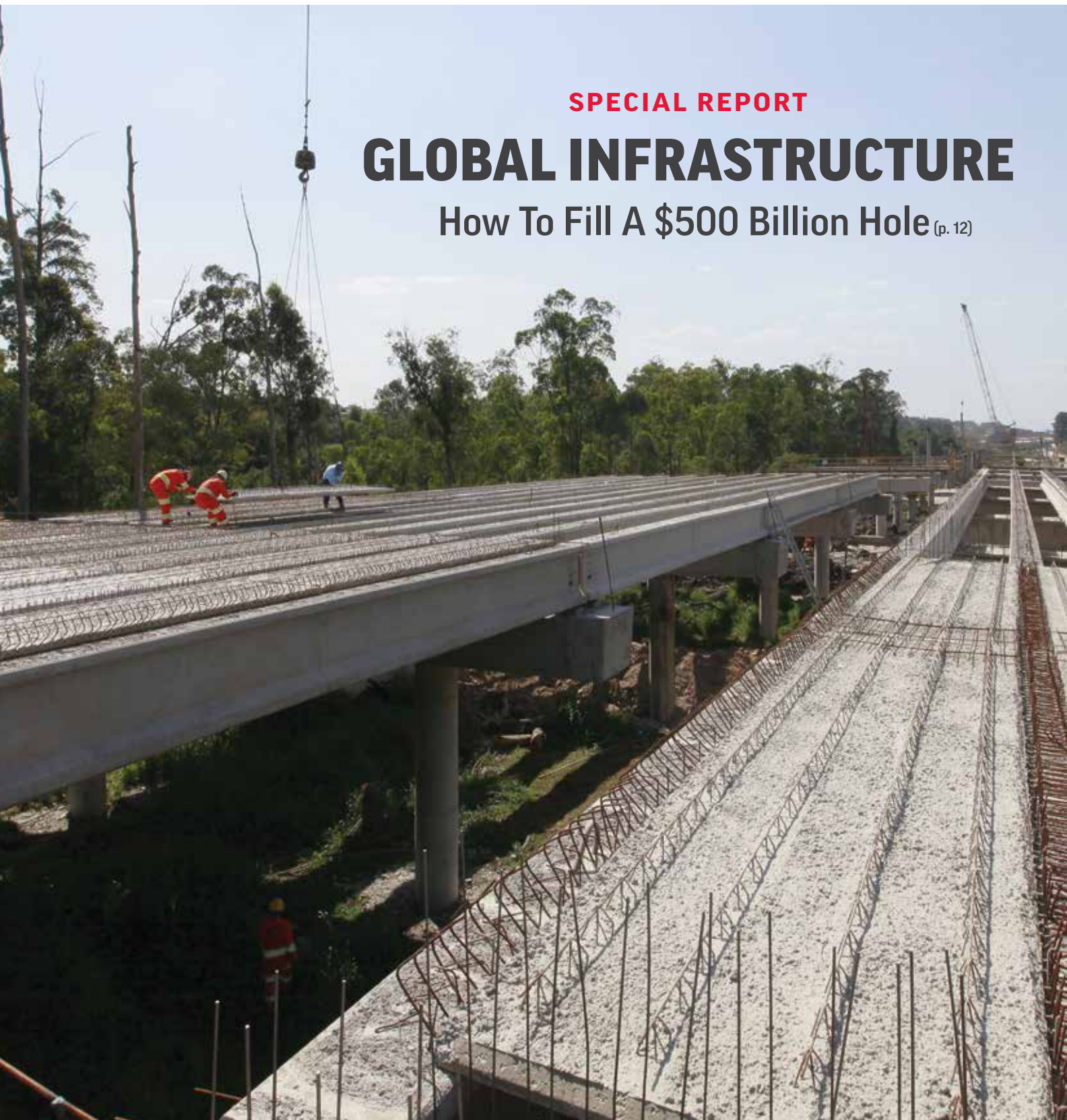


SPECIAL REPORT

GLOBAL INFRASTRUCTURE

How To Fill A \$500 Billion Hole (p. 12)



SPECIAL REPORT

12 Global Infrastructure: How To Fill A \$500 Billion Hole

By Michael Wilkins, London

From the aqueducts of ancient Rome to the 47,000-mile interstate highway system in the U.S., to the breathtaking bridges, sweeping power projects, and futuristic architecture of 21st-century China, infrastructure has long been a central component of economic and human progress. But now, the historical funding for these projects by governments is in question.



20 Cracks Appear In Advanced Economies' Government Infrastructure Spending As Public Finances Weaken

By Moritz Kraemer, Frankfurt

Economists agree that broad and high-quality physical infrastructure in an economy benefits growth, welfare, and economic inclusion. And strong infrastructure can support sovereign ratings. For centuries, the building of ports, canals, and roads has spurred economic development. Railroads and airports have opened up vast spaces for human economic use and benefit, connecting remote regions into an ever more integrated world economy.



26 Underwriting The Recovery: Insurers' Role As Investors Expected To Be Preserved

By Rob C. Jones, London

Insurers provide just over half of total institutional investment in Europe and they perform an important role in Europe's economic recovery. However, regulatory uncertainty threatens insurers' investment behavior, and may hinder their historical ability to facilitate growth. Policymakers have two objectives that sometimes conflict: to preserve and enhance insurers' role as long-term investors, and to deliver a modernized insurance regulatory regime.

30 Top 10 Global Investor Questions For 2014: Public-Private Partnerships

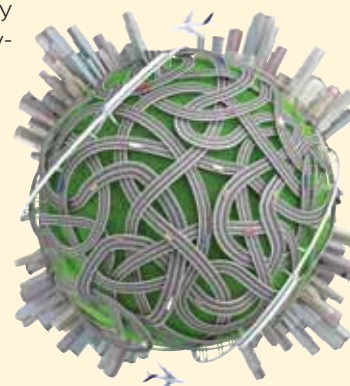
By Jodi E. Hecht, New York

In the years following the onset of the Great Recession in 2007, government funding for infrastructure and new projects was in short supply globally, and long-term sources of capital stagnated. In 2013, however, the situation turned around and the public-private partnership model re-emerged as a key tool for funding infrastructure projects and as another option to traditional project delivery methods.

37 Top 10 Global Investor Questions For 2014: Transportation Infrastructure Sector

By Aurelie Hariton-Fardad, London

Prospects for the transportation infrastructure sector globally in 2014 are now largely stable, given that we expect the European economy to slowly improve this year and growth in the Asia-Pacific and Latin America regions to stay relatively stable. Yet country-specific deviations from these regional trends could affect the credit quality of individual issuers because domestic economic and political climates strongly influence the sector.



**42 U.S. Public Finance:
Short-Term Savings On Infrastructure
Spending Could Prove To Be Short-Sighted**

By Jennifer K. Garza (Mann), Dallas

Infrastructure quality is a key component of maintaining a competitive economic advantage regionally and globally within U.S. public finance.

Governments that fail to maintain and invest sufficiently in new infrastructure undermine their economic bases and potential for growth. Deferral of capital needs poses credit risk in the long term, similar to the way pension liabilities become a credit weakness if an entity defers pension contributions.



**48 2013 U.S. State Debt Review: Despite Large
Infrastructure Needs, Debt Issuance Remains Muted**

By Henry W. Henderson, Boston



It might be a surprise to casual observers of U.S. state budgets, but U.S. states aren't laboring under unbearable debt burdens. Yes, the Great Recession and its aftermath have inflicted much pain on state and local

governments. And municipal debt issuance rose significantly in 2012 relative to 2011. Yet demands on governments to reinstate services, reduce taxes, and fund rising pension and health care costs leave limited appetite for additional debt.





Global Infrastructure

How To Fill A \$500 Billion Hole

Overview

- Public resources needed for new construction, or to repair existing infrastructure, are now under sustained downward pressure.
- About \$57 trillion will be needed to finance infrastructure projects around the world through 2030—but the gap between investment needs and available public funds could be about \$500 billion annually.
- Institutional investors' allocations to infrastructure could rise to an average of 4%, potentially providing about \$200 billion per year in additional funding for the sector. If banks continue to lend to projects at current levels of about \$300 billion per year, these private sector inflows could fill the gap left by retreating governments.
- Public policy decisions and investment incentives will play a big part in determining whether private sector institutions get more heavily involved.

From the aqueducts of ancient Rome to the 47,000-mile interstate highway system in the U.S., to the breathtaking bridges, sweeping power projects, and futuristic architecture of 21st-century China, infrastructure has long been a central component of economic and human progress. Historically, funding for these projects has been the domain of governments—emperors, central planners, and legislative bodies. Although this is still the case, the public resources needed for new construction, or to repair existing infrastructure, are now under sustained downward pressure.

An estimated \$57 trillion will be needed to finance infrastructure development around the world through 2030, according to a report from consultant McKinsey & Co. (see chart 1). Standard & Poor's Ratings Services believes this presents institutional investors with an unprecedented opportunity to fill some of the huge gap created by public-funding shortfalls. Given the many budgetary constraints burdening governments globally, and with banks' long-term lending restricted by regulatory requirements, nontraditional lenders such as insurers and pension funds are poised to take a larger share of the infrastructure investment pie.

Under our base-case assumptions, we estimate that institutional investors could provide as much as \$200 billion per year—or \$3.2 trillion by 2030—for infrastructure financing, given recent industry-stipulated asset allocation targets. Although this would represent an ambitious increase versus the historical trend, the gap between investment needs and available public funds could be more than twice that—at around \$500 billion annually (see table 1).

Against this backdrop, we believe that institutions could be persuaded to allocate even more of their money to infrastructure, provided certain enticements. Among these are a clearer pipeline of

projects, policy incentives, less onerous regulation, and better information about the performance expectations of the asset class in its various stages of gestation.

A Significant Increase In Institutions' Allocations

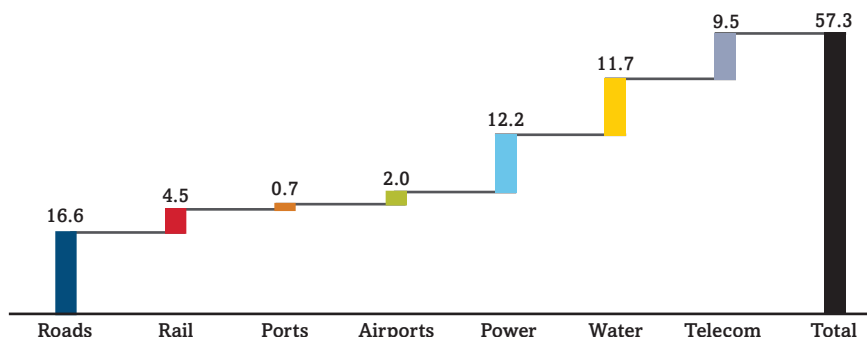
Based on data provided to Standard & Poor's in advance of publication by the Organisation for Economic Cooperation and Development (OECD) and from McKinsey, we estimate the funding needs for infrastructure around the world to be \$3.4 trillion annually, with most of that about evenly split among the U.S., the EU, and China.

Amid this opportunity for nontraditional lenders to take on a greater share of the investment, recent developments show that some have already begun to take up the mantle. In the U.K., for example, six large insurers have said they will invest £25 billion (\$40.9 billion) in the British government's National Infrastructure Plan, which plans to pump £375 billion into energy, transportation, and waste and water projects in the next five years and beyond.

Institutional investors' allocations could rise to a weighted average of 4%, which could provide about \$200 billion per year in additional funding for the sector. Based on figures from the OECD and infrastructure data and research firm Preqin, as well as recent statements from institutions, Standard & Poor's estimates that such investors are targeting an allocation of 3% to 8% of their assets under management over the next five years—a significant increase from what we've traditionally seen (see charts 2 and 3). This could equate to as much as \$3.2 trillion in new money earmarked for an asset class that is showing steady upward growth. About 40% of this would come from the pension fund sector, already one of the largest private-sector funders of infrastructure in North America and Australia. As it stands, the long-term global project finance market consists of a handful of banks and various capital markets players, including insurers, infrastructure fund managers, and investors in public bonds. Of these competing businesses, institutional investors have shown the biggest increase in appetite for such investments (see table 2). A September 2013 Preqin survey showed that 58% of investors plan to

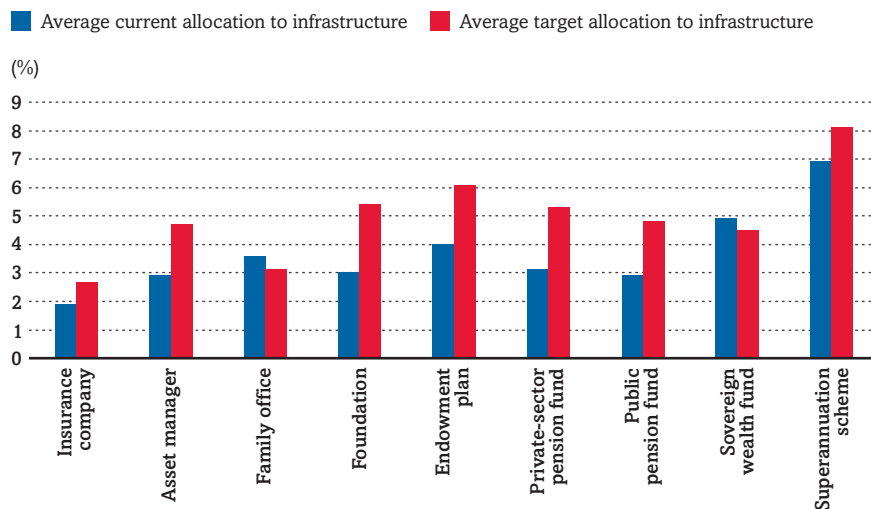
Chart 1 | More Than \$50 Trillion Needed For Infrastructure Through 2030

Global investment; 2013 to 2030 \$ trillion, constant 2010 dollars



Source: McKinsey & Co.
© Standard & Poor's 2014.

