.0	1.2
Greece	(4.9)	1.3	0.4	(4.0)	1.2	1.4
Hungary	1.3	0.9	1.3	0.0	0.8	1.8
Iceland	(4.0)	1.8	1.7	(1.5)	1.7	1.9
India	9.6	3.2	4.9	8.0	4.2	6.2
Indonesia	6.2	3.4	4.2	6.0	4.4	4.9
Ireland	(0.8)	2.0	2.3	(0.8)	1.6	2.2
Italy	1.8	1.5	1.3	0.7	1.3	1.4
Japan	3.2	2.0	1.7	1.1	0.6	1.2
Korea	6.3	1.4	2.1	5.0	0.5	2.0
Latvia	(0.9)	0.3	1.9	1.1	(0.1)	1.6
Lithuania	1.5	0.7	2.0	1.7	0.2	1.7
Luxembourg	2.9	1.7	1.7	1.8	2.2	2.4
Malaysia	7.2	3.0	4.1	6.0	3.0	4.1
Malta	3.4	0.8	1.6	0.8	0.8	1.7
Mexico	5.3	2.5	2.8	4.2	2.4	3.3
Netherlands	1.6	1.4	1.2	1.3	1.5	1.5
Norway	0.7	1.8	1.9	1.5	1.9	1.9

Table 2

Real GDP Growth (cont.)						
New Zealand	0.8	1.7	2.0	0.7	1.7	2.1
Philippines	7.6	4.8	5.4	3.7	4.8	5.1
Poland	3.9	0.5	1.6	3.0	0.3	1.8
Portugal	1.9	1.1	1.3	0.0	1.2	1.8
Romania	(1.7)	0.5	1.3	0.8	0.3	1.9
Russia	4.3	1.5	2.3	4.5	1.5	2.4
Saudi Arabia	5.1	3.6	4.7	3.8	3.6	4.6
South Africa	2.9	2.0	3.0	2.3	3.1	3.5
Slovakia	4.4	0.6	1.8	2.5	0.2	1.9
Slovenia	1.2	0.9	1.1	1.3	0.8	1.5
Spain	(0.3)	1.2	1.4	(0.6)	1.1	1.7
Sweden	6.6	1.6	2.1	1.5	1.7	2.0
Switzerland	3.0	1.6	1.7	1.2	1.6	1.7
Turkey	9.2	1.5	3.0	3.7	3.1	4.6
U.K.	1.8	1.8	1.8	1.4	1.9	2.1
Ukraine	4.2	2.2	3.3	4.0	2.2	3.4
U.S.	2.4	2.1	2.4	3.0	2.0	2.3
Medians						
Listed sovereigns	2.9	1.6	1.9	1.6	1.7	1.9
G-7	2.4	1.8	1.7	1.6	1.8	1.8

N.A.--Not available.

Table 3

Total Age-Related Spending (% GDP)						
(%)	Foreign currency rating	2010	2020f	2030f	2040f	2050f
Argentina	B-/Negative/B	12.5	13.9	15.5	17.9	20.8
Australia	AAA/Stable/A-1+	11.4	12.6	14.7	16.7	18.2
Austria	AA+/Stable/A-1+	23.9	25.9	28.4	29.3	30.3
Belgium	AA/Negative/A-1+	21.8	24.5	27.6	29.8	31.1
Brazil	BBB/Stable/A-2	12.7	13.5	16.0	20.4	25.3
Bulgaria	BBB/Stable/A-2	15.1	14.8	15.5	16.4	17.6
Canada	AAA/Stable/A-1+	14.0	16.3	18.3	19.4	20.1
Chile	AA-/Stable/A-1+	9.2	9.7	10.1	11.8	13.5
China	AA-/Stable/A-1+	5.4	7.6	10.5	12.7	15.1
Cyprus	CCC+/Negative/C	10.8	12.9	14.5	15.7	18.0
Czech Republic	AA-/Stable/A-1+	17.2	17.4	18.5	20.0	21.9
Denmark	AAA/Stable/A-1+	22.8	24.3	25.6	26.5	26.6
Estonia	AA-/Stable/A-1+	15.1	14.4	15.3	15.7	16.0
Finland	AAA/Stable/A-1+	22.2	25.1	28.0	28.8	28.9
France	AA+/Negative/A-1+	26.4	26.9	28.2	29.8	30.4
Germany	AAA/Stable/A-1+	21.2	22.2	24.2	25.8	26.9
Greece	B-/Stable/B	22.0	22.4	23.2	24.8	26.1

Table 3

Total Age-Related Spending (% GDP) (cont.)						
Hungary	BB/Stable/B	18.1	18.1	18.2	19.8	21.7
Iceland	BBB-/Stable/A-3	13.5	14.9	17.1	19.3	21.8
India	BBB-/Negative/A-3	2.2	2.7	3.3	3.9	4.4
Indonesia	BB+/Positive/B	2.0	2.7	3.5	4.6	5.5
Ireland	BBB+/Stable/A-2	18.5	20.8	20.8	22.3	24.3
Italy	BBB+/Negative/A-2	24.5	23.7	24.2	25.9	26.5
Japan	AA-/Negative/A-1+	18.2	19.1	19.3	20.4	21.3
Korea	A+/Stable/A-1	6.6	9.9	15.0	21.2	27.4
Latvia	BBB/Positive/A-2	14.8	12.8	12.1	12.1	12.4
Lithuania	BBB/Stable/A-2	15.2	14.9	16.3	18.3	20.6
Luxembourg	AAA/Stable/A-1+	14.5	16.3	20.0	23.3	25.8
Malaysia	A-/Stable/A-2	5.0	6.3	7.6	9.0	10.7
Malta	BBB+/Stable/A-2	16.8	18.3	19.8	22.1	24.8
Mexico	BBB/Positive/A-2	4.2	5.7	7.5	8.1	9.1
Netherlands	AAA/Negative/A-1+	19.2	20.9	24.0	26.9	27.9
Norway	AAA/Stable/A-1+	19.4	22.1	24.8	27.2	28.6
New Zealand	AA/Stable/A-1+	15.5	14.2	16.6	18.9	20.4
Philippines	BB+/Positive/B	3.1	3.8	4.4	5.3	6.4
Poland	A-/Stable/A-2	17.7	17.6	18.4	18.8	19.4
Portugal	BB/Stable/B	21.2	22.0	22.1	22.7	23.4
Romania	BB+/Stable/B	14.6	14.0	15.5	17.6	19.4
Russia	BBB/Stable/A-2	11.8	14.4	16.4	19.0	21.9
Saudi Arabia	AA-/Stable/A-1+	4.9	6.4	8.7	11.1	13.5
South Africa	BBB/Negative/A-2	5.7	6.9	8.1	9.2	10.7
Slovakia	A/Stable/A-1	14.7	16.3	18.1	20.2	22.7
Slovenia	A-/Stable/A-2	19.1	20.9	22.7	25.9	28.7
Spain	BBB-/Negative/A-3	19.4	20.6	20.6	22.6	24.6
Sweden	AAA/Stable/A-1+	21.5	22.1	23.7	24.7	24.9
Switzerland	AAA/Stable/A-1+	13.5	14.0	14.7	15.4	16.1
Turkey	BB/Stable/B	9.8	12.5	16.5	21.6	26.2
UK	AAA/Negative/A-1+	17.1	17.2	18.5	19.6	19.9
Ukraine	B/Negative/B	21.7	23.0	24.6	27.9	32.8
US	AA+/Negative/A-1+	10.9	12.7	15.5	17.3	18.8
Medians						
Listed sovereigns		15.1	15.6	17.6	19.7	21.7
Advanced economies		18.8	20.7	20.7	22.6	24.9
Emerging economies		12.2	13.1	15.4	16.1	16.8
BRICs		8.6	10.5	13.3	15.9	18.5
Europe		18.1	18.3	20.0	22.3	24.6
Asia		5.0	6.4	8.2	10.1	12.1
Latin America		10.9	11.6	12.8	14.8	17.2
G-7		18.2	19.1	19.3	20.4	21.3

Table 3

Total Age-Related Spending (% GDP) (cont.)					
'AAA' group	19.2	20.9	23.7	24.7	25.8
'AA' group	15.5	14.4	16.6	18.9	20.4
'BBB'-'A' group	14.7	14.9	16.3	19.1	21.8
Speculative-grade group	13.5	13.9	16.0	18.8	21.2

f--Standard & Poor's forecast.