Chart 2 | Breakdown Of Average Current/Target Allocation To Infrastructure By Investor Type



Source: Preqin Infrastructure Online.
© Standard & Poor's 2014.

increase their funding allocation for infrastructure in the long term. Almost two-thirds of respondents said they plan to allocate more capital to the sector in the next 12 months than in the previous year.

An asset allocation survey by Mercer, the asset consultant, of Canadian pension funds shows a significant change in the percentage of pension plans investing in alternative classes from 2010 to 2013 (*see chart 4*). The percentage of plans invested in each of these asset classes has increased, with one of the largest jumps being in infrastructure, which rose to 24% from 8% in three years. The Canadian model is often seen as one that pension funds around the world are looking to emulate.

As these institutions prepare to increase their allocations, crumbling infrastructure and the global population boom are feeding the need for ever-more funds. The U.N. projects the world's population will reach 9 billion by 2050, from about 7.1 billion today. Naturally, most of that increase will come in the developing world, where the population could surge by almost one-half, to 7.8 billion. In this light, it's clear that the need for new infrastructure in the areas of energy, water, transportation, telecommunications, and social facilities such as schools and hospitals, will increase substantially. According to the U.S. Energy Information Administration, Latin America and the Caribbean will need to double power-generation capacity by 2030 to meet demand, requiring an investment of more than \$700 billion.

Government Spending Continues To Decline In Developed Economies

All of this comes at a time when many governments—especially those in Western, developed nations—are cutting back on infrastructure spending because of budgetary concerns. In the U.S., for example, the Obama Administration's calls for increased project funding have gone unheeded as Washington lawmakers battle over the nation's budget, and government spending on infrastructure as a percentage of GDP has tumbled to a 20-year low of about 1.7%, according to figures from the Federal Reserve Bank of St. Louis. In the eurozone, the austerity measures that many govern-

ments implemented after the debt crisis have significantly constrained spending on infrastructure development and repair.

In the developing economies of Asia, government allocation is much higher. In China, for example, the government has been earmarking roughly 8.5% of GDP for infrastructure (however, a large chunk of that goes to projects outside its borders), and India has been allocating roughly 4.7% of GDP. This pace of government support, however, will likely decline over the longer term relative to historical high levels. Although economic growth is forecast to rise over the next two years across much of the region, the expectation from 2017 onward is for a steady decline that may eat into planned allocations for projects that could significantly enhance those economies' competitiveness.

Although the numbers vary significantly, there's been a clear trend of governments spending less of their budgets overall on infrastructure. Our base case assumes current average infrastructure investment by governments globally of about 3% of GDP (*see table 1*). With the world economy set to grow to \$122 trillion by 2030, from around \$70 trillion today, according to economic forecasting organization Global Insight, we calculate an annual gap of \$500 billion in global infrastructure requirements that private investors have an opportunity to plug. This assumes governments continue to pledge funds at the current pace.

If, however, aggregate government allocation continues to decline—to, say, 2% of global GDP—the public-funding shortfall in infrastructure investment could balloon to as much as \$1.5 trillion per year. This pessimistic scenario (which we see as unlikely to occur, given current emerging-market trends) could lead to chronic shortages of infrastructure, with potential adverse economic consequences.

However, if governments around the world increased spending on infrastructure to upward of 3.5% of GDP on average, the funding requirements through 2030 could be fully met through public funding. This—our most optimistic scenario—is also the one we view as least likely.

At any rate, infrastructure needs vary greatly from country to country—with a fairly clear dichotomy between more developed countries and emerging markets. In the former, where, for example, bridges and tunnels along many main thoroughfares are more than a century old and have lasted well beyond their planned lifespan, refurbishment and replacement will likely take a larger slice of the financing pie than in developing nations. In the latter, new systems and networks are needed to keep pace with population—and economic—expansion.

In many ways, this puts developing economies at an advantage, because technological advancements in a number of areas mean that crumbling legacy systems and structures won't be the burden they sometimes are in developed countries. India's telecommunications network is a great example of this. The number of mobile phones in that country is about 1 billion—about 30x the number of land lines in use—and growing fast, with service providers free of the need to run cable to rural areas, where just one-third of the population now has telephone service, according to mobile provider Telecom India. Similarly, coming advancements in green energy sources hold the promise of allowing power providers in emerging markets to build state-of-the-art transmission systems—in stark contrast to the U.S., for example, where the electrical grid, while more expansive than ever, still relies on what is essentially a century-old technology.

Governments And Banks Are Still The Biggest Players

To be sure, healthy government participation is still paramount for the evolution of a country's infrastructure. And not all governments are scaling back in this regard.

In Canada, for example, several provinces have increased capital spending in the face of deteriorating social infrastructure. Outlays for such projects as roads, schools, hospitals, courthouses, and prisons now account for about 10% of total government spending versus a historical average of 3% to 5%—with many provinces establishing private-public partnerships (PPP or P3) to fund infrastructure renewal.

Clearly, banks, too, remain important providers for infrastructure financing, particularly when capital markets are thin and secondary debt markets nascent. Although their involvement varies substantially by region, banks have historically participated in the debt financing—and, to a lesser extent, equity financing—of projects.

In Latin America, for example, most infrastructure financing comes through the banking sector, with larger participation of the government-owned banks in countries such as Brazil, given the relatively short track record of capital markets in the region. The lack of a strong secondary market for debt also curbs the financing of projects outside banks' balance sheets.

Similarly, because debt markets are relatively new to the six-country Gulf Cooperation Council (GCC), most deals

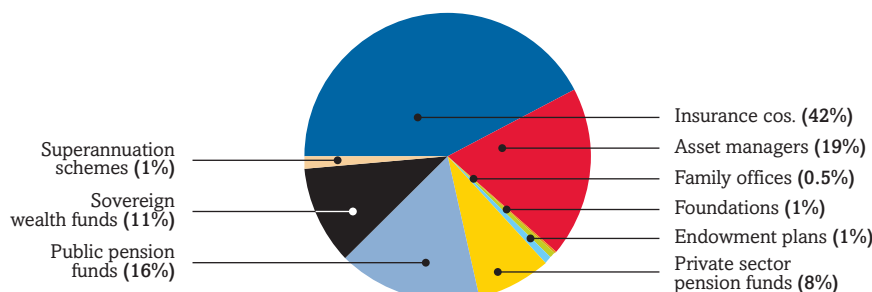
there are financed with bank credit. In addition to local lenders, certain foreign banks (particularly Japanese) are active in the market. Local banks traditionally carry the exposures on their balance sheets, rather than distributing them or selling them off. Most projects undertaken in the GCC involve highly rated government companies, are generally part of a national development strategy, and are seen as having strong credit.

Meanwhile, the 8.5% of GDP that the Chinese government is spending means the country has become the world's largest investor in infrastructure, according to figures from McKinsey. On top of that, local Asian banks don't generally have the types of liquidity concerns they did in the 1990s, when they couldn't finance domestic infrastructure, and project bonds funded a range of power projects.

Against this backdrop, nontraditional lenders aren't making the same inroads into infrastructure financing in Asia as they are in the U.S. and Europe, because of the dominance of Asian banks, which can provide financing cheap enough to price out competitors. In addition, Asian banks' desire to expand their balance sheets—in contrast to the U.S. and EU banks—means they are highly motivated to keep foreign and nontraditional lenders out. At least for the time being, debt financing of Asian infrastructure is the preserve of the Asian banks.

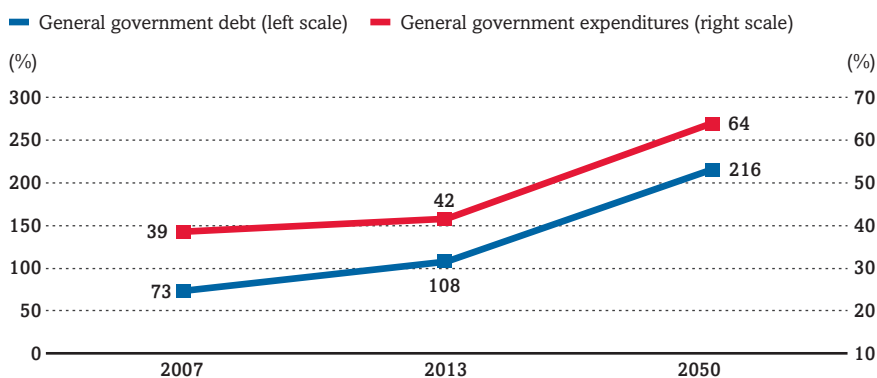
Despite this, a large number of institutional investors are seeking greater exposure to Asian infrastructure. And investing in such projects seems to be a good match, in particular for insurers and pension funds, because of the predictable, stable cash flows and potential for asset liability matching. Still, the comparatively low credit quality of sovereign borrowers and issuers in the region, combined with currency fluctuation risks and too-low yields, may hold many investors back.

Chart 3 | Breakdown Of Institutional Investors Active In Infrastructure By Type And Aggregate AUM



AUM—Assets under management.
Source: Preqin Infrastructure Online.
© Standard & Poor's 2014.

Chart 4 | Advanced Economies Fiscal Indicators (% Of GDP)



Sources: IMF World Economic Outlook Database, October 2013 and Standard & Poor's (for 2050).
© Standard & Poor's 2014.

Bank Participation Evolves In Response To Regulation

All of this is taking place as the nature of bank involvement in project finance is evolving in response to changing regulation.

In Europe, we've seen a pullback from infrastructure loans as governments deal with strained budgets in the wake of the recent financial crisis. Meanwhile, new capital and liquidity rules under Basel III suggest that banks will have a diminished appetite for relatively illiquid assets such as project finance. New rules will require lenders to seek longer-term funding, which is generally more expensive, to better match their assets with their liabilities. Simply put, while the negative effects of the deleveraging that banks undertook to prepare for new regulations (and a gloomy economic backdrop) are waning a bit, lenders will be more selective and the availability of credit less abundant than in the past—and with more demanding capital and funding requirements. In light of this, banks are diversifying away from buy-and-hold strategies in favor of roles as arrangers of deals.

In Latin America, Basel III requirements could somewhat reduce banks'

appetite for financing longer-term investments or holding lower-rated assets, but Standard & Poor's believes the deep need for infrastructure funding in the region will overcome these obstacles. This could be done through the continuing participation of government-owned development banks, as long as their funding and capital structures aren't limited by governments' budgetary constraints, or via further capital markets development.

Similarly, in the GCC, we see the implementation of Basel III curbing local banks' appetite for such exposures, and we expect project bond issuance, which has been limited to date, to gradually increase. And while there isn't yet any evidence of a decline in project finance exposures in Asia-Pacific, the pace of growth may slow in the next decade due to Basel III constraints.

All told, deepening capital markets and the greater participation of nonbank investors can help expand private financing opportunities for infrastructure, with banks still likely to step in as arrangers and facilitators, or to provide bridge financing. Certainly, institutional investors can play a larger role, and there is scope for them to increase their allocations to infrastructure from the current low levels. This will likely foster growth in capital markets assets, specifically project bonds.

This trend has already started. According to the latest data from Dealogic, global project finance bond volume reached \$54.7 billion in 2013, more than double the \$25.5 billion raised in 2012 and the highest full-year volume on record. Global project finance volumes overall increased 3% in 2013 to \$418 billion. In the same period, project finance loan volume dropped 4%, to \$297 billion.

Financing can take a number of routes. We see European banks potentially providing bridge financing during a project's construction phase, with refinancing coming from a bond sale or investment from the infrastructure funds, insurers, or pension managers that need long-term yields. Alternatively, the bond market might provide all of the required financing from the outset, which has been the U.S. model for many years. However, because Europe's

traditional way of debt financing—bank lending—will need to keep working in a big way, it's important to be realistic about the potential role of institutional investors. We believe significant increases in institutional involvement are possible only with sufficient supply of infrastructure assets and favorable political-economic environments.

In Latin America, meanwhile, the need for infrastructure spending could create an opportunity for further development of the capital markets. In most of the region's countries, regulations have fostered an infrastructure project bond market, including allowing pension funds and other institutional investors to participate. In Asia-Pacific, by contrast, project finance bonds remain unpopular and have a very limited presence, compared with loans. Nevertheless, given the aforementioned large financing gap, we expect non-loan instruments such as project financing bonds to become more prominent there.

Drawing Institutional Investors' Interest

Institutional investors are becoming increasingly attracted to infrastructure, due to their need to match long-term assets and liabilities—while at the same time picking up higher yields than they might get from traditional investments in investment-grade sovereign and corporate debt. Still, many nontraditional investors remain wary of such assets. Key to increasing their participation, perhaps, is a better understanding of the risks associated with this type of lending.

Toward this end, the World Bank plans to funnel capital from member nations and the private sector into projects in developing countries through a new Global Infrastructure Facility—an intermediary that World Bank President Jim Yong Kim believes will help match lenders and borrowers, and mitigate risk. Meanwhile, Justin Lin, former chief economist at the World Bank, and Kevin Lu, director of the World Bank Group's Multilateral Investment Guarantee Agency for the Asia-Pacific region, have called for the creation of a fund that would help nontraditional, private-sector lenders become more comfortable with

infrastructure investment. In an October 2013 editorial on the Huffington Post, the two pointed out that infrastructure investment requires a deeper level of expertise than that needed to invest in most existing asset classes. As such, “most long-term capital holders such as pension funds are unlikely to have the expertise already in place.” The ability for such lenders to look at infrastructure as a discrete asset class, with clearly defined risks and rewards, could make them more comfortable with such investments. The increased target allocation of assets under management by institutions to infrastructure is a sign that this may already be happening.

Although project finance offers some attractive characteristics for these lenders, Standard & Poor's believes there are a number of elements to be put in place before a market for project bonds can thrive at scale—not the least of which is some standardization of deal structures. (*See “How To Unlock Long-Term Investment In EMEA Infrastructure,” published Oct. 4, 2013, on RatingsDirect.*)

In Europe, for example, investor appetite for infrastructure assets is strong, but there has been only limited issuance of project finance capital market debt in the past five years. Most infrastructure funding requirements are still being met by bank lending. Still, we believe long-dated debt used to fund infrastructure will more likely be from alternative or non-bank sources in the next 12 months, in light of certain advantages that providing such long-term capital can offer.

Among the benefits are:

- Yields higher than those on government bonds and similarly rated corporate bonds (primarily because of an “illiquidity premium” on project debt and the fact that infrastructure bonds typically are not backed by the full faith and credit of the government sponsor);
- The ability to match long-dated assets and liabilities;
- Comparatively low default totals, and higher recovery rates, than we see among corporate bonds; and
- The chance to diversify into a broader investment pool, with low correlation to other asset classes.

That said, it's important to heed the factors that may hinder the participation of certain institutions. In Europe, for example, there is some concern that risk capital charges proposed for insurance companies under Solvency II, scheduled to take effect in 2016, will discourage insurers from providing long-term financing. Because the regulation was conceived with a focus on corporate loans—and doesn't account for specific default and recovery characteristics of project finance, or other factors such as strong security packages and transaction structures—the proposal could effectively penalize insurers for holding long-dated, low- to mid-investment-grade project debt (that is, debt in the 'BBB' and 'A' categories).

Regarding our analysis of infrastructure investment, we don't necessarily factor in specific risk-based capital charges, although this would depend on our view of the risks. Our approach would look at the investor's position in the capital structure,

the nature of the underlying assets, leverage levels, and risks regarding liquidity, valuation, and timing.

Meanwhile, many insurers and pension funds remain reluctant to directly invest in projects before completion (so-called "greenfield" projects). This is partly because of the possibility of delayed yields and the potential effects that loan prepayments have on long-term returns—but is perhaps more directly a reflection of their wariness of taking on construction risk. In our view, however, construction risk is seldom the main reason for a project to default. In the power sector, for example, defaults are more likely to occur as a result of technical and design failures, poor operational performance, or unexpected capital expenditures.

Another factor that could dissuade investors, particularly in countries with less established track records in PPPs, is political and regulatory risk. Government and regulatory interference and political

risk are by far the biggest concerns on investors' minds, with almost 60% of respondents to a survey by London-based law firm Berwin Leighton Paisner, undertaken in conjunction with Preqin, citing this as the main threat to a sustained flow of infrastructure transactions in the next 12 months. The support of independent, stable, and transparent regulatory frameworks, or frameworks enshrined in law, reduces the risk of adverse policy changes on a transaction. Such changes can discourage investor participation and in certain cases have the unintended effect of increasing a project's default risk.

When Standard & Poor's assesses a regulatory framework, we consider, among other things:

- Its stability and predictability;
- How operating and capital expenditures are recovered;
- How financial stability is supported; and
- To what extent the framework is insulated from political intervention.

At the same time, because project finance loans are rarely traded in the secondary market, they often don't meet the liquidity requirements that institutional investors demand—a drawback that can't always be counterbalanced with an illiquidity premium of even 50 to 100 basis points. Still, investors interested in holding such assets to maturity would benefit from this substantial difference in yield.

Table 1 | Mind The Gap: Scenarios For Global Infrastructure Investment Needs Versus Public Sector Funding Sources To 2030

	Base case	Downside	Upside
Total need through 2030	\$57 trillion	\$57 trillion	\$57 trillion
Government spending	3% of GDP	2% of GDP	3.5% of GDP
Total gap	\$8.4 trillion	\$24.6 trillion	Zero
Annual gap	\$500 billion	\$1.5 trillion	Zero

Sources: OECD; McKinsey & Co.; Global Insight.

Table 2 | 10 Largest Institutional Investors Investing In Infrastructure By Current Allocation

Rank	Investor	Type	Location	Current allocation to infrastructure (bil. \$)	Current allocation (% of AUM)
1	OMERS	Public pension fund	Canada	13.8	24.0
2	CPP Investment Board	Public pension fund	Canada	10.4	5.8
3	National Pension Service	Public pension fund	South Korea	10.0	2.6
4	APG - All Pensions Group	Asset manager	Netherlands	9.5	2.0
5	Ontario Teachers' Pension Plan	Public pension fund	Canada	9.1	8.0
6	Corporación Andina de Fomento (CAF)	Government agency	Venezuela	9.0	42.0
7	AustralianSuper	Superannuation scheme	Australia	8.3	14.0
8	Future Fund	Sovereign wealth fund	Australia	6.7	8.0
9	Government Savings Bank of Thailand	Bank	Thailand	6.1	10.0
10	CDP Capital - Private Equity Group	Asset manager	Canada	5.9	3.4

AUM—Assets under management.
Source: Preqin Infrastructure Online.

In Asia, the key to attracting private financing is a steady flow of investable projects. For this to occur, in our view, a reliable and predictable revenue stream, creditworthy counterparties that deliver cash flow, and a reliable legal system to protect investors are essential.

Public-Private Partnerships Are Still Very Important

As markets and governments develop new approaches to completing highly essential infrastructure projects, Standard & Poor's believes that initiatives such as the Canadian government's C\$1.25 billion five-year contribution to the Canadian P3 Fund and the U.K.'s Private Finance 2 will continue to draw financing using PPPs.

In the U.S., interest is growing as several states build robust PPP programs. California, Florida, Indiana, Texas, and Virginia are among those that have initiated PPPs. Advantages to this model are that it includes some level of private investment and that there is, typically, a transfer of construction and operating risk to the private party.

Similarly, we believe the infrastructure needs of most Latin American countries will continue to drive long-term investment in PPPs. Nevertheless, the use of PPPs to channel investments across the region is still marginal and uneven, with Chile and Mexico taking the lead. We expect countries such as Uruguay and Peru to start using this type of mechanism more actively in 2014 though, for the region as a whole, we expect PPPs to remain a relatively minor source of project funding.

In Europe, we expect the trend of increased issuance in the social and economic infrastructure sectors to continue. Especially strong last year were the higher-education and social-housing sectors, in terms of number of deals, with larger volumes in the power generation, transmission, and gas-storage sectors. For 2014, we expect all of these areas to continue growing, with strong emphasis on infrastructure network transactions—such as energy, transportation, and communications—given that these are priority areas for the EU's and European Investment Bank's project bond initiative.

It's clear that the market for funding long-term investments is in transition, globally. According to the latest Dealogic data, project bonds already accounted for 13% of total project finance raised in 2013 and 16% of total project finance debt. Although commercial banks will retain a significant market share, we believe long-dated debt that finds its way into infrastructure is more likely to come from alternative or nonbank sources.

Naturally, yields and prices that are attractive to both lenders and borrowers are crucial to the market's success. For now, historically low yields on long-term government debt, as well as tight credit spreads throughout the capital markets, make for pricing on project bonds that favors borrowers.

Low Default Rates And High Recoveries For Infrastructure Projects

Standard & Poor's default and recovery statistics indicate that the creditworthiness of infrastructure projects is strong, and we expect this to continue. Since the first rated project default in 1998, the average annual default rate for all project finance debt we rate is just 1.5%—below the 1.8% default rate for corporate issuers in the same period.

Simply put, projects are generally no more risky than corporate entities at comparable rating levels. Although defaults among corporate borrowers increased at the height of the global financial crisis in 2008 to 2009, project finance transactions remained resilient. In 2007, the annual default rate for global rated project finance deals was about 0.5%. In 2009, it was 0.75%. Various contractual protections, such as those that provide projects with stable revenues, contributed to this comparatively low rate of default (which, we should note, comes from a significantly smaller set of rated transactions—around 200—than the more than 4,000 corporate issues we rate).

On top of its stronger resistance to default, project finance debt also delivers a better rate of recovery when defaults do happen. The average recovery rate across Standard & Poor's rated project finance portfolio is about 75%—with most lenders receiving close to 100%, and very few getting shut out entirely. This reflects the specific characteristics of project debt, which

typically benefits from strong collateral, with lenders enjoying first-priority security. In many cases, strong collateral in tandem with certain contractual features enables projects that default to continue as going concerns, thereby ensuring cash flow and bolstering recovery prospects. Unrated project loans, too, typically afford full recovery, which we define as 91% to 100%, according to data collected by S&P Capital IQ. Either way, it's clear that post-default recoveries for project finance are considerably stronger than the average of about 45% among corporate borrowers.

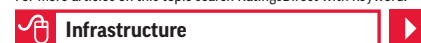
Understanding The Risks And Seizing The Opportunities

All told, institutional investors look set to capitalize on what Standard & Poor's sees as an unprecedented opportunity to invest in infrastructure around the world. A steady flow of projects and a better grasp of the risks associated with infrastructure lending are helping to draw pension funds, insurers, and other nontraditional financiers to investments that boast higher yields, as well as comparatively low default rates and better recoveries, than those similarly rated corporate debt, while also offering the asset liability management that these investors need.

While only time will tell whether institutions' financing of projects reaches critical mass and completely offsets public-funding shortfalls, all signs point to investors' increased allocations potentially filling a significant portion of the hole that governments leave, with other traditional sources of capital being called upon to provide the rest. **CW**

Writer: Joe Maguire

For more articles on this topic search RatingsDirect with keyword:



Analytical Contacts:

Michael Wilkins
London (44) 20-7176-3528
Steven J. Dreyer
Washington, D.C. (1) 202-383-2487
Moritz Kraemer
Frankfurt (49) 69-3399-9249
Marco Sindaco
London (44) 20-7176-7095
Devi Aurora
New York (1) 212-438-3055





Cracks Appear In Advanced Economies' Government Infrastructure Spending As Public Finances Weaken

Overview

- Sovereign states play a key role in providing infrastructure to promote future economic growth.
- However, public investment as a share of GDP in advanced economies has contracted since the onset of the global financial crisis.
- We believe this retrenchment will persist, particularly as aging populations add to pressures on public finances.
- We therefore expect that private sector involvement in providing infrastructure services will have to rise if high-quality infrastructure is to be secured in advanced economies.

Economists are in rare agreement that broad and high-quality physical infrastructure in an economy benefits growth, welfare, and economic inclusion. And because development and economic growth per capita are credit factors for sovereigns, strong infrastructure can also indirectly support sovereign ratings (*see chart 1*).

For centuries, the building of ports, canals, roads, and canalization has spurred economic development. Railroads and airports have opened up vast spaces for human economic use and benefit, connecting remote and underdeveloped regions into an ever more integrated world economy. These infrastructures contribute to the efficiency of private production of goods and services and therefore raise the productivity of private capital. At the same time, they contribute to the general public well-being. It is often impossible or prohibitively expensive to exclude additional users of infrastructure, and infrastructure networks also provide economies of scale. For example, a railroad can only unfold its full economic and social returns if it is part of a wider network of similar infrastructure. And excluding individuals

from urban roads or lighthouse services would be not only highly impractical but also undesirable.

Given the “public good” character of infrastructure services, private markets typically do not sustain an optimal level of these services: Enterprises seeking to maximize profits will not expand investments to the point where private returns fall below the cost of investment. The private cost-benefit analysis ignores the returns accruing to third parties, which are often extensive in the case of physical infrastructure projects. For this reason, ever since the ancient Romans built roads and aqueducts, it has fallen on government to provide infrastructure, funded by taxes on the general public. Since many infrastructure projects create natural monopolies with almost insurmountable barriers to entry, competitive market

mechanisms often cannot provide a sufficient endowment of infrastructure and equitable service pricing. A private highway system operator, for example, probably wouldn't have to worry about a competitor road network springing up, and hence would have a strong incentive to extract monopolistic tolls from users, leading to a socially inefficient underuse of the infrastructure. In recent decades, private involvement in infrastructure provision, for example via private-public partnerships, has risen considerably. In some areas, such as telecommunications, technological progress has made private provision of services viable. Nevertheless, the public sector has retained a dominant role in providing physical infrastructure.

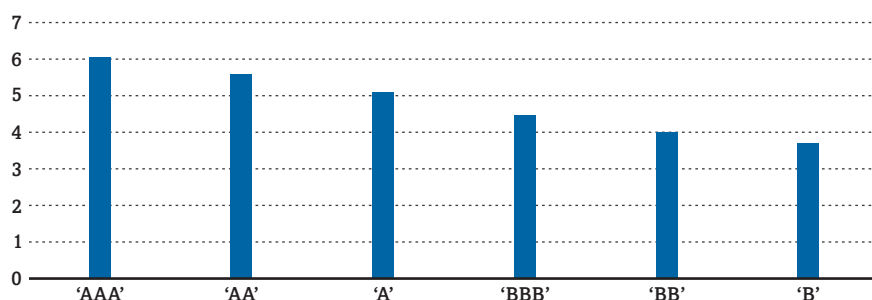
Internationally comparable data for public infrastructure spending are scarce. Even the definitions of national accounts data on general government gross fixed capital formation (GFCF) can differ internationally. For the sake of simplicity and the data available, we assume that the GFCF of general government (i.e., including all levels of government) is a reasonable proxy for public spending on physical infrastructure (*see chart 2*).