Table 4

Age-Related Spending By Component (% GDP)															
	--2010--					--2050f--					--Change 2010-2050f--				
	Total	PEN	HCA	LTC	UNE	Total	PEN	HCA	LTC	UNE	Total	PEN	HCA	LTC	UNE
Argentina	12.5	7.4	5.1	N.A.	N.A.	20.8	11.9	8.9	N.A.	N.A.	8.3	4.5	3.8	N.A.	N.A.
Australia	11.4	4.7	6.0	0.0	0.7	18.2	6.2	10.3	1.3	0.4	6.8	1.5	4.3	1.3	(0.3)
Austria	23.9	14.1	7.4	1.6	0.8	30.3	16.4	9.6	3.5	0.7	6.4	2.3	2.2	1.9	(0.1)
Belgium	21.8	11.0	6.3	2.3	2.1	31.1	16.7	7.1	5.3	2.0	9.3	5.7	0.8	3.0	(0.1)
Brazil	12.7	9.1	3.6	0.0	N.A.	25.3	16.8	7.3	1.2	N.A.	12.6	7.7	3.7	1.2	N.A.
Bulgaria	15.1	9.9	4.3	0.5	0.4	17.6	11.1	5.5	0.8	0.2	2.5	1.2	1.2	0.3	(0.2)
Canada	14.0	4.9	7.4	1.2	0.5	20.1	6.3	11.1	2.4	0.3	6.1	1.4	3.7	1.2	(0.2)
Chile	9.2	5.5	3.7	0.0	N.A.	13.5	3.8	7.2	2.5	N.A.	4.3	(1.7)	3.5	2.5	N.A.
China	5.4	3.4	1.9	0.1	N.A.	15.1	9.2	3.9	2.0	N.A.	9.7	5.8	2.0	1.9	N.A.
Cyprus	10.8	7.6	2.6	0.2	0.5	18.0	14.4	3.0	0.3	0.4	7.2	6.8	0.4	0.1	(0.1)
Czech Republic	17.2	9.1	6.9	0.8	0.4	21.9	11.0	9.1	1.5	0.2	4.7	1.9	2.2	0.7	(0.2)
Denmark	22.8	10.1	7.4	4.5	0.7	26.6	9.6	8.9	7.4	0.7	3.8	(0.5)	1.5	2.9	0.0
Estonia	15.1	8.9	5.2	0.5	0.6	16.0	8.0	6.8	0.9	0.4	0.9	(0.9)	1.6	0.4	(0.2)
Finland	22.2	12.0	6.0	2.5	1.6	28.9	14.9	7.5	5.2	1.3	6.7	2.9	1.5	2.7	(0.3)
France	26.4	14.6	8.0	2.2	1.7	30.4	15.1	10.1	4.1	1.1	4.0	0.5	2.1	1.9	(0.6)
Germany	21.2	10.8	8.0	1.4	1.0	26.9	13.0	10.1	3.1	0.8	5.7	2.2	2.1	1.7	(0.2)
Greece	22.0	13.6	6.5	1.4	0.6	26.1	15.4	7.6	2.7	0.4	4.1	1.8	1.1	1.3	(0.2)
Hungary	18.1	11.9	4.9	0.8	0.4	21.7	13.5	6.4	1.5	0.3	3.6	1.6	1.5	0.7	(0.1)
Iceland	13.5	3.3	7.8	1.7	0.7	21.8	3.5	15.2	2.7	0.4	8.3	0.2	7.4	1.0	(0.3)
India	2.2	1.0	1.1	0.1	N.A.	4.4	0.7	2.0	1.7	N.A.	2.2	(0.3)	0.9	1.6	N.A.
Indonesia	2.0	0.7	1.2	0.1	N.A.	5.5	1.6	2.3	1.6	N.A.	3.5	0.9	1.1	1.5	N.A.
Ireland	18.5	7.5	7.3	1.1	2.6	24.3	11.4	8.8	2.8	1.4	5.8	3.9	1.5	1.7	(1.2)
Italy	24.5	15.3	6.6	1.9	0.7	26.5	15.7	7.6	2.7	0.5	2.0	0.4	1.0	0.8	(0.2)
Japan	18.2	10.0	6.8	0.7	0.7	21.3	10.7	8.2	1.9	0.4	3.1	0.7	1.4	1.2	(0.3)
Korea	6.6	1.7	3.9	0.3	0.7	27.4	12.5	12.3	2.1	0.4	20.8	10.8	8.4	1.8	(0.3)
Latvia	14.8	9.7	3.7	0.7	0.7	12.4	6.4	4.7	0.9	0.4	(2.4)	(3.3)	1.0	0.2	(0.3)
Lithuania	15.2	8.6	4.9	1.2	0.4	20.6	10.8	6.3	3.4	0.2	5.4	2.2	1.4	2.2	(0.2)
Luxembourg	14.5	9.2	3.8	1.0	0.6	25.8	18.1	4.7	2.6	0.5	11.3	8.9	0.9	1.6	(0.1)
Malaysia	5.0	3.0	2.0	N.A.	N.A.	10.7	6.9	3.8	N.A.	N.A.	5.7	3.9	1.8	N.A.	N.A.
Malta	16.8	10.4	5.4	0.7	0.4	24.8	13.4	8.5	2.5	0.4	8.0	3.0	3.1	1.8	0.0
Mexico	4.2	1.5	2.7	0.0	N.A.	9.1	1.3	5.4	2.4	N.A.	4.9	(0.2)	2.7	2.4	N.A.
Netherlands	19.2	6.8	7.0	3.8	1.6	27.9	10.4	8.6	7.6	1.2	8.7	3.6	1.6	3.8	(0.4)

Table 4

Age-Related Spending By Component (% GDP) (cont.)

Norway	19.4	9.3	5.8	3.8	0.5	28.6	13.9	7.4	7.0	0.3	9.2	4.6	1.6	3.2	(0.2)
New Zealand	15.5	5.5	8.1	1.3	0.6	20.4	7.3	10.1	2.7	0.3	4.9	1.8	2.0	1.4	(0.3)
Philippines	3.1	1.7	1.4	N.A.	N.A.	6.4	3.9	2.5	N.A.	N.A.	3.3	2.2	1.1	N.A.	N.A.
Poland	17.7	11.8	4.9	0.7	0.2	19.4	10.0	7.2	2.0	0.1	1.7	(1.8)	2.3	1.3	(0.1)
Portugal	21.2	12.5	7.2	0.3	1.2	23.4	13.1	8.5	1.0	0.8	2.2	0.6	1.3	0.7	(0.4)
Romania	14.6	9.8	3.7	0.6	0.5	19.4	12.8	4.9	1.6	0.2	4.8	3.0	1.2	1.0	(0.3)
Russia	11.8	8.1	3.5	0.2	N.A.	21.9	14.9	6.0	1.0	N.A.	10.1	6.8	2.5	0.8	N.A.
Saudi Arabia	4.9	2.2	2.7	N.A.	N.A.	13.5	8.1	5.4	N.A.	N.A.	8.6	5.9	2.7	N.A.	N.A.
South Africa	5.7	1.9	3.6	0.2	N.A.	10.7	3.5	6.1	1.1	N.A.	5.0	1.6	2.5	0.9	N.A.
Slovakia	14.7	8.0	6.2	0.3	0.2	22.7	12.2	9.0	1.4	0.1	8.0	4.2	2.8	1.1	(0.1)
Slovenia	19.1	11.2	6.1	1.4	0.3	28.7	17.9	7.7	2.8	0.3	9.6	6.7	1.6	1.4	0.0
Spain	19.4	10.1	6.5	0.8	2.0	24.6	14.0	8.3	1.4	1.0	5.2	3.9	1.8	0.6	(1.0)
Sweden	21.5	9.6	7.5	3.9	0.6	24.9	9.9	8.6	5.9	0.5	3.4	0.3	1.1	2.0	(0.1)
Switzerland	13.5	9.6	2.5	0.6	0.7	16.1	10.7	3.3	1.6	0.4	2.6	1.1	0.8	1.0	(0.3)
Turkey	9.8	6.3	3.5	0.0	N.A.	26.2	17.0	6.7	2.5	N.A.	16.4	10.7	3.2	2.5	N.A.
U.K.	17.1	7.7	7.2	2.0	0.3	19.9	8.2	8.9	2.6	0.2	2.8	0.5	1.7	0.6	(0.1)
Ukraine	21.7	17.7	4.0	N.A.	N.A.	32.8	26.1	6.7	N.A.	N.A.	11.1	8.4	2.7	N.A.	N.A.
U.S.	10.9	4.9	3.6	1.9	0.5	18.8	6.1	8.1	4.3	0.3	7.9	1.2	4.5	2.4	(0.2)
Medians															
Listed sovereigns	15.1	9.0	5.1	0.8	0.6	21.7	11.1	7.5	2.4	0.4	6.6	2.1	2.4	1.6	(0.2)
Advanced economies	18.8	9.6	6.5	1.4	0.7	24.9	12.7	8.6	2.7	0.4	6.1	3.1	2.1	1.3	(0.3)
Emerging economies	12.2	7.8	3.6	0.2	0.4	16.8	9.6	6.1	1.6	0.2	4.6	1.8	2.5	1.4	(0.2)
BRICs	8.6	5.8	2.7	0.1	N.A.	18.5	12.1	5.0	1.5	N.A.	9.9	6.3	2.3	1.4	N.A.
Europe	18.1	9.8	6.1	1.0	0.6	24.6	13.1	7.6	2.6	0.4	6.5	3.3	1.5	1.6	(0.2)
Asia	5.0	2.0	2.0	0.1	0.7	12.1	7.5	3.9	1.9	0.4	7.1	5.5	1.9	1.8	(0.3)
Latin America	10.9	6.5	3.7	0.0	N.A.	17.2	7.9	7.3	2.4	N.A.	6.3	1.4	3.6	2.4	N.A.
G-7	18.2	10.0	7.2	1.9	0.7	21.3	10.7	8.9	2.7	0.4	3.1	0.7	1.7	0.8	(0.3)
'AAA' group	19.2	9.3	7.0	2.0	0.7	25.8	10.4	8.6	3.1	0.5	6.6	1.1	1.6	1.1	(0.2)
'AA' group	15.5	8.9	6.3	1.1	0.7	20.4	9.2	8.1	2.6	0.4	4.9	0.3	1.8	1.5	(0.3)
'BBB'-'A' group	14.7	8.4	4.6	0.7	0.6	21.8	11.3	7.3	2.0	0.4	7.1	2.9	2.7	1.3	(0.2)
Speculative-grade group	13.5	8.7	3.8	0.3	0.5	21.2	13.3	6.6	1.6	0.4	7.7	4.6	2.8	1.3	(0.1)

f--Forecast. PEN--Pensions. HCA--Health care. LTC--Long-term care. UNE--Unemployment benefits. N.A.--Not available.