Using this definition, two findings immediately become apparent. First, general government GFCF as a share of GDP has hovered around 2% to 3% in most developed countries in recent decades—a level that is dwarfed by overall investment in the economy, which is typically close to 20% of GDP. However, given the positive external effects of infrastructure investments in improving economic and social outcomes, the role that general government GFCF plays in securing future growth is in our opinion much higher than the relatively modest figures would suggest. Second, general government GFCF spending has historically varied considerably among advanced economies. Typically, it has been higher in Japan, Canada, and Australia than in Europe and the U.S.

In Financial Crises, Infrastructure Spending Is Often The First Victim
Policymakers and economists broadly agree that fiscal consolidation measures

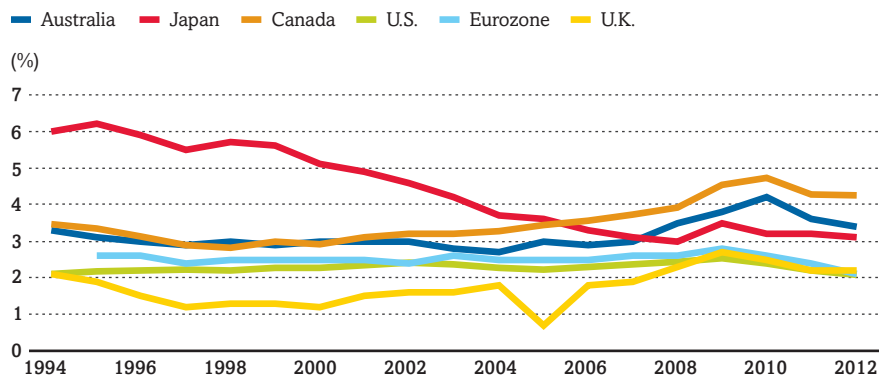
Chart 1 | Average Quality Of Overall Infrastructure

(1=extremely underdeveloped to 7=extensive and efficient by international standards)



Sources: Global Competitiveness Report 2012–2013 (Data Table 2.01) and Standard & Poor's (Ratings as of Jan. 10, 2014).
© Standard & Poor's 2014.

Chart 2 | General Government Gross Fixed Capital Formation (% Of GDP)



Sources: Australia Bureau of Statistics, European Commission, U.S. Bureau of Economic Analysis (excluding defense), Japan Cabinet Office, Statistics Canada.
© Standard & Poor's 2014.

should avoid jeopardizing sources of future growth. For example, the Organisation for Economic Co-operation and Development (OECD) advised member governments in 2009 that “while expenditure cuts are needed, fiscal retrenchment should preserve pro-growth programs. This includes productive outlays, such as on education, R&D, and infrastructure, which are expected to be growth-enhancing in the longer term” (see note 1). The International Monetary Fund (IMF) similarly concluded in 2013 that “protecting public investment is critical for medium-term growth” (see note 2).

Cutting or delaying public capital spending is generally a more politically attractive option than raising taxes or cutting recurrent spending and entitlements.

Yet, in spite of broad agreement in principle, in reality fiscal adjustment usually looks quite different. Cutting or delaying (sometimes indefinitely) public capital spending is generally a more politically attractive option than raising taxes or cutting recurrent spending and entitlements. Governments can make such cuts quickly and without contentious and cumbersome legislative changes, and can often justify them by the need to maintain public transfers in order to smooth consumption amid rising unemployment and often rising income inequality. Standard & Poor's Ratings Services has long considered investment spending to be a source of expenditure flexibility that governments can compress with discretion relatively quickly, if necessary (see “*The 2005 Fiscal Flexibility Index: Little Budgetary Leeway For Continental European Sovereigns*,” published May 19, 2005, on RatingsDirect). However, we believe that while curtailing investment can be a valuable buffer in the short term, sovereigns will then in most cases need to enact more structural fiscal consolidation measures, such as boosting permanent revenue or lowering recurrent outlays, to avoid undermining future sources of growth. This is especially true in situations

where the private sector is deleveraging in parallel, so compressing private investment at the same time as the state.

In recent years, the global financial crisis has led to an additional contraction in the relative share of public investment to GDP. Notably, the drop in the public investment ratio was steepest where the crisis struck hardest and where the need for fiscal consolidation was most intense. In Iceland, for example, which the financial crisis hit early, public investment fell to 1.8% of GDP in 2011 after having hovered around 4% during the decade leading up to the crisis (see note 3). Spain offers another case in

point: The public investment ratio averaged over 3.5% of GDP in the lead-up to the crisis and reached 4% of GDP in 2007 just before the Spanish economic boom ended, before falling to a mere 1.7% of GDP in 2012. The European Commission (EC) estimates that public investment in Spain will drop further to just over 1% of GDP in 2014 and 2015. According to EC data, in absolute terms this will constitute a drop to €13 billion in 2014, from €47 billion as recently as 2009 (see chart 3). This 72% drop from the 2009 peak would be the steepest among EU sovereigns. But the experience has been similar elsewhere, with declines of 70% in Ireland, 62% in Cyprus, 58% in Greece, and 54% in Portugal, despite easier access to EU structural funds supporting investments. Even in Italy, which never had to tap emergency funding during the crisis, the EC forecasts that general government gross capital spending will have fallen by 26% between the 2009 peak and 2014.

A temporary reduction in a nation's public spending on infrastructure may not be a serious impediment to longer-term growth, especially if the quality and quantity of existing infrastructure is generally satisfactory. This seems to be the

case in most of the advanced economies. Data from the World Economic Forum's Global Competitiveness Report suggest that the European countries generally rank particularly well and therefore can probably digest a public investment hiatus without lasting damage.

Some of the reduction in once-buoyant public investment in the European periphery may have abetted what turned out to be a massive misallocation of scarce resources. For example, the GFCF of Ireland's public sector amounted to 5% of GDP in 2007 and 2008, and Spain's was at 4.5% of GDP in 2009. Much of this spending is likely to have been on ancillary infrastructure investment facilitating what proved to be a housing bubble. Nevertheless, if the currently low public investment persists, it may lastingly weaken the economies' growth. Such a development would make fiscal consolidation all the more difficult, causing a vicious circle of economic stagnation and further retrenchment in growth-enhancing infrastructure spending as these governments attempt to curtail their budget deficits.

Public Infrastructure May Already Be Depreciating In Some Countries

Calculating depreciation of the capital stock of infrastructure is a complex endeavor. However, it appears likely that the net effect of declining GFCF to GDP in European periphery countries has been an erosion of the existing capital stock. Many believe the U.K. experienced such a depletion of infrastructure substance during much of the 1990s and 2000s, with the predictable result of eroding corporate competitiveness and citizens' well-being.

Estimates for Germany indicate that following the public investment boom in the 1990s in the wake of unification, the value of the stock of public real assets—mostly physical infrastructure—began to drop continuously after the turn of the millennium as the value of annual public investment fell short of estimated annual depreciation (see note 4). The U.S. also seems to be experiencing a relative depletion of infrastructure assets: While real GDP rose by 40% between 1997 and

2012 (in chained 2009 dollars), the real net stock of general government fixed assets increased by a much smaller 30%, according to the Bureau of Economic Analysis (*see note 5*).

In large parts of the Western world, the availability of infrastructure per unit of economic value added seems to be declining. Experience suggests that the erosion of the real value, partly as a result of delayed or inefficient maintenance, only becomes visible after many years of negligence, when it will have become more costly to rectify. The long lifespan of the benefits of infrastructure—which may at times be well beyond many policymakers' political careers—may create incentives for policymakers to underinvest in infrastructure and prioritize spending programs

with more immediately visible benefits for the electorate.

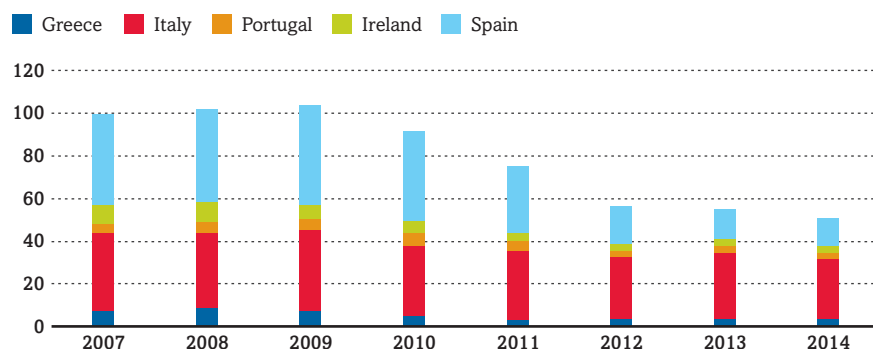
Prudent Budgeting When Times Are Good Can Protect Infrastructure Investment In Leaner Times

Australia and Canada are notable among advanced economies for having kept public fixed capital formation relatively high and stable throughout the past two decades. It has remained above the long-term average in these two countries since 1990, even during the financial crisis. This vividly illustrates that governments with prudent fiscal policies during economically good years can turn to stimulatory investment spending in a downturn. On the other hand, some governments have lost fiscal flexibility following years, or even decades, of spending above

their revenues. The resulting public debt burdens preclude countercyclical capital spending, which could further jeopardize capital market access.

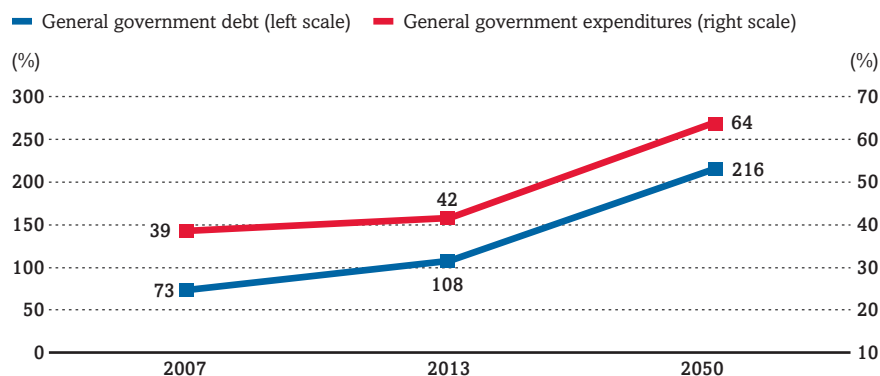
Japan's experience with vast investment-driven economic stimulus programs illustrates, however, that public works-driven fiscal stimulus by itself may be insufficient to lift an economy out of stagnation and into dynamic and self-sustained recovery. According to the IMF, "investment multipliers were higher than for public consumption, although they were relatively low and declining over time," especially for investment conducted by the central government, as compared to local authorities (*see note 6*). When sovereigns ramp up public investment quickly, the risk of inefficient allocation of public funds also rises. In some countries, pork-barrel politics could lead to a proliferation of the proverbial "bridges to nowhere," which may leave few economic legacies other than higher maintenance costs.

Chart 3 | General Government Gross Fixed Capital Formation In The Eurozone Crisis Countries (Bil. €)



Source: European Commission Directorate General for Economic and Financial Affairs (General Government Data, Part II, Table 52A, Autumn 2013).
© Standard & Poor's 2014.

Chart 4 | Advanced Economies Fiscal Indicators (% Of GDP)



Sources: IMF World Economic Outlook Database, October 2013 and Standard & Poor's (for 2050).
© Standard & Poor's 2014.

Public Infrastructure Provision May Not Recover Anytime Soon

Over the past few decades, public spending on infrastructure as a share of GDP has in most advanced economies been stagnant or falling. In a global economy, this may increasingly cut into a nation's competitiveness, economic growth, and prosperity. Trade and communication links are becoming ever more global, chipping away at the natural protection from foreign competition that producers in advanced economies may have enjoyed in the past due to their proximity to global centers of demand. High-quality infrastructure—physical as well as institutional—can be a critical line of defense in maintaining global competitiveness and sustaining growth in an ever more open world economy.

The deep cuts in public investment spending in countries at the center of the eurozone (European Economic and Monetary Union) crisis offer an example of how public sector infrastructure spending may fare in times of financial stress. But we believe it is not unusual for government capital

The longer-term outlook for infrastructure spending is even gloomier because aging populations will put additional pressure on public finances.

spending to bear more than its proportional share of cuts in times of deep and prolonged fiscal corrections.

This leads us to believe that further retrenchment in government infrastructure spending may lie ahead. Government balance sheets have suffered considerably over the past half-decade. The IMF estimates that the gross debt-to-GDP ratio of the advanced economies (as the IMF's *World Economic Outlook* defines them) reached 108% in 2013, from 73% in 2007 (see chart 4). Over the same period, general government expenditures have risen to 42% of GDP from 39%. These trends suggest that spending cuts will be a part of fiscal consolidation policies for many years to come.

The longer-term outlook for infrastructure spending is even gloomier because aging populations will put additional pressure on public finances. We estimate that, in the absence of corrective policies, the median net debt ratio of advanced economies will rise to 216% of GDP by 2050. By that time, the median general government expenditure ratio for the advanced economies will reach 64% of GDP (see *"Global Aging 2013: Rising To The Challenge,"* published March 20, 2013). These simulations are not actual forecasts by Standard & Poor's but estimates of the vast demographic challenge to the sustainability of public finances that lie ahead. We believe this challenge will prove difficult for many governments to address while protecting infrastructure at the same time.