Table 5

No Policy Change Scenario

	--Net general government debt (% GDP)--					--General government balance (% GDP)--					Long-term foreign currency sovereign ratings	--Hypothetical long-term sovereign ratings--			
	2010	2020f	2030f	2040f	2050f	2010	2020f	2030f	2040f	2050f	As of March 18, 2013	2020	2030	2040	2050
Argentina	42.0	31.0	63.0	114.0	194.0	(0.7)	(3.9)	(7.0)	(11.7)	(18.3)	B-	spec	'bbb'	spec	'bbb'

Table 5

No Policy Change Scenario (cont.)														
Australia	16.0	21.0	39.0	78.0	139.0	(5.3)	(1.5)	(4.4)	(8.1)	(12.5)	AAA	'aaa'	'aa'	'a'	'bbb'
Austria	71.0	73.0	103.0	155.0	225.0	(4.5)	(3.6)	(7.5)	(10.8)	(15.1)	AA+	'aa'	'bbb'	'bbb'	spec
Belgium	91.0	95.0	126.0	185.0	270.0	(3.8)	(4.3)	(8.7)	(13.6)	(18.9)	AA	'a'	'bbb'	'bbb'	spec
Brazil	39.0	28.0	27.0	63.0	153.0	(2.5)	0.1	(2.3)	(8.3)	(17.2)	BBB	'a'	'a'	'a'	'bbb'
Bulgaria	7.0	15.0	30.0	55.0	101.0	(3.1)	(1.5)	(2.9)	(4.9)	(8.2)	BBB	'bbb'	spec	spec	spec
Canada	48.0	50.0	67.0	101.0	147.0	(5.4)	(2.2)	(4.9)	(7.6)	(10.5)	AAA	'aaa'	'aa'	'bbb'	'bbb'
Chile	2.0	(4.0)	(8.0)	0.0	25.0	(0.4)	0.8	0.6	(1.4)	(4.3)	AA-	'a'	'a'	'a'	'a'
China	14.0	18.0	50.0	108.0	199.0	(1.7)	(2.9)	(7.2)	(12.1)	(18.7)	AA-	'bbb'	'bbb'	'bbb'	'bbb'
Cyprus	71.0	132.0	149.0	177.0	236.0	(5.3)	(5.9)	(8.2)	(10.7)	(15.7)	CCC+	'bbb'	'bbb'	'bbb'	spec
Czech Republic	31.0	51.0	80.0	128.0	206.0	(4.8)	(3.9)	(6.4)	(10.1)	(15.6)	AA-	'a'	'a'	'bbb'	spec
Denmark	25.0	47.0	83.0	137.0	201.0	(2.5)	(4.2)	(7.1)	(10.5)	(13.7)	AAA	'aaa'	'a'	'bbb'	spec
Estonia	0.0	3.0	9.0	24.0	46.0	0.2	(0.3)	(1.4)	(2.6)	(3.9)	AA-	'a'	'aa'	'a'	'a'
Finland	10.0	25.0	65.0	129.0	208.0	(2.5)	(2.8)	(7.5)	(11.4)	(15.2)	AAA	'aaa'	'a'	'bbb'	spec
France	77.0	92.0	116.0	163.0	228.0	(7.1)	(5.0)	(7.4)	(11.2)	(14.8)	AA+	'a'	'bbb'	'bbb'	spec
Germany	80.0	69.0	87.0	130.0	195.0	(4.1)	(2.4)	(5.1)	(8.7)	(12.9)	AAA	'aa'	'a'	'bbb'	'bbb'
Greece	143.0	184.0	202.0	239.0	303.0	(10.7)	(7.2)	(8.8)	(12.1)	(16.4)	B-	'bbb'	spec	spec	spec
Hungary	76.0	69.0	61.0	63.0	89.0	(4.4)	(1.8)	(1.5)	(3.1)	(6.1)	BB	'bbb'	'bbb'	'bbb'	'a'
Iceland	65.0	41.0	11.0	(1.0)	9.0	(10.1)	2.0	1.9	0.4	(2.5)	BBB-	'a'	'aa'	'aa'	'a'
India	75.0	73.0	86.0	109.0	145.0	(8.3)	(6.0)	(7.3)	(8.9)	(11.2)	BBB-	'bbb'	'bbb'	spec	spec
Indonesia	24.0	20.0	32.0	55.0	87.0	(0.7)	(2.0)	(3.4)	(5.5)	(7.9)	BB+	spec	spec	spec	spec
Ireland	90.0	116.0	118.0	139.0	188.0	(30.9)	(6.0)	(6.0)	(8.5)	(12.7)	BBB+	'a'	'a'	'bbb'	'bbb'
Italy	114.0	106.0	75.0	56.0	48.0	(4.5)	(0.8)	0.1	(0.7)	(0.8)	BBB+	'a'	'a'	'a'	'aa'
Japan	105.0	193.0	275.0	375.0	494.0	(8.5)	(14.4)	(18.5)	(24.3)	(30.8)	AA-	'bbb'	spec	spec	spec
Korea	20.0	14.0	42.0	136.0	313.0	1.0	(0.5)	(6.6)	(17.0)	(31.3)	A+	'a'	'a'	'bbb'	spec
Latvia	34.0	26.0	14.0	(3.0)	(21.0)	(8.1)	0.0	1.2	2.0	2.0	BBB	'a'	'a'	'aa'	'aa'
Lithuania	32.0	42.0	65.0	110.0	191.0	(7.2)	(3.0)	(5.3)	(9.4)	(15.5)	BBB	'a'	'bbb'	'bbb'	'bbb'
Luxembourg	(20.0)	(8.0)	30.0	110.0	232.0	(0.8)	(1.2)	(6.6)	(13.6)	(21.8)	AAA	aaa	'a'	'bbb'	spec
Malaysia	43.0	66.0	105.0	158.0	232.0	(8.8)	(7.2)	(10.3)	(14.2)	(19.3)	A-	spec	spec	spec	spec
Malta	60.0	62.0	74.0	110.0	188.0	(3.6)	(2.8)	(4.8)	(8.7)	(15.0)	BBB+	'a'	'a'	'bbb'	'bbb'
Mexico	35.0	41.0	68.0	107.0	158.0	(2.9)	(3.5)	(6.5)	(8.9)	(12.4)	BBB	'bbb'	'bbb'	spec	spec
Netherlands	59.0	80.0	140.0	243.0	380.0	(5.1)	(6.1)	(12.0)	(19.7)	(27.1)	AAA	'aa'	'bbb'	spec	spec
Norway	(108.0)	(169.0)	(219.0)	(166.0)	(51.0)	11.2	16.2	8.6	(3.5)	(10.3)	AAA	'aaa'	'a'	'a'	'a'
New Zealand	14.0	33.0	42.0	78.0	138.0	(6.3)	(0.9)	(3.6)	(7.5)	(11.8)	AA	'aa'	'aa'	'a'	'bbb'
Philippines	25.0	19.0	18.0	24.0	40.0	(2.7)	(0.9)	(1.5)	(2.6)	(4.4)	BB+	'bbb'	spec	spec	spec
Poland	51.0	54.0	69.0	94.0	134.0	(7.9)	(2.8)	(4.3)	(5.8)	(8.3)	A-	'a'	'bbb'	'a'	'bbb'
Portugal	90.0	110.0	102.0	100.0	110.0	(9.8)	(3.4)	(3.1)	(3.6)	(4.7)	BB	'bbb'	'a'	'bbb'	'bbb'
Romania	25.0	30.0	45.0	83.0	155.0	(6.8)	(1.5)	(3.7)	(7.5)	(12.7)	BB+	'bbb'	'bbb'	'bbb'	spec
Russia	1.0	13.0	77.0	215.0	444.0	(3.5)	(4.0)	(12.0)	(24.1)	(37.8)	BBB	'bbb'	'bbb'	spec	spec
Saudi Arabia	(163.0)	(96.0)	(62.0)	(47.0)	(42.0)	6.0	2.0	2.0	2.0	2.0	AA-	'bbb'	'a'	'a'	'a'
South Africa	31.0	39.0	51.0	76.0	121.0	(4.4)	(2.5)	(4.2)	(6.5)	(10.0)	BBB	'bbb'	'bbb'	'bbb'	spec
Slovakia	40.0	55.0	88.0	156.0	273.0	(7.7)	(4.4)	(7.7)	(12.9)	(20.9)	A	'bbb'	'a'	'bbb'	spec
Slovenia	32.0	54.0	80.0	142.0	255.0	(5.7)	(3.4)	(6.3)	(12.4)	(20.3)	A-	'a'	'a'	'bbb'	spec

Table 5

No Policy Change Scenario (cont.)															
Spain	51.0	102.0	120.0	164.0	247.0	(9.7)	(6.2)	(7.1)	(11.1)	(17.0)	BBB-	'a'	'bbb'	'bbb'	spec
Sweden	4.0	0.0	(1.0)	12.0	31.0	0.3	1.0	(0.5)	(2.1)	(3.2)	AAA	'aaa'	'aaa'	'aa'	'aa'
Switzerland	23.0	12.0	5.0	4.0	10.0	0.4	0.6	0.2	(0.4)	(1.3)	AAA	'aaa'	'aaa'	'aaa'	'aaa'
Turkey	41.0	35.0	72.0	164.0	327.0	(2.7)	(3.2)	(8.8)	(18.0)	(30.2)	BB	'bbb'	'bbb'	spec	spec
U.K.	76.0	111.0	158.0	223.0	302.0	(10.2)	(7.9)	(11.4)	(15.5)	(19.6)	AAA	'a'	'bbb'	spec	spec
Ukraine	27.0	33.0	56.0	105.0	205.0	(7.4)	(3.3)	(5.9)	(11.4)	(20.8)	B	'bbb'	spec	spec	spec
U.S.	71.0	102.0	169.0	258.0	366.0	(9.7)	(9.4)	(15.2)	(21.2)	(27.8)	AA+	'a'	'bbb'	spec	spec
Group comparison															
Listed sovereigns	37.0	42.0	68.0	109.0	189.0	(4.6)	(2.8)	(6.0)	(8.9)	(14.3)					
Advanced economies	59.0	66.0	85.0	137.0	216.0	(5.3)	(3.4)	(6.6)	(10.8)	(15.0)					
Emerging economies	31.0	30.0	53.0	88.0	149.0	(3.3)	(2.6)	(4.2)	(7.9)	(11.8)					
BRICs	27.0	23.0	64.0	108.0	176.0	(3.0)	(3.5)	(7.3)	(10.5)	(17.9)					
Europe	41.0	54.0	75.0	128.0	201.0	(4.8)	(3.2)	(6.0)	(10.1)	(15.0)					
Asia	24.0	20.0	46.0	108.0	172.0	(2.2)	(2.5)	(6.9)	(10.5)	(14.9)					
Latin America	37.0	30.0	45.0	85.0	155.0	(1.6)	(1.7)	(4.4)	(8.6)	(14.8)					
G-7	77.0	102.0	116.0	163.0	228.0	(7.1)	(5.0)	(7.4)	(11.2)	(14.8)					
'AAA' group	23.0	25.0	65.0	110.0	195.0	(2.8)	(2.2)	(5.1)	(8.7)	(12.9)					
'AA' group	31.0	51.0	80.0	128.0	206.0	(4.5)	(3.6)	(7.2)	(10.8)	(15.1)					
'BBB'-'A' group	40.0	48.0	71.0	109.0	173.0	(6.5)	(2.9)	(5.7)	(8.8)	(13.9)					
Speculative-grade group	41.0	34.0	62.0	103.0	174.0	(4.9)	(3.3)	(4.8)	(9.1)	(14.2)					

f--Standard & Poor's forecast. spec--Speculative-grade.