With fiscal flexibility progressively running out for most advanced economies, private-sector involvement in the provision of infrastructure services is likely to rise, in our view. Sovereigns with a track record of strong institutions and governance will in our view be more likely to attract private investment and to regulate the sectors

appropriately. In turn, securing an adequate level and quality of physical infrastructure will likely support sovereign creditworthiness by supporting economic growth and competitiveness as well as the cohesiveness of civil society and social inclusion, all of which are factors in Standard & Poor's sovereign ratings methodology. In contrast, shortfalls in basic services and infrastructure do not only limit the economic and social development potential of a society, but also put pressure on public finances, all of which we consider negatively affect sovereign creditworthiness. **CW**

NOTES

1. OECD (2009): "Preparing Fiscal Consolidation" (<http://www.oecd.org/eco/public-finance/44829122.pdf>).
2. IMF (2013) "Debt Reduction, Fiscal Adjustment, and Growth in Credit-Constrained Economies," Working Paper WP/13/238.
3. Eurostat, Ausgaben des Staates nach Aufgabenbereich (COFOG), bruttoinvestitionen.
4. Institut für Weltwirtschaft (2013): Mittelfristprojektion für Deutschland im Frühjahr 2013 (Kasten 1).
5. Bureau of Economic Analysis (Table 7.2B. Chain-Type Quantity Indexes for Net Stock of Government Fixed Assets, Line 75: General government fixed assets).
6. "Public Investment as a Fiscal Stimulus: Evidence from Japan's Regional Spending During the 1990s," IMF WP/10/110.

For more articles on this topic search RatingsDirect with keyword:



Analytical Contact:

Moritz Kraemer
Frankfurt (49) 69-3399-9249



A man in a dark suit and blue tie is looking down at a desk with papers and glasses. The background is a light blue wall.

Underwriting The Recovery

Insurers' Role As Investors Expected To Be Preserved

Overview

- Insurers are the key investor group in Europe, providing just over half of the region's total institutional investment.
- We consider preserving their historical role as a facilitator of growth through investment to be critical for Europe's economic development.
- Although the implementation date for the EU's Solvency II directive has finally been agreed, many of the details remain uncertain.
- We expect policymakers to remain pragmatic in preserving insurers' role, but insurers' investment aspirations will likely be limited at least until the Solvency II details are known.

Insurers provide just over half of total institutional investment in Europe.

Both as providers of protection and as the region's key investor group, they perform an important role in Europe's economic recovery. However, regulatory uncertainty threatens insurers' investment behavior, and may hinder their historical ability to facilitate growth. Policymakers currently have two objectives that sometimes conflict:

- To preserve and enhance insurers' role as long-term investors, and
- To deliver a modernized insurance regulatory regime.

We expect that policymakers will eventually make pragmatic decisions that achieve both objectives, but the industry is still waiting for many of the details to emerge.

Insurers' Dual Role In Supporting Economic Development Shouldn't Be Taken For Granted

Insurers have always played a key role in economic development. Their offering includes:

- Protection of individuals' and businesses' assets (for example, property, motor vehicles, ships, aircraft, and cargo);

- Protection of the livelihoods of individuals and their dependents against uncertain events (death, ill health, and unemployment); and
- Savings and investment products (including pensions and annuities).

In our view, insurers' protection role operates in tandem with their role as investor, and is as important. Insurance protection products mitigate the risks that individuals and businesses face and the resulting confidence underpins economic activity. At the same time, insurers' onward investment of the premiums received for their savings and investment products benefits the economy more directly.

Insurers Act As A Shock Absorber In Financial Markets

In the absence of insurers as key investors, in our opinion, financial market volatility would be significantly greater. Insurers typically operate to a long-term investment horizon and hold investments to maturity. European insurers received about €1,100 billion in premiums in 2012 and expended €959 billion in claims and policy benefits (*source*: Insurance Europe, the European industry's trade association).

Insurers invest premiums received until they are needed to pay claims; for some products, this may be decades after receipt. Insurers are therefore major investors: at the end of 2012, Europe's insurers held investments worth €8,400 billion, equivalent to 58% of the EU's GDP. According to a report from Insurance Europe and Oliver Wyman, a consulting firm, in June 2013, this amounted to about 51% of Europe's institutional assets under management, while pension funds comprised 24%, retail mutual funds 11%, and high-net-worth individuals 8%.

Government and corporate bonds and equities dominate insurers' investment portfolios (see chart 1). Although loans, properties, and bank deposits are material asset classes, bonds are the natural asset class of insurers. As far as possible, insurers seek to match bond durations to their liabilities to policyholders, which may extend up to 60 years. Banks are central to economic growth prospects and they issue most of the corporate bonds in

Europe; this represents a concentration risk for the insurance industry. Insurers tend to share much of the equity investment risk with policyholders through unit-linked or discretionary participation life insurance contracts.

The illiquidity of insurers' liabilities affects their investment behavior, lengthening their investment horizon and enabling them to hold investments to maturity. Because policyholders generally cannot demand immediate payment of claims, insurers are not typically forced to sell long-term investments. Instead, claims are typically settled from cash flow or highly liquid shorter-term investments. The insurance sector as a whole therefore acts as a shock absorber for the financial system, reducing volatility. Most insurers have weathered the financial crisis that started in 2008 well, causing the Financial Stability Board (FSB) to conclude that the traditional insurance model is not systemically risky.

Lower economic activity affects insurer investment and regulatory uncertainty threatens renewed growth

With Europe's economic growth in its fragile state, insurers have received lower investable premiums. Life insurance premiums—the main source of longer-term investment funds—peaked in 2007 at €748 billion according to Insurance Europe. Since then, they have fluctuated between €620 billion and €660 billion (see chart 2). The reduction in premium stems from low interest rates, higher unemployment, lower disposable incomes, and lower housing market activity.

Europe's insurers stand ready to underwrite economic recovery, and policymakers appear keen that they should do so. However, the responses of those same policymakers in reaction to the last financial crisis could alter insurers' future investment behavior.

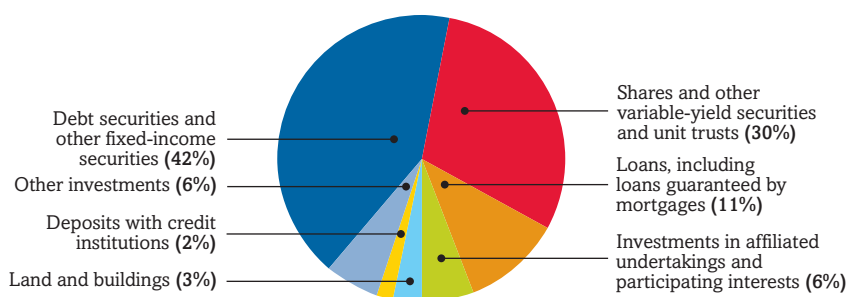
The 15-Year Wait For Solvency II Has Tested Insurers' Patience

We agree with policymakers that Europe's current insurance solvency regime is not fit for purpose (see "Q&A On The Future Of Solvency II: Pragmatism Is Likely To Prevail," published May 15, 2013, on RatingsDirect). For example, Solvency I imposes hardly any investment-related capital requirements. No differential regulatory capital requirements currently apply, whether an insurer invests in low-risk government bonds and bank deposits or high-risk private equity and hedge funds. Policymakers' response, the Solvency II directive, is needed urgently, in our view, but has been under development for a decade and a half. It rightly, we believe, proposes to introduce the comprehensive enterprise-wide risk management incentives that are almost completely lacking in the current regime.

A "market consistent" view of insurers' assets and liabilities underpins Solvency II. This includes the discounting of liabilities at a risk-free rate based on interbank swap rates and basing bond capital requirements on spread volatility, rather than pure credit risk.

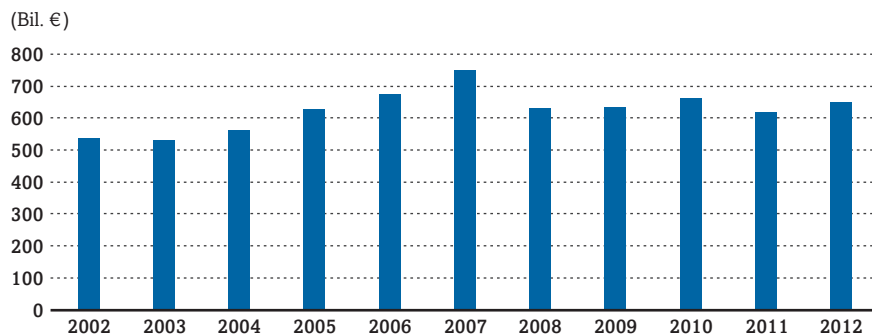
Sovereign bond yields and values diverged markedly around Europe. The south (notably Greece, Cyprus, Portugal,

Chart 1 | European Insurers' Investment Portfolio (2011)



Source: Insurance Europe—Key Facts 2013.
© Standard & Poor's 2014.

Chart 2 | Life Insurance Premiums



Sources: Insurance Europe—Key Facts 2013 and The European Life Insurance Market In 2011.
© Standard & Poor's 2014.

Spain, and Italy) and Ireland faced unprecedentedly high rates while at the same time the north (in particular Germany) continues to face unprecedentedly low rates. Without modification, such fluctuations would cause insurer solvency ratios to be volatile. In turn, this may affect insurers' ability and willingness to invest for the long term. Much of the effort expended by Europe's policymakers and regulators in trying to deliver Solvency II in the past few years has focused on modifications that preserve insurers' investment flexibility, while retaining the integrity of the framework that incentivizes good asset-liability matching.

Insurers remain concerned that investing in longer-term and lower credit quality bonds (other than government bonds, which are deemed risk-free) and many of the newer asset classes such as private equity, hedge funds, structured finance, and infrastructure loans carry excessive capital requirements relative to the risks these investments pose and the reward they offer (see *"Europe's Insurers Welcome EIOPA's Assessment On Long-Term Guarantees, But Solvency II Uncertainty Remains,"* published July 31, 2013).

2016 implementation promises resolution

Policymakers recently agreed on a package of modifications that we regard as highly pragmatic, allowing Solvency II to come into force on Jan. 1, 2016. The modifications include constraints on the impact of the volatility of the bond yields and a very blunt 16-year transition period for the valuation of life insurance liabilities. The insurance industry broadly welcomed the package.

However, delivering that package requires the industry's regulator to provide detailed guidance under the general principles of the Solvency II legislation. The European Insurance and Occupational Pensions Authority (EIOPA) is under considerable pressure from the industry and policymakers to modify some of the guidance it currently has in mind.

EIOPA's guidance on newer longer-term investment classes remains under the microscope

The European Commission publicly wrote to EIOPA in September 2012 asking it to

examine "whether the calibration and design of capital requirements for investments in certain assets under the envisaged Solvency II regime necessitates any adjustment or reduction under the current economic conditions, without jeopardizing the prudential nature of the regime." It mentioned infrastructure financing, small to midsize enterprise financing, socially responsible investments, and debt securitization. EIOPA has since defended its approach to most of these asset classes.

However, in December 2013, it announced some modifications to its capital requirements for debt securitizations, suggesting a more granular approach that has been welcomed. EIOPA acknowledged that securitizations of European assets typically performed well through the financial crisis.

EIOPA does not believe that modifications should be made for infrastructure investments, given that it lacks "comprehensive, reliable and publicly available performance data" upon which to base lower requirements. Despite the uncertainties that remain, some insurers have announced significant commitments to infrastructure investment. For example, six U.K. insurers announced a collective commitment of £25 billion over five years, and the AXA Group has announced a €10 billion commitment over a similar period. Allianz and Munich Re have also announced material commitments. Oliver Wyman and Insurance Europe estimated the current level of infrastructure investment at €12 billion, based on a 2013 survey of 13 insurers, a tiny proportion of their investments under management.

Insurers May Curb Their Lending Activity To Reduce Their Systemic Importance

Bank lending capacity in Europe has diminished sharply, leaving a funding gap. We have observed many commercial borrowers that have traditionally borrowed from banks switching to new sources of capital. The larger of these borrowers have tapped the capital markets, where insurers are active participants.

We also see insurers helping to fill the funding gap by providing loans, although their combined lending activity is immaterial compared with European banks' €46

trillion in lending assets. Approximately €800 billion of European insurers' investments were in loans at the end of 2011. Most of these loans were retail mortgages, but some insurers offer direct loans or invest via investment funds.

We consider that the FSB's new global systemically important insurer (G-SII) designation could encourage leading insurers to curb their future lending activities. The FSB designated five of Europe's larger insurers (Allianz, Aviva, AXA, Generali, and Prudential) as G-SIIs in July 2013 (see *"Possible Ratings Implications For Global Systemically Important Insurers,"* published July 19, 2013, for further information on the merits and effect of this designation). The designation may also give insurers an incentive to limit their third-party asset management activities.