Table 6

Balanced Budget In 2016 Scenario															
	--Net general government debt (% GDP)--					--General government balance (% GDP)--					Long-term foreign currency sovereign ratings	--Hypothetical long-term sovereign ratings--			
	2010	2020f	2030f	2040f	2050f	2010	2020f	2030f	2040f	2050f	As of March 18, 2013	2020	2030	2040	2050
Argentina	42.0	12.0	16.0	40.0	91.0	(0.7)	(0.2)	(1.9)	(5.3)	(10.5)	B-	'a'	'a'	'bbb'	'a'
Australia	16.0	18.0	26.0	56.0	106.0	(5.3)	(0.5)	(2.9)	(6.2)	(10.1)	AAA	'aaa'	'aaa'	'a'	'bbb'
Austria	71.0	59.0	65.0	89.0	127.0	(4.5)	(1.1)	(3.8)	(5.8)	(8.5)	AA+	'aaa'	'aa'	'a'	'bbb'
Belgium	91.0	80.0	82.0	112.0	162.0	(3.8)	(1.3)	(4.4)	(7.9)	(11.5)	AA	'aa'	'aa'	'bbb'	'bbb'
Brazil	39.0	21.0	16.0	47.0	131.0	(2.5)	0.8	(1.4)	(7.1)	(15.7)	BBB	'a'	'a'	'a'	'bbb'
Bulgaria	7.0	10.0	18.0	33.0	66.0	(3.1)	(0.6)	(1.6)	(3.2)	(6.0)	BBB	'bbb'	'bbb'	spec	'bbb'
Canada	48.0	44.0	45.0	61.0	89.0	(5.4)	(0.5)	(2.5)	(4.4)	(6.4)	AAA	'aaa'	'aaa'	'aa'	'a'
Chile	2.0	0.0	5.0	20.0	56.0	(0.4)	(0.2)	(0.8)	(3.1)	(6.5)	AA-	'a'	'a'	'bbb'	'a'
China	14.0	9.0	27.0	71.0	145.0	(1.7)	(0.9)	(4.6)	(8.8)	(14.6)	AA-	'a'	'a'	'a'	'bbb'
Cyprus	71.0	83.0	69.0	66.0	84.0	(5.3)	(1.1)	(1.9)	(2.9)	(6.0)	CCC+	'a'	'a'	'a'	'a'

Table 6

Balanced Budget In 2016 Scenario (cont.)														
Czech Republic	31.0	33.0	31.0	43.0	78.0	(4.8)	(0.5)	(1.5)	(3.5)	(6.9)	AA-	'aa'	'aa'	'aa'	'a'
Denmark	25.0	26.0	32.0	52.0	78.0	(2.5)	(0.9)	(2.4)	(4.1)	(5.5)	AAA	'aaa'	'aaa'	'aa'	'aa'
Estonia	0.0	2.0	7.0	19.0	38.0	0.2	(0.1)	(1.1)	(2.1)	(3.3)	AA-	'a'	'aa'	'a'	'a'
Finland	10.0	18.0	47.0	99.0	163.0	(2.5)	(1.6)	(5.8)	(9.0)	(12.2)	AAA	'aaa'	'aa'	'a'	'bbb'
France	77.0	71.0	57.0	61.0	75.0	(7.1)	(0.8)	(1.4)	(3.1)	(4.4)	AA+	'aa'	'aaa'	'aa'	'aa'
Germany	80.0	63.0	71.0	101.0	150.0	(4.1)	(1.3)	(3.6)	(6.5)	(9.9)	AAA	'aaa'	'aa'	'bbb'	'bbb'
Greece	143.0	156.0	120.0	95.0	82.0	(10.7)	(1.6)	(0.7)	(1.0)	(1.6)	B-	'a'	'a'	'a'	'a'
Hungary	76.0	54.0	23.0	(1.0)	(12.0)	(4.4)	0.9	2.0	2.0	0.7	BB	'a'	'a'	'a'	'aa'
Iceland	65.0	51.0	43.0	55.0	95.0	(10.1)	0.0	(1.7)	(4.4)	(8.6)	BBB-	'a'	'a'	'a'	'a'
India	75.0	34.0	2.0	(14.0)	(24.0)	(8.3)	2.0	2.0	2.0	2.0	BBB-	'a'	'a'	'a'	'a'
Indonesia	24.0	11.0	9.0	17.0	35.0	(0.7)	(0.1)	(0.7)	(2.1)	(3.9)	BB+	'bbb'	'bbb'	spec	spec
Ireland	90.0	89.0	42.0	11.0	(8.0)	(30.9)	0.1	2.0	2.0	1.4	BBB+	'aaa'	'aaa'	'aaa'	'aaa'
Italy	114.0	97.0	53.0	21.0	(2.0)	(4.5)	0.7	2.0	2.0	2.0	BBB+	'a'	'aa'	'aa'	'aaa'
Japan	105.0	132.0	116.0	105.0	102.0	(8.5)	(3.3)	(2.7)	(3.2)	(3.9)	AA-	'aa'	'aa'	'aa'	'aa'
Korea	20.0	15.0	51.0	156.0	345.0	1.0	(1.3)	(7.9)	(18.7)	(33.6)	A+	'a'	'a'	'bbb'	spec
Latvia	34.0	21.0	6.0	(12.0)	(27.0)	(8.1)	0.4	1.7	2.0	2.0	BBB	'a'	'a'	'aa'	'aa'
Lithuania	32.0	25.0	23.0	41.0	87.0	(7.2)	(0.2)	(1.4)	(4.2)	(8.5)	BBB	'a'	'a'	'a'	'a'
Luxembourg	(20.0)	(10.0)	24.0	100.0	217.0	(0.8)	(0.8)	(6.0)	(12.8)	(20.7)	AAA	'aaa'	'a'	'bbb'	spec
Malaysia	43.0	32.0	21.0	27.0	48.0	(8.8)	(0.2)	(0.9)	(2.5)	(5.2)	A-	'a'	'a'	'a'	'aa'
Malta	60.0	48.0	40.0	52.0	98.0	(3.6)	(0.4)	(1.4)	(4.1)	(8.9)	BBB+	'aa'	'a'	'a'	'a'
Mexico	35.0	26.0	28.0	42.0	66.0	(2.9)	(0.4)	(2.3)	(3.5)	(5.7)	BBB	'a'	'a'	'a'	'bbb'
Netherlands	59.0	58.0	76.0	132.0	213.0	(5.1)	(1.8)	(5.7)	(11.1)	(15.9)	AAA	'aaa'	'aa'	'bbb'	spec
Norway	(108.0)	(179.0)	(231.0)	(197.0)	(108.0)	11.2	17.4	9.7	(0.1)	(5.6)	AAA	'aaa'	'a'	'a'	'a'
New Zealand	14.0	18.0	2.0	9.0	36.0	(6.3)	2.0	0.5	(2.0)	(4.8)	AA	'aa'	'aa'	'aa'	'aa'
Philippines	25.0	13.0	6.0	7.0	18.0	(2.7)	0.2	(0.1)	(1.0)	(2.5)	BB+	'bbb'	'bbb'	spec	spec
Poland	51.0	41.0	31.0	26.0	27.0	(7.9)	(0.1)	(0.4)	(0.5)	(1.1)	A-	'a'	'a'	'aa'	'aa'
Portugal	90.0	90.0	52.0	19.0	(3.0)	(9.8)	0.1	1.8	2.0	2.0	BB	'a'	'aa'	'aa'	'aa'
Romania	25.0	22.0	20.0	38.0	84.0	(6.8)	0.2	(1.2)	(4.0)	(7.9)	BB+	'bbb'	a	'bbb'	'bbb'
Russia	1.0	(40.0)	(59.0)	(27.0)	53.0	(3.5)	6.4	2.3	(4.7)	(11.2)	BBB	'a'	'a'	'a'	'a'
Saudi Arabia	(163.0)	(83.0)	(12.0)	67.0	164.0	6.0	(0.5)	(6.0)	(12.1)	(19.0)	AA-	'bbb'	'a'	'a'	'bbb'
South Africa	31.0	24.0	13.0	14.0	29.0	(4.4)	0.5	(0.1)	(1.2)	(3.3)	BBB	'a'	'a'	'a'	'a'
Slovakia	40.0	35.0	35.0	60.0	119.0	(7.7)	(0.5)	(2.3)	(5.4)	(10.6)	A	'a'	'aa'	'a'	'bbb'
Slovenia	32.0	36.0	34.0	60.0	128.0	(5.7)	(0.2)	(1.8)	(6.2)	(12.0)	A-	'aa'	'aa'	'a'	'bbb'
Spain	51.0	71.0	40.0	21.0	24.0	(9.7)	(0.3)	1.2	0.2	(1.9)	BBB-	'aa'	'aa'	'aa'	'aaa'
Sweden	4.0	5.0	14.0	40.0	74.0	0.3	(0.2)	(2.3)	(4.4)	(6.2)	AAA	'aaa'	'aa'	'aa'	'a'
Switzerland	23.0	16.0	19.0	28.0	46.0	0.4	(0.4)	(1.2)	(2.3)	(3.8)	AAA	'aaa'	'aaa'	'aa'	'aa'
Turkey	41.0	20.0	36.0	102.0	232.0	(2.7)	(0.4)	(4.9)	(12.9)	(23.5)	BB	'a'	'bbb'	spec	spec
U.K.	76.0	71.0	48.0	35.0	27.0	(10.2)	0.0	(0.1)	(0.5)	(0.5)	AAA	'aa'	'aa'	'aaa'	'aaa'
Ukraine	27.0	16.0	13.0	35.0	103.0	(7.4)	0.3	(1.1)	(5.3)	(13.2)	B	'a'	'bbb'	spec	spec
U.S.	71.0	65.0	68.0	94.0	137.0	(9.7)	(1.8)	(4.6)	(7.6)	(11.0)	AA+	'aaa'	'aaa'	'aa'	'bbb'
Group comparison															
Listed sovereigns	37.0	26.0	30.0	42.0	80.0	(4.6)	(0.3)	(1.4)	(3.8)	(6.3)					