Remaining Uncertainty In Solvency II Implementation Will Limit Insurers' Investment Aspirations

Given the fragile economic recovery, we anticipate that EU policymakers will remain pragmatic in their oversight of Solvency II developments. The legislative outcome for the industry seems relatively benign for insurers' future solvency measures and goes some significant way toward enabling them to facilitate economic recovery through their investment activities. The focus has now moved to EIOPA and its final detailed implementation guidance. We expect policymakers to put pressure on EIOPA to modify the solvency regime further to protect or even enhance insurers' role in economic development. However, EIOPA must maintain the integrity of the planned risk-based regime. Until we see the final guidance, we expect insurers to limit their investment aspirations as a hedge against uncertainty. **CW**

For more articles on this topic search RatingsDirect with keyword:



Analytical Contacts:

Rob C. Jones
London (44) 20-7176-7041

Miroslav Petkov
London (44) 20-7176-7043





Top 10 Global Investor Questions For 2014

Public-Private Partnerships

In the years following the onset of the Great Recession in 2007, government funding for infrastructure and new projects was in short supply globally, and long-term sources of capital stagnated. In 2013, however, the situation turned around and the public-private partnership (P3) model re-emerged as a key tool for funding infrastructure projects and as another option to traditional project delivery methods. The P3 sector grew in some developing markets for this type of funding such as the U.S., and came back to life in more established markets, such as the U.K. and Canada. As the need to invest in infrastructure grows worldwide, markets and governments are developing new approaches to fund highly essential projects. Standard & Poor's Ratings Services believes that government initiatives, such as the Canadian government's C\$1.25 billion five-year contribution to the Canadian P3 Fund and the U.K.'s Private Finance 2 (PF2) program, will continue to spur new infrastructure investments using the P3 model in 2014.

1 What are the long-term investment needs and financing sources in different regions?

Large infrastructure deficits and pressure on public sector finances continue to drive long-term investment in the P3 sector around the world. In the U.S., interest in the public-private partnerships approach is growing, and several more states are developing robust P3 programs. We expect states with established P3 programs—such as Florida, Indiana, and Texas—to keep on using P3 project funding methods and more states—such as Maryland, North Carolina, and Pennsylvania—to develop new P3-funding programs. U.S. projects span several sectors with a focus on transportation, including roads and managed lanes, transit projects, and the redevelopment of the Central Terminal at LaGuardia Airport in New York. A few social infrastructure projects such as the Long Beach Civic Center in California are also in the works.

sectors, and some large-scale energy projects in continental Europe and the Middle East gulf states.

In Canada, the health care sector remains a prolific source of new P3-funded projects. However, governments have completed most of the planned green field hospitals, or “hospitals on new sites,” using the P3 funding model and are now focusing on expanding existing facilities. Traditionally, governments have limited the private sector’s involvement to just the construction phase of expansion projects. Consequently, we believe the P3 investment plans will ultimately move from health care to new sectors facing large capital deficiencies—namely transit, power, and water. To help facilitate this transition, we expect governments to adapt their existing standardized project contracts to suit these new asset types, thereby capitalizing on domestic lenders’ familiarity with the availability-based P3 model. Under this model, the project operates under a contract where the project’s revenue

project, irrespective of usage. The relatively small market size will limit the number of projects over the next 12 months, especially if the government mandates some very large ones, such as the East West tunnel in Melbourne or the West Connex project in Sydney. Another potential constraint may be the need for some projects to receive capital subsidies from the state and federal governments—again, the amount of subsidies available might slow down some projects coming to markets.

Long-term investment in the Latin American P3 sector will depend on infrastructure needs. Nevertheless, the use of P3s to channel investments across the region is still relatively marginal and uneven. However, Chile and Mexico are probably ahead of the pack. For 2014, we expect countries like Uruguay and Peru to start using P3 mechanisms more often. For the region as a whole, we don’t expect major changes in 2014 from previous years’ trends and P3s are likely to remain a relatively minor method of financing major projects.

Globally, the market for funding long-term investments is currently in transition. According to respondents to a survey by London-based lawyers Berwin Leighton Paisner (BLP), undertaken in conjunction with Preqin, an infrastructure data and research firm, public bond issuance for projects is likely to represent 10% of future global funding requirements over the next 12 months, with private placement bonds accounting for another 14%, and infrastructure debt funds an additional 25%. While commercial banks will retain a significant market share, we believe long-dated infrastructure-related debt issued over the next 12 months will more likely come from alternative or non-bank sources.

In the U.S., large-scale transportation infrastructure projects have other funding sources in addition to the capital and bank loan markets; the U.S. Department of Transportation’s Transportation Finance and Innovation Act (TIFIA) program to date provided loans for 33% of the capital costs. Under the current U.S.

Globally, the market for funding long-term investments is currently in transition.

In Europe, the Middle East, and Africa (EMEA), we expect the trend established in 2013 to continue with increased issuance in both the social and economic infrastructure sectors. Social infrastructure is typically related to health, social housing, and education. Economic infrastructure is typically related to energy, utilities, transportation, and communications. For 2014, we expect each sector to continue growing with strong emphasis on infrastructure network transactions (energy, transportation, and communications) because these are priorities for the European Union’s and European Investment Bank’s project bond initiative. We expect ongoing issuance in social infrastructure, especially in the U.K. housing and education

is earned based on its achievement of key performance indicators or other contractual specifications. Still, we believe projects in these new sectors could entail potentially complex civil engineering tasks and other issues such as unknown or irreplaceable equipment suppliers, limiting their ability to reach the Canadian bond market’s preferred ‘A’ category ratings absent material risk protections and credit enhancements.

Australia’s key priorities are primarily in the transportation sector (road and rail), but a key challenge is that investors are shying away from the user-pay model and its inherent demand risk, instead favoring projects where payment is contingent on the availability of the

transportation MAP-21 program, TIFIA received authority to lend \$1.75 billion through September 2014. TIFIA letters of interest from eligible projects totaled more than \$42 billion through August 2013. We believe the flexible repayment terms, among other provisions, provide the project the ability to complete the critical ramp-up period before full repayment of the TIFIA loan begins.

2 *What is the outlook for the P3 sector in 2014?*

Overall, we expect projects we rate to be stable in 2014. Of the 266 global projects we publicly rate, just about half are P3 projects. Of the P3 projects, 86% have stable outlooks. The majority of our projects have fully contracted cash flows and counterparties with high ratings. Although this insulates the projects from economic conditions, they retain operating risks. With about half our projects still in construction in the U.S. and Canada, we expect potential rating actions to predominately be a function of ratings changes on construction contractors. However, a weaker economy could hurt volume-based projects—those that rely on fees based on usage or consumption projects such as toll roads and airports, thus diminishing volume, or the number of fees and pricing flexibility. The impact on start-up projects may be more severe, resulting in negative rating or outlook revisions while stabilized projects may fare better.

Our default and recovery statistics indicate that the creditworthiness of infrastructure projects is strong and we don't expect this to change. Since the first default on a project we rate, in 1998, the annual default rate for all project finance debt we rate has averaged 1.5% (see *"Project Finance Default And Recovery: Shale Gas Fuels Rise In U.S. Defaults," published Aug. 9, 2013, on RatingsDirect*). This is slightly below the 1.8% default rate for corporate issuers for the same period.

Projects are on average no more risky than corporate entities at compa-

table rating levels. In 2007, the annual default rate for global project finance transactions we rate was about 0.50%, and in 2009 it was 0.75%. While many corporate borrowers defaulted during the height of the global financial crisis of 2008 and 2009, project finance transactions remained resilient. This is likely due to various contractual protections that provide projects with stable revenues, such as off-take contract and concession agreements.

3 *What are the most significant macroeconomic and policy developments that might influence the P3 sector in 2014?*

In 2013, a number of policy developments worldwide have addressed large infrastructure needs and the funding gaps in government support, and we expect these to have an impact in 2014.

The U.S. government will address several key legislative issues regarding infrastructure funding in 2014. The current federal transportation program, MAP-21, expires in September 2014. The program can't be extended at current levels without identifying a new ongoing funding source because the current 18.5 cent per gallon gas tax doesn't fully cover the annual transit and road expenses. Legislators will need to address the TIFIA program's future lending authority in the successor bill to MAP-21. We are also following two bills related to infrastructure funding, which call for an independent agency or fund to originate loans leveraged with other governmental funds and private investment for infrastructure projects. The Building and Renewing Infrastructure for Development and Growth in Employment (BRIDGE) Act would create an infrastructure financing authority to provide federal loans and guarantees alongside private investment and The Partnership to Build America Act would be capitalized with repatriated profits and provide loans and guarantees for state and local government investment.

The U.K. is now implementing the Government Guarantee Scheme and the

Treasury's proposed PF2 initiative for transactions in procurement. We understand that the programs will provide a number of unconditional and irrevocable financial guarantees to borrower payment obligations in favor of lenders or investors in certain U.K. projects. Outside the U.K., the main impetus behind capital market project finance issuance is the European Investment Bank's (EIB) Project Bond Credit Enhancement (PBCE) program. Under the program, the EIB will provide subordinated debt instruments—either a loan or a letter of credit—to enhance the credit quality of senior debt project finance issuance to make it more attractive to institutional investors.

The most significant policy development for Canadian projects in 2014 is the government's decision earlier this year to inject C\$1.25 billion over five years into its P3 Canada Fund. Through the fund, the government will deliver grants to governments undertaking P3s, especially those less familiar with the P3 model. We expect this to help broaden and increase Canada's P3 market growth potential.

Most of the largest Latin American countries have announced their intentions to introduce large infrastructure programs, particularly within the transportation subsector (roads, ports, and massive transport are the most relevant asset classes). Despite the benefits of those programs, we believe that it's unclear how soon they will become effective. The main reasons for potential delays in their implementation are a combination of lack of political consensus, regulatory issues, and market conditions.

4 *How does the long-term infrastructure market look, and how will this affect P3 investment?*

We believe the outlook for infrastructure-related long-term debt is positive. But continuing to shape our outlook will be the ongoing development of the project finance capital markets and, particularly, how project financial structures are able to account for certain risks

while meeting investor demands for transparency and predictability.

The competitive long-term global project finance market consists of a handful of banks and a varied assortment of capital market participants, including insurance companies, infrastructure debt managers, and investors in public bonds. Of these competing businesses, institutional investors are showing the most increased appetite for infrastructure investments. A recent survey by the infrastructure data and research firm Preqin revealed that 58% of investors were planning to raise their funding allocation for infrastructure over the next five years. With plans to raise nearly €74 billion of institutional funds globally in 2013—€21 billion of which is already secured—we believe the long-term infrastructure investment market is in good shape. Naturally, the success of the market will also rely on yields and prices that are attractive for both lenders and borrowers. While long-term yields for government debt are at historical lows, and credit spreads have tightened throughout the capital markets in general, all-in pricing for project bonds (i.e., the reference government bond yield added to the credit spread associated with the project itself) is at an all-time low, which is good for borrowers.

5 *Which Latin American domestic markets will see further financing activity in 2014 for transportation infrastructure projects?*

Latin America's domestic capital markets have been increasingly active in financing infrastructure the past few years and we expect this trend to continue strengthening, particularly in Brazil, Colombia, Mexico, and Peru in 2014. The transportation sector is the largest Latin American P3 sector we rate and the one sector in which we expect to see significant investments the next few years. We expect countries like Brazil and Mexico to rely almost entirely on domestic markets while we expect financing for trans-

portation infrastructure in countries like Chile, Colombia, Panama, Peru, and Uruguay to come from a mix of domestic and cross-border investors. Two factors will primarily influence the different composition of this financing mix: the domestic capital market's depth and development and the project's size. Based on those variables, we expect to see more domestic financing in Chile and Peru while countries like Uruguay and Panama would likely use more cross-border financing. In addition, we expect domestic investors to be more active in financing projects that have not completed construction, although construction risk continues to be a main concern of investors in the region, and we don't expect to see a major shift in investor sentiment during 2014.

6 *What role does Standard & Poor's expect the public bond market to play in financing Canada's upcoming light-rail transit projects?*

We see a place for the public bond market in financing Canada's light-rail transit (LRT) projects, which include the region of Waterloo's proposed rapid transit project as well as the city of Toronto's proposed Eglinton Crosstown and Finch LRT projects. However, the sponsor's decision to use private-placement financing on Ottawa's Confederation Line LRT, which closed in 2013, suggests a gap may exist between the bond market's risk tolerance and Canadian LRT's risk profiles. Consequently, we believe bond investors wishing to participate in upcoming LRT P3s might need to recalibrate their risk tolerances and educate themselves about LRT P3 investment risks, which differ markedly from those in the country's health care P3s. At the same time, we believe government off-takers and sponsors may need to develop stronger risk mitigants to help broaden LRT's appeal.

Late last year, Infrastructure Ontario issued a request for proposals for the Eglinton Crosstown project. We understand Infrastructure Ontario intends to

procure two of the more difficult construction elements outside the project scope; namely the train deliveries and tunneling. This would differ from the Confederation Line LRT, in which the trains and tunneling were in scope. In our view, these types of risk mitigants should help reduce project risk and attract bond investors, fostering more competitive financings in the process.

7 What is Standard & Poor's outlook for project bonds in EMEA?

With the demise of most monoline insurers (which are global companies based in the U.S.), the market has struggled to find a support structure that meets both equity investors' rate-of-return requirements (e.g., by retaining similar total leverage to a monoline-wrapped deal, a transaction that benefits from a financial guarantee from a monoline bond insurer) and investor demand for higher-rated bonds. Nevertheless, various initiatives across Europe have aimed to increase the appetite for infrastructure investments.

Outside the U.K., the main impetus behind capital market project finance issuance is the EIB's PBCE program. At the beginning of August, we assigned a rating to the first project bond benefiting from the program. In the Watercraft Capital project (also known as Project Castor), the PBCE provides €200 million of standby liquidity at issuance (covering about 14% of the senior bond). Support will decrease as the bond amortizes, covering a maximum amount of 20% of the outstanding bond. Watercraft Capital SA can use this facility to support the project's credit quality during stressful times. Once used, the outstanding PBCE amount will rank junior to the rated bonds. In our view, this instrument considerably reduces the likelihood of default under most realistic stress scenarios, including moderately adverse regulatory changes.