Table 6

Balanced Budget In 2016 Scenario (cont.)									
Advanced economies	59.0	55.0	46.0	60.0	92.0	(5.3)	(0.5)	(2.1)	(4.3)	(6.3)
Emerging economies	31.0	20.0	16.0	30.0	61.0	(3.3)	(0.1)	(1.1)	(3.3)	(6.2)
BRICs	27.0	15.0	9.0	16.0	92.0	(3.0)	1.4	0.3	(5.9)	(12.9)
Europe	41.0	36.0	35.0	41.0	78.0	(4.8)	(0.3)	(1.4)	(4.0)	(6.2)
Asia	24.0	14.0	15.0	47.0	75.0	(2.2)	(0.3)	(1.8)	(2.9)	(4.5)
Latin America	37.0	16.0	16.0	41.0	79.0	(1.6)	(0.2)	(1.6)	(4.4)	(8.5)
G-7	77.0	71.0	57.0	61.0	89.0	(7.1)	(0.8)	(2.5)	(3.2)	(4.4)
'AAA' group	23.0	18.0	32.0	56.0	89.0	(2.8)	(0.5)	(2.5)	(4.4)	(6.4)
'AA' group	31.0	33.0	31.0	67.0	102.0	(4.5)	(0.8)	(2.7)	(3.5)	(6.9)
'BBB'-'A' group	40.0	33.0	30.0	30.0	59.0	(6.5)	(0.1)	(1.2)	(3.4)	(5.8)
Speculative-grade group	41.0	21.0	21.0	37.0	83.0	(4.9)	0.0	(0.9)	(2.5)	(5.0)

f--Standard & Poor's forecast. spec--Speculative-grade.

Table 7

No Additional Age-Related Spending Scenario														
	--Net general government debt (% GDP)--					--General government balance (% GDP)--					Long-term foreign currency sovereign ratings	--Hypothetical long-term sovereign ratings--		
	2010	2020f	2030f	2040f	2050f	2010	2020f	2030f	2040f	2050f	As of March 18, 2013	2020	2030	2040	2050
Argentina	42.0	28.0	43.0	58.0	74.0	(0.7)	(3.0)	(3.7)	(4.4)	(5.1)	B-	'bbb'	'bbb'	'bbb'	'a'
Australia	16.0	18.0	15.0	13.0	11.0	(5.3)	(0.6)	(0.5)	(0.4)	(0.3)	AAA	'aaa'	'aaa'	'aaa'	'aaa'
Austria	71.0	68.0	68.0	67.0	66.0	(4.5)	(2.2)	(2.1)	(2.1)	(2.0)	AA+	'aa'	'aa'	'aa'	'aa'
Belgium	91.0	89.0	82.0	72.0	60.0	(3.8)	(2.4)	(2.1)	(1.6)	(1.0)	AA	'a'	aa	'aaa'	'aaa'
Brazil	39.0	27.0	7.0	(11.0)	(24.0)	(2.5)	0.5	1.5	2.0	2.0	BBB	'a'	'a'	'aa'	'aa'
Bulgaria	7.0	14.0	19.0	26.0	34.0	(3.1)	(0.9)	(1.2)	(1.5)	(1.9)	BBB	'bbb'	'bbb'	'bbb'	'a'
Canada	48.0	45.0	35.0	23.0	9.0	(5.4)	(0.6)	(0.2)	0.4	1.1	AAA	'aaa'	'aaa'	'aaa'	'aaa'
Chile	2.0	(5.0)	(13.0)	(23.0)	(32.0)	(0.4)	1.1	1.5	1.9	2.0	AA-	'a'	'a'	'a'	'aa'
China	14.0	14.0	20.0	26.0	36.0	(1.7)	(1.5)	(1.7)	(2.1)	(2.5)	AA-	'a'	'a'	'aa'	'aa'
Cyprus	71.0	128.0	124.0	116.0	113.0	(5.3)	(4.6)	(4.4)	(4.0)	(3.9)	CCC+	'bbb'	'bbb'	'bbb'	'bbb'
Czech Republic	31.0	50.0	69.0	91.0	120.0	(4.8)	(3.5)	(4.4)	(5.4)	(6.8)	AA-	'aa'	'a'	'a'	'bbb'
Denmark	25.0	44.0	63.0	84.0	107.0	(2.5)	(3.2)	(4.1)	(5.1)	(6.2)	AAA	'aaa'	'aa'	'aa'	'a'
Estonia	0.0	3.0	7.0	10.0	15.0	0.2	(0.4)	(0.6)	(0.7)	(1.0)	AA-	'a'	'aa'	'aa'	'aa'
Finland	10.0	18.0	19.0	19.0	19.0	(2.5)	(0.6)	(0.6)	(0.7)	(0.7)	AAA	'aaa'	'aaa'	'aaa'	'aaa'
France	77.0	90.0	105.0	123.0	144.0	(7.1)	(4.6)	(5.3)	(6.2)	(7.2)	AA+	'a'	'a'	'a'	'bbb'
Germany	80.0	67.0	62.0	57.0	49.0	(4.1)	(1.4)	(1.1)	(0.9)	(0.5)	AAA	'aaa'	'aaa'	'aaa'	'aaa'
Greece	143.0	184.0	200.0	220.0	246.0	(10.7)	(7.3)	(8.0)	(8.9)	(10.2)	B-	'bbb'	spec	spec	spec
Hungary	76.0	69.0	63.0	58.0	54.0	(4.4)	(2.0)	(1.7)	(1.4)	(1.3)	BB	'bbb'	'bbb'	'bbb'	'a'
Iceland	65.0	41.0	11.0	(9.0)	(23.0)	(10.1)	2.0	2.0	2.0	2.0	BBB-	'a'	'aa'	'aa'	'aa'