In the U.K., the Government Guarantee Scheme and the Treasury's proposed PF2 initiative are now being implemented for transactions in procurement.

In our opinion, the current scheme, to a large extent, resembles a monoline insurer's financial guarantee and should help increase capital market issuance of project finance debt. However, there were already a number of successful unguaranteed project bond issues in 2013.

In 2014, we expect EMEA project bond issuance to continue following the 2013 pick-up, thanks to the support of a number of alternative financing structures designed to assist projects in achieving strong investment-grade ratings.

For instance, we assigned ratings to several projects in 2013 that opened up new areas of the capital markets:

- **ULivingAtHertfordshire**, a student-accommodation project, is the first unenhanced project bond with construction risk that has closed in the U.K. for more than a decade.
- **GRANVIA a.s.**, an availability-based road project, is the first transaction we've rated in the Republic of Slovakia. We assigned a 'BBB+' rating with a stable outlook to the

Notably, this is the first project rating for a government-related entity (*see "Examining The Factors Behind Ruwais Power Co.'s Preliminary Issue Ratings," published June 26, 2013*).

- **Watercraft Capital S.A.** was the first project bond benefiting from the EIB's PBCE program.

8 Does Standard & Poor's expect a renewed interest in P3 projects in Australia funded in the capital markets following Aquasure Finance's late-2013 refinancing?

In our experience, sponsors of P3 projects in Australia view capital markets as the natural place to fund their debt due to the potential for longer tenor than those offered in the bank market. Constraints to date have mainly resulted from capital market investors being unable or unwilling to take construction risks, a lack of interest in projects with untested volume risk, and very competitive pricing in the bank market, especially as bond tenors were somewhat constrained.

Outside the U.K., the main impetus behind capital market project finance issuance is the EIB's PBCE program.

bonds. GRAVANIA used the proceeds to refinance bank funding for construction costs.

- **Sustainable Communities for Leeds (Finance) PLC** and **S4B (Issuer) PLC** signalled the return of monoline-wrapped deals, and both represented the first social housing projects with construction risk financed through the capital markets. Holyrood Student Accommodation PLC, also monoline-wrapped, showed that Leeds and S4B weren't just one-offs.
- **Ruwais Power Co. PJSC (Schweihat2)** brought the Middle East project bond market back to life with an \$800 million transaction we rated A-/Stable.

Aquasure Finance, the financing arm of the Melbourne Desalination P3 project in the Australian State of Victoria, successfully completed in late 2013 the refinancing of its A\$3.75 billion of debt with a combination of bank funding and capital market issues. Unlike smaller projects that may have single-tranche financing, Aquasure has the ability to diversify its debt funding (by source and tenor) while ensuring that each individual debt instrument is sufficiently large to maintain liquidity in the secondary market. Also beneficial to the project's financing strategy is the fact that construction was completed in 2012 and the project has lim-

ited exposure to the actual volume of water being treated.

In our view, a P3 project's size and predictability of the operations limits the number of projects likely to turn to capital markets. In other words, we believe investors will continue to have a more favorable view of a P3 project post construction when operations are up and running. However, because we

We expect to see more availability road, managed lane, and transit projects, as well as an airport terminal project at LaGuardia Airport. It will be structured as a volume risk project, similar to the JFK IAT LLC project (BBB-/Stable), which is an airport terminal project that gets support from terminal revenues from landing and users fees to pay project obligations.

We believe investors will continue to have a more favorable view of a P3 project post construction...

see a growing number of companies issuing bonds with maturities of up to seven years when bank loan margins are less competitive, we believe sponsors favoring long-term mitigation of refinancing risk to the detriment of more competitive pricing of shorter-dated debt could successfully access capital markets, as demonstrated by Aquasure Finance.

9 What is Standard & Poor's outlook for U.S. P3 bonds?

The number of infrastructure P3s in the U.S. increased in 2013, and we assigned ratings to several projects, including:

- **WVB East End Partners LLC and NYNJ Link Borrower LLC.** Each will build, operate, and maintain bridge projects and receive availability payments under long-term concessions from the Port Authority of New York and New Jersey.
- **Autopistas Metropolitanas de Puerto Rico LLC (Autopistas) and NTE Mobility Partners Segment 3 LLC (NTE Segment 3).** Both are volume-based toll road projects. Autopistas operates two roads in Puerto Rico and NTE Segment 3 is a managed lane in the Dallas, Texas, area currently under construction.

For 2014, we expect an increase in U.S. P3s similar to the increase in 2013.

The majority of the existing U.S. P3 projects we rate are under construction and are a mix of projects exposed to volume and market risk and availability projects. Availability projects, once operational, are primarily exposed to counterparty and operating risk. While the projects with market risk will be hurt by local economic trends, we believe any rating or outlook revisions would more likely be triggered by changes during construction, such as major unfunded construction costs or poor performing contractors. Because there is no history of stable P3 projects in the U.S., we will watch as newly opened projects, such as the Long Beach Courthouse, 495 Express Lanes managed-lane project, and the LBJ Express managed-lanes project, progress during the ramp-up period.

10 How does Standard & Poor's plan to finalize and apply its project finance criteria?

P3 transactions are assigned credit ratings using our project finance criteria. On Nov. 15, 2013, we published request for comment (RFC) articles about the major components of the proposed revised ratings framework. The comment period is open until Feb. 7, 2014. During this period, we plan to interact with market

participants globally through roundtables, teleconferences, and one-on-one meetings. We will use these sessions to increase participants' awareness and understanding of the proposed criteria changes and to fully understand the response to the RFCs. After the request for comment period ends, we will publish a report that summarizes comments from our outreach and outlines the areas that received the most feedback. We plan to evaluate the feedback and incorporate it in subsequent criteria revisions where appropriate.

We intend to publish our revised criteria for determining issue credit ratings on project finance issuers in 2014 after the comment period ends. The revised criteria will provide market constituents with greater insight into the ratings process and enhance the comparability of our ratings through a clear, comprehensive, and globally consistent criteria framework, while maintaining our analytical judgment of construction risk in project finance transactions (see "Project Finance Construction Methodology," published Nov. 15, 2013).

The new criteria will be effective on publication. Until then, we will use the existing criteria and assign ratings accordingly. Once we publish the new criteria, they will govern the issue credit ratings within the scope of the criteria, or the "in-scope ratings." We plan to substantially complete our review of the in-scope ratings within a few weeks after the publication of the criteria. **CW**

For more articles on this topic search RatingsDirect with keyword:

 **Public-Private Partnerships** 

Analytical Contacts:

Jodi E. Hecht
New York (1) 212-438-2019

Michela Bariletti
London (44) 20-7176-3804

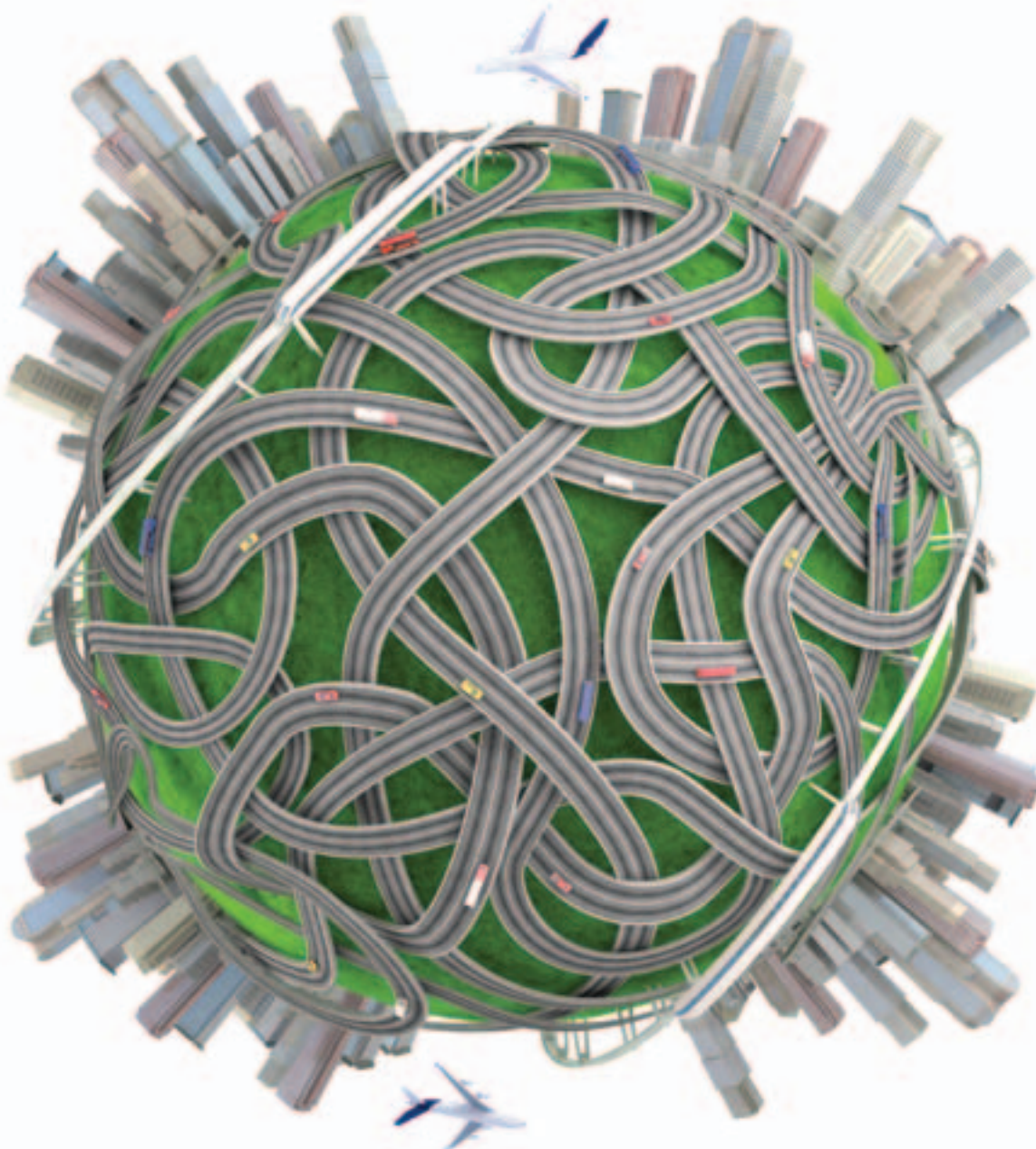
Thomas Jacquot
Sydney (61) 2-9255-9872

Paul Judson, CFA
Toronto (1) 416-507-2523

Pablo F. Lutereau
Buenos Aires (54) 114-891-2125

Jatinder Mall
San Francisco (1) 415-371-5071

Anne C. Selting
San Francisco (1) 415-371-5009



Top 10 Global Investor Questions For 2014

Transportation Infrastructure Sector

Prospects for the transportation infrastructure sector globally in 2014 are now largely stable, in our view, because in 2014 we expect the European economy to slowly improve and growth in the Asia-Pacific and Latin America regions to stay relatively stable. Standard & Poor's Ratings Services nevertheless believes country-specific deviations from these regional trends could affect the credit quality of individual issuers because domestic economic and political climates strongly influence the sector. Some countries are more exposed to volatile commodity volumes and prices than others, and government priorities differ regarding infrastructure investment and privatization. In this article, we provide insight into the impact we think these diverging trends will have on the sector in 2014.

1 What is the credit outlook for transportation infrastructure companies for 2014?

We consider it largely stable. The outlook distribution among the 81 transportation infrastructure companies we currently rate globally under our corporate methodology reflects this: 60 have stable outlooks, 19 have negative outlooks, while two have positive outlooks. About one-half of these companies are located in Europe, the Middle East, and Africa (EMEA), while the remainders are split about 60:40 between Asia-Pacific and Latin America. Only one company is in North America, although we assess some transportation infrastructure entities in this region, as in the others, under our public finance or project finance criteria.

The economies of the countries and regions in which they operate greatly influence the operational and financial performance of transportation infrastructure companies. Our base-case rating assumptions incorporate our macroeconomic forecasts for these countries and regions. Overall, we expect a moderate pick-up in GDP growth in 2014—although this will vary widely across regions and countries, as follows:

- Although we forecast that the eurozone (European Economic and Monetary Union) will come out of recession in 2014, we expect a

recovery to be weak and fragile. We forecast real GDP growth of 0.9% in 2014, compared with a 0.6% contraction in 2013. Among eurozone countries our forecasts vary, from just 0.2% GDP growth in the Netherlands to 1.8% in Germany.

- We forecast somewhat stronger growth for Eastern Europe, the Middle East, and Africa (EEMEA) than for Western Europe. We nevertheless consider that the economic recovery in a large number of countries in this region has remained shallow. We forecast real GDP growth of 1.5% in Ukraine, 2.2% in Russia, and 3.6% in Turkey.
- For Latin America, we anticipate that economic growth will increase to 2.9% real GDP growth in 2014 from 2.4% in 2013.
- In the Asia-Pacific region, we anticipate that growth will remain relatively stable, although trends will also vary between countries. We forecast real GDP growth will be about 5.4% for the region in 2014, compared with 5.3% in 2013. This incorporates a 7.4% GDP growth forecast for China (compared with about 9% on average between 2000 and 2011), 2.6% for Australia, and 1.4% for Japan.

(For further details, see “Credit Conditions: Europe Sees A Slight Improvement, But Structural Weaknesses Persist,” published Dec. 9, 2013, “Credit Conditions: Growth In Latin America Expected To Pick Up in 2014 Amid Continuing Financial Market Volatility,” published Dec. 13, 2013, and “Credit Conditions: Asia-Pacific Growth Is Mostly Stable, But Some Lagging Credit Risks Remain For 2014,” published Dec. 10, 2013, on RatingsDirect.)