Table 7

No Additional Age-Related Spending Scenario (cont.)														
India	75.0	72.0	80.0	92.0	112.0	(8.3)	(5.8)	(6.1)	(6.7)	(7.7)	BBB-	'bbb'	'bbb'	'bbb'	spec
Indonesia	24.0	19.0	23.0	29.0	35.0	(0.7)	(1.6)	(1.8)	(2.1)	(2.3)	BB+	spec	spec	spec	spec
Ireland	90.0	113.0	106.0	110.0	119.0	(30.9)	(5.0)	(4.7)	(4.8)	(5.2)	BBB+	'a'	'a'	'a'	'a'
Italy	114.0	107.0	77.0	46.0	16.0	(4.5)	(1.2)	0.3	1.8	2.0	BBB+	'a'	'a'	'aa'	'aaa'
Japan	105.0	192.0	268.0	354.0	447.0	(8.5)	(13.9)	(17.6)	(21.6)	(26.1)	AA-	'bbb'	spec	spec	spec
Korea	20.0	7.0	(12.0)	(26.0)	(36.0)	1.0	1.8	2.0	2.0	2.0	A+	'aa'	'aa'	'aa'	'aa'
Latvia	34.0	29.0	25.0	22.0	21.0	(8.1)	(0.8)	(0.6)	(0.5)	(0.4)	BBB	'a'	'a'	'a'	'a'
Lithuania	32.0	42.0	54.0	69.0	90.0	(7.2)	(2.7)	(3.3)	(4.0)	(5.0)	BBB	'a'	'bbb'	'a'	'a'
Luxembourg	(20.0)	(12.0)	(8.0)	(3.0)	2.0	(0.8)	0.1	(0.1)	(0.3)	(0.6)	AAA	'aaa'	'aaa'	'aaa'	'aaa'
Malaysia	43.0	63.0	88.0	114.0	146.0	(8.8)	(6.3)	(7.5)	(8.8)	(10.3)	A-	'bbb'	'bbb'	spec	'bbb'
Malta	60.0	59.0	54.0	50.0	49.0	(3.6)	(1.8)	(1.6)	(1.4)	(1.4)	BBB+	'a'	'a'	'a'	'a'
Mexico	35.0	38.0	45.0	53.0	62.0	(2.9)	(2.5)	(2.8)	(3.2)	(3.6)	BBB	'bbb'	'a'	'bbb'	'bbb'
Netherlands	59.0	76.0	103.0	135.0	169.0	(5.1)	(4.7)	(6.0)	(7.5)	(9.2)	AAA	'aa'	'a'	'a'	'bbb'
Norway	(108.0)	(173.0)	(227.0)	(200.0)	(154.0)	11.2	17.4	9.7	2.0	2.0	AAA	'aaa'	'a'	'a'	'a'
New Zealand	14.0	38.0	53.0	71.0	91.0	(6.3)	(2.9)	(3.6)	(4.4)	(5.4)	AA	'aa'	'a'	'a'	'aa'
Philippines	25.0	18.0	10.0	3.0	(2.0)	(2.7)	(0.4)	0.0	0.3	0.5	BB+	'bbb'	'bbb'	'bbb'	'bbb'
Poland	51.0	53.0	57.0	64.0	76.0	(7.9)	(2.3)	(2.4)	(2.8)	(3.3)	A-	'a'	'a'	'a'	'a'
Portugal	90.0	109.0	96.0	85.0	76.0	(9.8)	(2.9)	(2.4)	(1.8)	(1.4)	BB	'a'	'a'	'a'	'a'
Romania	25.0	30.0	37.0	46.0	58.0	(6.8)	(1.6)	(1.9)	(2.3)	(2.9)	BB+	'bbb'	'bbb'	'bbb'	'bbb'
Russia	1.0	8.0	46.0	127.0	250.0	(3.5)	(2.3)	(7.2)	(14.1)	(20.0)	BBB	'bbb'	'bbb'	'bbb'	spec
Saudi Arabia	(163.0)	(96.0)	(62.0)	(47.0)	(42.0)	6.0	2.0	2.0	2.0	2.0	AA-	'bbb'	'a'	'a'	'a'
South Africa	31.0	37.0	36.0	36.0	39.0	(4.4)	(1.8)	(1.7)	(1.7)	(1.9)	BBB	'bbb'	'a'	'a'	'a'
Slovakia	40.0	51.0	62.0	82.0	110.0	(7.7)	(3.1)	(3.7)	(4.6)	(6.0)	A	'a'	'a'	'a'	'bbb'
Slovenia	32.0	50.0	57.0	68.0	82.0	(5.7)	(2.4)	(2.7)	(3.2)	(3.8)	A-	'a'	'a'	'a'	'a'
Spain	51.0	100.0	116.0	145.0	186.0	(9.7)	(5.9)	(6.6)	(8.0)	(10.0)	BBB-	'a'	'bbb'	'bbb'	'bbb'
Sweden	4.0	(1.0)	(14.0)	(27.0)	(35.0)	0.3	1.2	1.9	2.0	2.0	AAA	'aaa'	'aaa'	'aaa'	'aaa'
Switzerland	23.0	10.0	(4.0)	(20.0)	(31.0)	0.4	1.0	1.7	2.0	2.0	AAA	'aaa'	'aaa'	'aaa'	'aaa'
Turkey	41.0	29.0	28.0	30.0	35.0	(2.7)	(1.4)	(1.4)	(1.5)	(1.7)	BB	'a'	'a'	'a'	'a'
U.K.	76.0	111.0	153.0	199.0	250.0	(10.2)	(8.0)	(10.0)	(12.2)	(14.7)	AAA	'a'	'a'	'bbb'	spec
Ukraine	27.0	31.0	38.0	47.0	60.0	(7.4)	(2.5)	(2.8)	(3.3)	(3.9)	B	'bbb'	'bbb'	'bbb'	'bbb'
U.S.	71.0	99.0	141.0	181.0	223.0	(9.7)	(8.3)	(10.3)	(12.2)	(14.2)	AA+	'aa'	'bbb'	'bbb'	spec
Group comparison															
Listed sovereigns	37.0	41.0	50.0	55.0	59.0	(4.6)	(2.1)	(2.0)	(2.1)	(2.2)					
Advanced economies	59.0	63.0	62.0	69.0	71.0	(5.3)	(2.4)	(2.2)	(2.0)	(1.7)					
Emerging economies	31.0	29.0	37.0	41.0	47.0	(3.3)	(1.7)	(1.8)	(2.1)	(2.4)					
BRICs	27.0	20.0	33.0	59.0	74.0	(3.0)	(1.9)	(3.9)	(4.4)	(5.1)					
Europe	41.0	50.0	57.0	64.0	60.0	(4.8)	(2.3)	(2.1)	(2.1)	(2.0)					
Asia	24.0	18.0	21.0	28.0	35.0	(2.2)	(1.5)	(1.8)	(2.1)	(2.4)					
Latin America	37.0	28.0	25.0	21.0	19.0	(1.6)	(1.0)	(0.7)	(0.6)	(0.8)					
G-7	77.0	99.0	105.0	123.0	144.0	(7.1)	(4.6)	(5.3)	(6.2)	(7.2)					

Table 7

No Additional Age-Related Spending Scenario (cont.)									
'AAA' group	23.0	18.0	19.0	19.0	11.0	(2.8)	(0.6)	(0.5)	(0.4)	(0.5)
'AA' group	31.0	50.0	68.0	71.0	66.0	(4.5)	(2.4)	(2.1)	(2.1)	(2.5)
'BBB'-'A' group	40.0	46.0	54.0	58.0	69.0	(6.5)	(2.3)	(2.6)	(3.0)	(3.5)
Speculative-grade group	41.0	31.0	41.0	52.0	59.0	(4.9)	(2.2)	(2.1)	(2.2)	(2.6)

f--Standard & Poor's forecast. spec--Speculative-grade.

Table 8

Lower Interest Rate Scenario														
	--Net general government debt (% GDP)--					--General government balance (% GDP)--					Long-term foreign currency sovereign ratings	--Hypothetical long-term sovereign ratings--		
	2010	2020f	2030f	2040f	2050f	2010	2020f	2030f	2040f	2050f	As of March 18, 2013	2020	2030	2040	###
Argentina	42.0	26.0	46.0	84.0	145.0	(0.7)	(2.6)	(5.0)	(8.7)	(13.9)	B-	'bbb'	'bbb'	'bbb'	'bbb'
Australia	16.0	15.0	23.0	51.0	95.0	(5.3)	(0.4)	(2.7)	(5.7)	(8.9)	AAA	'aaa'	'aaa'	'a'	'a'
Austria	71.0	70.0	90.0	128.0	177.0	(4.5)	(2.8)	(6.0)	(8.3)	(11.1)	AA+	'aa'	'a'	'bbb'	'bbb'
Belgium	91.0	94.0	117.0	165.0	230.0	(3.8)	(3.7)	(7.5)	(11.5)	(15.3)	AA	'a'	'bbb'	'bbb'	spec
Brazil	39.0	27.0	24.0	57.0	137.0	(2.5)	0.3	(2.0)	(7.5)	(15.3)	BBB	'a'	'a'	'a'	'bbb'
Bulgaria	7.0	16.0	33.0	57.0	98.0	(3.1)	(1.7)	(3.0)	(4.8)	(7.6)	BBB	'bbb'	spec	spec	'bbb'
Canada	48.0	50.0	65.0	94.0	132.0	(5.4)	(2.0)	(4.5)	(6.7)	(8.9)	AAA	'aaa'	'aa'	'a'	'bbb'
Chile	2.0	(4.0)	(7.0)	1.0	25.0	(0.4)	0.7	0.5	(1.4)	(4.1)	AA-	'a'	'a'	'a'	'a'
China	14.0	18.0	49.0	101.0	180.0	(1.7)	(2.9)	(6.9)	(11.0)	(16.3)	AA-	'bbb'	'bbb'	'bbb'	'bbb'
Cyprus	71.0	134.0	148.0	170.0	219.0	(5.3)	(5.7)	(7.7)	(9.8)	(13.9)	CCC+	'bbb'	'bbb'	'bbb'	spec
Czech Republic	31.0	48.0	67.0	102.0	160.0	(4.8)	(3.1)	(4.9)	(7.7)	(11.7)	AA-	'aa'	'a'	'bbb'	'bbb'
Denmark	25.0	42.0	64.0	100.0	139.0	(2.5)	(2.9)	(5.0)	(7.2)	(8.9)	AAA	'aaa'	'aa'	'a'	'bbb'
Estonia	0.0	3.0	9.0	22.0	41.0	0.2	(0.3)	(1.4)	(2.3)	(3.3)	AA-	'a'	'aa'	'a'	'a'
Finland	10.0	27.0	69.0	130.0	198.0	(2.5)	(3.2)	(7.6)	(10.8)	(13.5)	AAA	'aaa'	'a'	'bbb'	'bbb'
France	77.0	90.0	107.0	142.0	190.0	(7.1)	(4.3)	(6.2)	(9.1)	(11.5)	AA+	'a'	'a'	'bbb'	'bbb'
Germany	80.0	64.0	71.0	100.0	144.0	(4.1)	(1.4)	(3.6)	(6.2)	(9.0)	AAA	'aaa'	'aa'	'a'	'bbb'
Greece	143.0	179.0	179.0	195.0	231.0	(10.7)	(5.5)	(6.2)	(8.4)	(11.0)	B-	'bbb'	'bbb'	'bbb'	spec
Hungary	76.0	65.0	48.0	40.0	53.0	(4.4)	(0.7)	(0.1)	(1.3)	(3.7)	BB	'a'	'a'	'a'	'a'
Iceland	65.0	41.0	14.0	11.0	32.0	(10.1)	2.0	0.9	(1.1)	(4.3)	BBB-	'a'	'aa'	'a'	'a'
India	75.0	71.0	78.0	94.0	122.0	(8.3)	(5.3)	(6.2)	(7.4)	(9.0)	BBB-	'bbb'	'bbb'	'bbb'	spec
Indonesia	24.0	20.0	30.0	49.0	76.0	(0.7)	(1.8)	(3.0)	(4.8)	(6.7)	BB+	spec	spec	spec	spec
Ireland	90.0	115.0	110.0	122.0	158.0	(30.9)	(5.2)	(5.0)	(6.9)	(10.3)	BBB+	'a'	'a'	'bbb'	'bbb'
Italy	114.0	89.0	44.0	15.0	(2.0)	(4.5)	2.0	2.0	2.0	1.6	BBB+	'aa'	'aa'	'aa'	'aaa'
Japan	105.0	194.0	266.0	346.0	434.0	(8.5)	(13.8)	(16.7)	(20.9)	(25.1)	AA-	'bbb'	spec	spec	spec
Korea	20.0	11.0	34.0	117.0	269.0	1.0	0.1	(5.7)	(14.9)	(26.6)	A+	'a'	'a'	'bbb'	spec
Latvia	34.0	14.0	(8.0)	(23.0)	(35.0)	(8.1)	2.0	2.0	2.0	2.0	BBB	'a'	'a'	'aa'	'aa'
Lithuania	32.0	35.0	42.0	69.0	122.0	(7.2)	(1.4)	(2.9)	(5.9)	(10.2)	BBB	'a'	'a'	'a'	'bbb'
Luxembourg	(20.0)	(4.0)	40.0	121.0	234.0	(0.8)	(2.1)	(7.4)	(13.7)	(20.4)	AAA	'aaa'	'a'	'bbb'	spec

Table 8

Lower Interest Rate Scenario (cont.)														
Malaysia	43.0	64.0	98.0	142.0	202.0	(8.8)	(6.7)	(9.2)	(12.3)	(16.2)	A-	'bbb'	'bbb'	spec	spec
Malta	60.0	61.0	69.0	98.0	163.0	(3.6)	(2.4)	(4.2)	(7.5)	(12.6)	BBB+	'a'	'a'	'a'	'bbb'
Mexico	35.0	40.0	62.0	94.0	134.0	(2.9)	(3.1)	(5.7)	(7.5)	(10.1)	BBB	'bbb'	'bbb'	'bbb'	spec
Netherlands	59.0	74.0	118.0	197.0	296.0	(5.1)	(4.7)	(9.5)	(15.3)	(20.0)	AAA	'aa'	'bbb'	'bbb'	spec
Norway	(108.0)	(185.0)	(235.0)	(206.0)	(158.0)	11.2	17.4	9.7	2.0	2.0	AAA	'aaa'	'a'	'a'	'a'
New Zealand	14.0	28.0	28.0	52.0	95.0	(6.3)	0.2	(2.1)	(5.2)	(8.4)	AA	'aa'	'aa'	'a'	'a'
Philippines	25.0	22.0	23.0	30.0	46.0	(2.7)	(1.4)	(2.0)	(3.1)	(4.8)	BB+	spec	spec	spec	spec
Poland	51.0	52.0	60.0	75.0	101.0	(7.9)	(2.1)	(3.2)	(4.1)	(5.7)	A-	'a'	'a'	'a'	'bbb'
Portugal	90.0	108.0	93.0	84.0	85.0	(9.8)	(2.5)	(2.1)	(2.3)	(3.0)	BB	'a'	'a'	'a'	'a'
Romania	25.0	32.0	49.0	86.0	153.0	(6.8)	(1.8)	(3.9)	(7.4)	(11.7)	BB+	spec	bbb	bbb	spec
Russia	1.0	(38.0)	(56.0)	(24.0)	50.0	(3.5)	6.5	2.2	(4.6)	(10.3)	BBB	'a'	'a'	'a'	'a'
Saudi Arabia	(163.0)	(96.0)	(62.0)	(47.0)	(42.0)	6.0	2.0	2.0	2.0	2.0	AA-	'bbb'	'a'	'a'	'a'
South Africa	31.0	40.0	50.0	73.0	112.0	(4.4)	(2.5)	(4.0)	(6.0)	(8.9)	BBB	'bbb'	'bbb'	'bbb'	spec
Slovakia	40.0	50.0	72.0	122.0	208.0	(7.7)	(3.2)	(5.9)	(9.8)	(15.5)	A	'a'	'a'	'bbb'	spec
Slovenia	32.0	54.0	75.0	129.0	223.0	(5.7)	(3.1)	(5.6)	(10.9)	(17.1)	A-	'a'	'a'	'bbb'	spec
Spain	51.0	100.0	110.0	142.0	205.0	(9.7)	(5.5)	(5.8)	(9.0)	(13.4)	BBB-	'a'	'a'	'bbb'	spec
Sweden	4.0	(1.0)	(6.0)	4.0	18.0	0.3	1.3	(0.1)	(1.5)	(2.2)	AAA	'aaa'	'aaa'	'aaa'	'aa'
Switzerland	23.0	12.0	7.0	8.0	16.0	0.4	0.4	0.0	(0.7)	(1.7)	AAA	'aaa'	'aaa'	'aaa'	'aaa'
Turkey	41.0	34.0	67.0	149.0	288.0	(2.7)	(2.9)	(8.0)	(16.0)	(25.9)	BB	'bbb'	'bbb'	spec	spec
U.K.	76.0	107.0	141.0	186.0	239.0	(10.2)	(6.7)	(9.2)	(12.0)	(14.4)	AAA	'a'	'a'	'bbb'	spec
Ukraine	27.0	37.0	62.0	111.0	204.0	(7.4)	(3.9)	(6.3)	(11.4)	(19.7)	B	spec	spec	spec	spec
U.S.	71.0	105.0	170.0	249.0	340.0	(9.7)	(9.6)	(14.7)	(19.6)	(24.5)	AA+	'a'	'bbb'	spec	spec
Group comparison														
Listed sovereigns	37.0	40.0	61.0	94.0	142.0	(4.6)	(2.4)	(4.7)	(7.4)	(10.3)					
Advanced economies	59.0	62.0	72.0	122.0	183.0	(5.3)	(2.9)	(5.7)	(8.4)	(11.3)					
Emerging economies	31.0	30.0	47.0	71.0	117.0	(3.3)	(1.8)	(3.1)	(5.9)	(9.5)					
BRICs	27.0	23.0	36.0	76.0	130.0	(3.0)	(1.3)	(4.1)	(7.4)	(12.8)					
Europe	41.0	50.0	67.0	100.0	158.0	(4.8)	(2.5)	(4.9)	(7.4)	(11.0)					
Asia	24.0	21.0	41.0	98.0	151.0	(2.2)	(2.4)	(6.0)	(9.2)	(12.6)					
Latin America	37.0	27.0	35.0	70.0	136.0	(1.6)	(1.1)	(3.5)	(7.5)	(12.0)					
G-7	77.0	90.0	107.0	142.0	190.0	(7.1)	(4.3)	(6.2)	(9.1)	(11.5)					
'AAA' group	23.0	27.0	64.0	100.0	139.0	(2.8)	(2.0)	(4.5)	(6.7)	(8.9)					
'AA' group	31.0	48.0	67.0	102.0	177.0	(4.5)	(2.9)	(6.0)	(8.3)	(11.5)					
'BBB'-'A' group	40.0	45.0	55.0	85.0	128.0	(6.5)	(2.2)	(4.1)	(7.1)	(10.2)					
Speculative-grade group	41.0	35.0	55.0	85.0	149.0	(4.9)	(2.6)	(4.5)	(7.9)	(11.4)					

f--Standard & Poor's forecast. spec--Speculative-grade.

Table 9

<table>
<tr style="background-color:#c8102e;color:white"><td colspan="20">Higher Growth Rate Scenario</td></tr>
</table>

	--Net general government debt (% GDP)--					--General government balance (% GDP)--					Long-term foreign currency sovereign ratings	--Hypothetical long-term sovereign ratings--			
	2010	2020f	2030f	2040f	2050f	2010	2020f	2030f	2040f	2050f	As of March 18, 2013	2020	2030	2040	2050
Argentina	42.0	30.0	58.0	102.0	170.0	(0.7)	(3.9)	(6.7)	(11.1)	(17.1)	B-	spec	'bbb'	'bbb'	'bbb'
Australia	16.0	20.0	37.0	74.0	129.0	(5.3)	(1.5)	(4.3)	(7.9)	(12.1)	AAA	'aaa'	'aa'	'a'	'bbb'
Austria	71.0	71.0	96.0	141.0	200.0	(4.5)	(3.5)	(7.2)	(10.2)	(13.9)	AA+	'aa'	'a'	'bbb'	'bbb'
Belgium	91.0	93.0	117.0	168.0	240.0	(3.8)	(4.2)	(8.3)	(12.8)	(17.5)	AA	'a'	'bbb'	'bbb'	spec
Brazil	39.0	27.0	23.0	56.0	137.0	(2.5)	0.1	(2.2)	(7.9)	(16.4)	BBB	'a'	'a'	'a'	'bbb'
Bulgaria	7.0	14.0	27.0	49.0	85.0	(3.1)	(1.4)	(2.7)	(4.5)	(7.5)	BBB	'bbb'	spec	'bbb'	'bbb'
Canada	48.0	49.0	63.0	92.0	132.0	(5.4)	(2.1)	(4.7)	(7.2)	(9.8)	AAA	'aaa'	'aa'	'a'	'bbb'
Chile	2.0	(4.0)	(7.0)	1.0	25.0	(0.4)	0.8	0.5	(1.4)	(4.3)	AA-	'a'	'a'	'a'	'a'
China	14.0	18.0	47.0	99.0	177.0	(1.7)	(2.9)	(7.1)	(11.7)	(17.7)	AA-	'bbb'	'bbb'	'a'	'bbb'
Cyprus	71.0	128.0	138.0	158.0	205.0	(5.3)	(5.7)	(7.7)	(9.8)	(14.2)	CCC+	'bbb'	'bbb'	'bbb'	spec
Czech Republic	31.0	50.0	75.0	118.0	187.0	(4.8)	(3.9)	(6.1)	(9.6)	(14.7)	AA-	'a'	'a'	'bbb'	'bbb'
Denmark	25.0	46.0	79.0	127.0	182.0	(2.5)	(4.2)	(7.0)	(10.1)	(12.8)	AAA	'aaa'	'a'	'bbb'	'bbb'
Estonia	0.0	3.0	9.0	22.0	41.0	0.2	(0.3)	(1.4)	(2.5)	(3.7)	AA-	'aa'	'aa'	'a'	'aa'
Finland	10.0	24.0	63.0	123.0	192.0	(2.5)	(2.8)	(7.4)	(11.1)	(14.5)	AAA	'aaa'	'a'	'bbb'	'bbb'
France	77.0	89.0	108.0	148.0	202.0	(7.1)	(4.9)	(7.0)	(10.5)	(13.6)	AA+	'a'	'bbb'	'bbb'	spec
Germany	80.0	67.0	80.0	116.0	171.0	(4.1)	(2.3)	(4.8)	(8.0)	(11.7)	AAA	'aa'	'a'	'bbb'	'bbb'
Greece	143.0	179.0	185.0	209.0	255.0	(10.7)	(6.9)	(8.0)	(10.7)	(14.1)	B-	'bbb'	'bbb'	spec	spec
Hungary	76.0	65.0	51.0	46.0	62.0	(4.4)	(1.6)	(1.0)	(2.3)	(4.9)	BB	'bbb'	'a'	'a'	'a'
Iceland	65.0	39.0	9.0	(3.0)	8.0	(10.1)	2.0	1.9	0.4	(2.5)	BBB-	'a'	'aa'	'aa'	'a'
India	75.0	70.0	77.0	94.0	121.0	(8.3)	(5.9)	(6.8)	(8.2)	(10.0)	BBB-	'bbb'	'bbb'	spec	spec
Indonesia	24.0	19.0	30.0	49.0	76.0	(0.7)	(2.0)	(3.2)	(5.2)	(7.4)	BB+	spec	spec	spec	'bbb'
Ireland	90.0	113.0	110.0	125.0	164.0	(30.9)	(5.9)	(5.7)	(7.8)	(11.6)	BBB+	'a'	'a'	'bbb'	'bbb'
Italy	114.0	102.0	66.0	44.0	31.0	(4.5)	(0.7)	0.5	0.0	0.0	BBB+	'a'	'a'	'aaa'	'aaa'
Japan	105.0	189.0	260.0	344.0	440.0	(8.5)	(14.3)	(17.9)	(22.9)	(28.3)	AA-	'bbb'	spec	spec	spec
Korea	20.0	14.0	40.0	130.0	296.0	1.0	(0.4)	(6.6)	(16.8)	(30.5)	A+	'a'	'a'	'bbb'	spec
Latvia	34.0	25.0	10.0	(7.0)	(22.0)	(8.1)	0.0	1.4	2.0	2.0	BBB	'a'	'aa'	'aa'	'aa'
Lithuania	32.0	40.0	57.0	94.0	159.0	(7.2)	(2.9)	(5.0)	(8.7)	(14.0)	BBB	'a'	'a'	'a'	'bbb'
Luxembourg	(20.0)	(7.0)	31.0	109.0	222.0	(0.8)	(1.3)	(6.7)	(13.5)	(21.3)	AAA	'aaa'	'a'	'bbb'	spec
Malaysia	43.0	63.0	96.0	139.0	198.0	(8.8)	(7.1)	(9.9)	(13.3)	(17.7)	A-	'bbb'	'bbb'	'bbb'	'bbb'
Malta	60.0	60.0	69.0	100.0	169.0	(3.6)	(2.7)	(4.6)	(8.2)	(14.1)	BBB+	'a'	'a'	'bbb'	'bbb'
Mexico	35.0	39.0	61.0	93.0	133.0	(2.9)	(3.4)	(6.2)	(8.3)	(11.2)	BBB	'bbb'	'bbb'	'a'	'bbb'
Netherlands	59.0	78.0	132.0	225.0	344.0	(5.1)	(6.0)	(11.6)	(18.8)	(25.4)	AAA	'aa'	'bbb'	spec	spec
Norway	(108.0)	(164.0)	(202.0)	(136.0)	(13.0)	11.2	15.8	7.7	(5.0)	(12.2)	AAA	'aaa'	'a'	'a'	'a'
New Zealand	14.0	32.0	40.0	72.0	127.0	(6.3)	(0.9)	(3.5)	(7.2)	(11.3)	AA	'aa'	'aa'	'a'	'bbb'
Philippines	25.0	19.0	16.0	22.0	35.0	(2.7)	(0.9)	(1.4)	(2.5)	(4.2)	BB+	'bbb'	spec	spec	'bbb'
Poland	51.0	51.0	60.0	76.0	103.0	(7.9)	(2.6)	(3.8)	(4.9)	(6.8)	A-	'a'	'a'	'a'	'bbb'

Table 9

Higher Growth Rate Scenario (cont.)														
Portugal	90.0	107.0	94.0	86.0	88.0	(9.8)	(3.2)	(2.7)	(2.9)	(3.6)	BB	'a'	'a'	'a'	'a'
Romania	25.0	28.0	39.0	71.0	130.0	(6.8)	(1.5)	(3.5)	(6.9)	(11.5)	BB+	'bbb'	'bbb'	'bbb'	'bbb'
Russia	1.0	13.0	74.0	198.0	392.0	(3.5)	(4.0)	(11.9)	(23.3)	(35.3)	BBB	'bbb'	'a'	'bbb'	spec
Saudi Arabia	(163.0)	(91.0)	(55.0)	(40.0)	(36.0)	6.0	2.0	2.0	2.0	2.0	AA-	'bbb'	'a'	'a'	'a'
South Africa	31.0	37.0	46.0	66.0	102.0	(4.4)	(2.4)	(4.0)	(6.0)	(9.1)	BBB	'bbb'	'a'	'a'	'bbb'
Slovakia	40.0	53.0	83.0	145.0	248.0	(7.7)	(4.3)	(7.5)	(12.4)	(19.7)	A	'a'	'a'	'bbb'	spec
Slovenia	32.0	53.0	75.0	131.0	232.0	(5.7)	(3.4)	(6.1)	(11.9)	(19.3)	A-	'a'	'a'	'bbb'	spec
Spain	51.0	99.0	112.0	148.0	218.0	(9.7)	(6.1)	(6.8)	(10.4)	(15.7)	BBB-	'a'	'bbb'	'bbb'	spec
Sweden	4.0	0.0	(1.0)	12.0	31.0	0.3	0.9	(0.6)	(2.2)	(3.2)	AAA	'aaa'	'aaa'	'aa'	'aa'
Switzerland	23.0	11.0	4.0	3.0	9.0	0.4	0.6	0.3	(0.3)	(1.3)	AAA	'aaa'	'aaa'	'aaa'	'aaa'
Turkey	41.0	33.0	67.0	148.0	287.0	(2.7)	(3.2)	(8.6)	(17.3)	(28.3)	BB	'bbb'	'bbb'	'bbb'	spec
U.K.	76.0	108.0	149.0	204.0	268.0	(10.2)	(7.8)	(10.9)	(14.6)	(18.0)	AAA	'a'	'a'	spec	spec
Ukraine	27.0	32.0	51.0	94.0	181.0	(7.4)	(3.2)	(5.7)	(10.9)	(19.7)	B	'bbb'	spec	spec	spec
U.S.	71.0	100.0	160.0	240.0	334.0	(9.7)	(9.3)	(14.8)	(20.3)	(26.2)	AA+	'a'	'bbb'	spec	spec
Group comparison														
Listed sovereigns	37.0	40.0	62.0	97.0	167.0	(4.6)	(2.8)	(5.7)	(8.2)	(13.2)					
Advanced economies	59.0	64.0	80.0	126.0	196.0	(5.3)	(3.3)	(6.6)	(10.1)	(14.0)					
Emerging economies	31.0	29.0	49.0	73.0	125.0	(3.3)	(2.5)	(3.9)	(7.4)	(10.6)					
BRICs	27.0	22.0	61.0	96.0	157.0	(3.0)	(3.5)	(7.0)	(9.9)	(17.0)					
Europe	41.0	51.0	69.0	116.0	181.0	(4.8)	(3.2)	(5.7)	(9.6)	(13.9)					
Asia	24.0	19.0	44.0	96.0	149.0	(2.2)	(2.4)	(6.7)	(9.9)	(13.8)					
Latin America	37.0	28.0	41.0	75.0	135.0	(1.6)	(1.6)	(4.2)	(8.1)	(13.8)					
G-7	77.0	100.0	108.0	148.0	202.0	(7.1)	(4.9)	(7.0)	(10.5)	(13.6)					
'AAA' group	23.0	24.0	63.0	109.0	171.0	(2.8)	(2.1)	(4.8)	(8.0)	(12.2)					
'AA' group	31.0	50.0	75.0	118.0	187.0	(4.6)	(3.7)	(7.1)	(10.3)	(14.3)					
'BBB'-'A' group	40.0	46.0	64.0	94.0	148.0	(6.5)	(2.8)	(5.3)	(8.2)	(12.8)					
Speculative-grade group	41.0	33.0	54.0	90.0	150.0	(4.9)	(3.2)	(4.6)	(8.3)	(12.8)					

f--Standard & Poor's forecast. spec--Speculative-grade.

Table 10

Sustainability Gap (% GDP)		
(%)	**No policy change scenario**	**Balanced budget in 2016 scenario**
Argentina	9.4	6.5
Australia	5.7	4.8
Austria	4.7	2.7
Belgium	6.2	4.0
Brazil	8.7	8.3
Bulgaria	2.8	2.2
Canada	3.6	2.2
Chile	2.5	3.3

Table 10

Sustainability Gap (% GDP) (cont.)		
China	8.9	7.4
Cyprus	5.0	2.1
Czech Republic	5.3	2.6
Denmark	4.4	1.9
Estonia	1.4	1.3
Finland	5.1	4.3
France	4.5	1.2
Germany	3.7	3.0
Greece	3.9	(0.6)
Hungary	1.9	(0.2)
Iceland	1.6	3.7
India	4.4	(0.9)
Indonesia	4.1	2.5
Ireland	4.2	(0.8)
Italy	(0.5)	(1.2)
Japan	8.7	(0.1)
Korea	13.0	14.1
Latvia	(0.7)	(0.7)
Lithuania	5.4	3.3
Luxembourg	9.1	9.0
Malaysia	8.8	3.1
Malta	5.2	3.4
Mexico	5.0	2.6
Netherlands	8.8	5.5
Norway	8.6	6.9
New Zealand	4.7	2.4
Philippines	3.5	2.6
Poland	2.4	0.2
Portugal	0.8	(1.1)
Romania	4.2	2.9
Russia	14.3	6.1
Saudi Arabia	0.3	12.9
South Africa	4.1	1.7
Slovakia	6.8	3.8
Slovenia	6.9	4.5
Spain	5.4	0.7
Sweden	1.4	2.5
Switzerland	0.6	1.5
Turkey	12.6	10.6
U.K.	6.0	(0.4)
Ukraine	10.5	7.6
U.S.	10.7	4.7

Table 10

Sustainability Gap (% GDP) (cont.)		
Medians		
Listed sovereigns	4.8	2.7
Advanced economies	5.1	2.6
Emerging economies	4.3	2.8
BRICs	8.8	6.7
Europe	4.7	2.6
Asia	6.6	2.8
Latin America	6.8	4.9
G-7	4.5	1.2

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