We expect performance in the transportation sector will continue to evolve in line with regional and domestic growth. Moderate economic growth in 2014 together with tariff increases in line with, or slightly above inflation should support moderate earnings’ increases among transportation infrastructure companies and a relatively stable financial performance. Under our base-case scenarios for rated transportation infrastructure companies, we anticipate:

- Revenue growth of about 5.4% on average on the previous year.

- Earnings before interest, taxes, depreciation and amortization (EBITDA) margins of about 46.0%, on average, representing a 1.3% improvement on the previous year.

We nevertheless anticipate that performance will vary between subsectors of the industry (see table).

2 What is the perspective for transportation infrastructure companies in emerging markets?

We think the sector will stay largely stable, similar to the global picture. We currently rate 37 transportation infrastructure companies in emerging markets, of which 29 have stable outlooks and eight have negative outlooks.

We nevertheless remain cautious concerning prospects for the EEMEA region. Companies operating in the rail and port sectors have high exposure to commodities, and in our view improvement in economic conditions could be partially offset by volatility in commodities markets. We also expect domestic demand and industrial production to remain subdued in 2014, notably in Russia and Ukraine. This will likely constrain any rebound in earnings (see “Growth In Russia Is Faltering On Domestic As Well As Global Weaknesses,” published Sept. 25, 2013). We also see a risk that the tariffs of certain rail companies could be frozen during the year, notably in Russia and Ukraine.

Access to international capital markets remains a key success factor for transportation infrastructure companies that operate in emerging markets. We believe that emerging markets in Europe, which have relatively weak external liquidity positions, could face liquidity shortages (see “Emerging Market Sovereigns In Europe Could Be Most At Risk In A Liquidity Squeeze,” published on July 4, 2013). Such liquidity squeezes could, in our view, affect the ratings on transportation infrastructure companies operating in the region. Limited access to international capital markets could prompt companies to postpone vital investments into infrastructure and fleet upgrades. If this is not remedied, this

S&P's 2014 Base-Case Forecasts For Rated Transportation Infrastructure Companies' Revenues And EBITDA Margins

Average year-on-year change in revenue (%)

Toll roads	4.9
Airports	3.5
Rail	5.6
Ports	7.4

Average EBITDA margin (%)

Toll roads	63.1
Airports	50.1
Rail	25.9
Ports	48.7

EBITDA—Earnings before interest, taxes, depreciation, and amortization.

could over time additionally pressurize their market position and profitability. This contributed to our downgrade, on Nov. 8, 2013, of Ukraine's national rail operator (*see "Ukrainian Railways Downgraded To 'B-' Following Downgrade Of Ukraine; Outlook Negative," published Nov. 8, 2013*). In our view, the national rail company was highly exposed to country and transfer and convertibility (T&C) risk in Ukraine. Furthermore, liquidity risk had increased as a result of weakening sovereign credit quality, which could constrain Ukrainian issuers' access to the financial markets. Added to this, the company is exposed to the weak domestic banking system, where it holds its cash and committed lines.

While we consider prospects for transportation infrastructure companies operating in Latin America to be generally stable, we think the outlook for Argentinian companies is negative. This is because the sovereign rating and T&C assessment constrains our ratings on corporations operating in the country (*see "11 Argentine Corporates, Utilities, And Infrastructure Entities Downgraded Following Similar Action On Sovereign," published Sept. 13, 2013*). Further downward rating pressure could occur in 2014, in our view.

3 *Would a material slowdown in China or return to recession in the eurozone in 2014 hurt transportation infrastructure companies?*

While we forecast that the eurozone will remain out of recession in 2014, we assign a 25% to 30% probability of retrenchment in the final part of 2014, extending into 2015. In this scenario, we forecast that GDP growth in the region could slow to 0.6% in 2014 and only 0.1% in 2015. In addition, although we consider the prospects of a hard landing in China's growth increasingly unlikely in the near term, we see a 15% to 20% probability of real GDP growth slowing to 6.9% in 2014, and a greater drop, although less probable, could still occur.

Such adverse changes in economic conditions would likely affect demand for transportation infrastructure companies.

We would expect such a scenario to trigger a decline in volumes of goods transported by companies in the sector, in the number of passengers using airports, toll roads, and trains, and in their retail spend when traveling. Tariffs for the transport of goods could also reduce in light of a decline in demand. A slowdown in the economy could therefore lead to reduced earnings for transportation infrastructure companies, and weaken the credit quality of the sector. In our view, rail companies and ports that carry material volumes of freight, and airports that have material transfer traffic flows would be most at risk. European airports would likely be more affected if the change in economic conditions was driven by a slowdown in China, because Chinese tourists have been above-average spenders at European airports. However, the growth in their expenditure has already started to decelerate following the introduction of new anti-corruption laws in China.

4 *What other macroeconomic and policy developments could have the most significant impact on transportation infrastructure in 2014?*

In our view, two other macroeconomic developments are most likely to affect the sector in 2014: first, the gradual tapering of quantitative easing; second, a change in the sovereign environment, especially for companies that are government-related entities (GREs).

About 40% of the transportation infrastructure companies we rate are GREs. We typically factor uplift from our assessments of their stand-alone credit profiles (SACPs) into our ratings to reflect the likelihood of extraordinary financial support from the government in case of need. Transportation infrastructure GREs are mainly located in the EMEA and Asia-Pacific regions. Nine of these issuers currently have a negative outlook, reflecting the possibility that under our GRE criteria we could lower the ratings if we were to downgrade the relevant sovereign.

More generally, the tapering of some of the U.S. Federal Reserve's quantitative easing policies could affect market conditions for rated transportation infrastructure corporates. On Dec. 18, 2013, the Fed announced that, starting in January, it will reduce bond purchases from \$85 billion a month to \$75 billion a month. The Fed also said that it will likely reduce the program in measured steps at future meetings. While the decision sent equity indices surging, bond spreads were not affected. The effect that tapering will have on the financial markets could be higher than market participants currently anticipate. This could create downward rating pressure, in particular for companies that have significant maturities in the near term.

We believe that funding will remain available for transportation infrastructure companies in developed markets. However, this could translate into higher funding costs, which could negatively affect the financial profile of these companies. For companies operating in emerging markets, we consider liquidity risk to be greater. In our view, as quantitative easing tapers, there is greater risk that the flow of funds to these markets may shrink, or in some cases reverse. Domestic markets in some countries could, however, mitigate this, by assuming an increasingly larger proportion of infrastructure funding. This could affect companies operating in these countries, be it through the unavailability of foreign currency they need to repay debt, the lack of new funding, or increased funding costs. We see emerging markets in Europe, as well as Argentina, as being most at risk in this respect.

5 *What are the prospects for capital investment in the sector, and how will it be financed?*

We expect capital investment in the transportation infrastructure sector to remain high in 2014. We forecast that during the year, rated transportation infrastructure companies will invest in total about 15.2% of their forecast

revenues for the year. This would represent about a 9.4% increase in total spend in 2013.

We anticipate that investment will vary somewhat across regions. The need for investment in transportation infrastructure remains high in emerging markets. We see governments' involvement in these markets as key to maintaining the sector's credit quality. Governments have been partially funding infrastructure investment in their domestic markets either directly through capital subsidies or indirectly through state-sponsored funding and tax incentives.

In Latin America, we believe already approved plans and the required investment programs under concession contracts will drive capital expenditures (capex). We expect a mix of internal cash generation and bank debt will finance this. Meanwhile, we believe debt capital markets and national development banks will also participate in financing some of the new investments and projects in the region. The Brazilian national development bank—Banco Nacional de Desenvolvimento Econômico e Social (BNDES)—has played a significant role in the delivery of new transportation infrastructure investment in Brazil, and in our view will continue to do so in 2014.

In EMEA, we anticipate investments across rated airports will increase materially and that investments across other sub sectors will continue to be high. The increase in capex at European airports will be mainly to increase capacity and reduce connection times. We expect most of it to be funded from internally generated cash flows, with additional contributions from debt issuance.

We also expect that capex among Western European rail companies will remain high, owing to governments' investment plans and the capital-intensive nature of the sector. Significant new projects are under way, for instance, in Germany, Italy, and France. Most rated rail companies rely on ongoing support from the government through capital subsidies for a portion of their investments. Given the political

and social importance of public transport in Europe, we do not anticipate significant changes in the likelihood of extraordinary government support to most of rail GREs we rate. We anticipate that these companies will continue accessing debt markets to complete capital requirements.

We expect capital investment for the Asia-Pacific transportation infrastructure sector will remain broadly in line with historical trends, characterized primarily by a strategy of gradual investment supported by underlying growth. This generally enables companies to temper spending if operating conditions deteriorate. Funding is mainly through debt issuance, a trend we expect to continue. We expect a few certain large projects with long lead times to start during 2014, but these are generally supported by favorable regulatory regimes that allow an economic return even before the projects are completed.

6 *To what extent will transport infrastructure companies be able to capitalize on greater long-term investment in vital infrastructure over the next few years?*

Rising long-term investment in infrastructure has led, in many cases, to increased investment plans among rated companies. Rated rail companies in EMEA, for instance, are delivering significant investments, including modernization of their networks and high-speed rail services. Likewise, several rated toll road network operators are widening or upgrading parts of their networks.

Although this can reduce free operating cash flows and increase leverage in the near to medium term, the companies generally secure some form of cost recovery, including an economic return on investment, often in the form of higher tariffs. New investments could therefore improve their credit quality over the longer term. Over the near to medium term, however, such investments could damage credit quality, depending on the way they are funded and the pace at which companies recover costs.

Some companies are unlikely to see any significant benefit from greater long-term investment. For instance, the current investment plans for rated airports in EMEA do not incorporate any significant investments in new runway capacity, although they incorporate investment in terminal capacity.

Finally, for some companies, new investment could increase competition between different transportation companies over the medium term. For instance, new high-speed rail links are being built in France and will likely, once they open, increase competition on roads that cover the same routes. We expect the impact of such changes on rated French toll road network operators to remain limited, however, given their large scale and the diversity of their networks.

Many governments provide incentives for transportation infrastructure companies to invest. This can take the form of capital subsidies, which are often made available for rail companies. It can also be through the availability of funding from multilateral agencies, such as BNDES in Brazil, or in Europe the European Investment Bank and EUROFIMA European Company for the Financing of Railroad Rolling Stock.

7 *Could the tight schedule for infrastructure investment in Brazil for the 2014 World Cup and 2016 Summer Olympics affect ratings on participating companies?*

We believe that investment in transportation infrastructure that is essential for the games to take place will be delivered on time. This includes airport projects in Guarulhos and Brasilia. Some of the less essential projects, for which there is greater flexibility, could be delayed given the challenging deadlines. We therefore don't expect that our ratings on transportation companies that are participating in the infrastructure investment will be negatively affected.

Several European transportation infrastructure companies are participating projects that won bids in the Brazilian transportation infrastructure sector, including Spain-based toll road

operator Abertis Infraestructuras S.A. and Flughafen Zurich AG. This has so far not affected our ratings on these companies. This is mainly because European companies have invested as minority shareholders and equity investments have been limited in light of their cash resources. We anticipate that in 2014 European companies will continue to consider new investment in the region with a view to preserving their credit quality.

8 *What is the pace and nature of mergers and acquisitions in transportation infrastructure?*

Merger and acquisition (M&A) activity has been significant over the past five years, and new acquisitions were often largely debt funded. We expect this activity to lessen over the next 12 months as companies look to stabilize their financial performance. Therefore, we believe that European companies will continue looking to diversify into emerging markets, in particular in Latin America. We expect, however, that this will only have a limited impact on rated companies in the sector. We believe rated transportation infrastructure companies would likely partner with other investors, often acting as minority investors, and that this will likely reduce the impact of any new acquisitions on their credit profile.

Although we expect privatization of transportation infrastructure assets to continue, we believe it will have only a limited impact on rated transportation infrastructure companies. This is because we believe that privatizations are more likely to attract long-term investors, such as infrastructure or pension funds, rather than trade buyers. What's more, as is the case for M&A activity in general, we expect that trade buyers would be part of consortia, with only limited stakes.

We do not expect that companies will significantly increase their leverage through capital returns, unless on the back of recent strong performance. We expect that those transactions would remove any poten-

tial upward pressure on ratings rather than lead to downward movements.

9 *How do you view the policy risk in China's toll road sector?*

Chinese toll road operators have faced heightened policy uncertainty over the past two years, since the government responded to the perceived high toll rates in China and started to clear out the irregularities in this sector. The green passage policy for waiving toll fees of fresh farm products and the toll-free policy for passenger cars during four national holidays have adversely affected the operators.

In our view, policy uncertainty could continue in China until there is a transparent regulatory framework on toll rates and concessions. The government has to balance the lowering of transportation costs, the interests of toll road operators, and the attractiveness of highway construction projects for private capital. China plans to invest about renminbi (RMB) 2.5 trillion (about \$400 billion) on new national highways from 2013 to 2030. Materially adverse policies are therefore less likely, in our opinion.

We expect the credit quality of major toll road operators to be largely stable. Although the holiday toll-free policy since October 2012 has led to revenues reducing by 5% to 8% on average, operators are still likely to expand their revenue modestly in 2013 and 2014. A pick-up in traffic amid an economic recovery in the second half of 2013, and a continued rise in car ownership will support earnings. We view the investment appetite of major toll road operators as less aggressive than before because of higher construction costs and lower returns on new roads.

10 *Do you expect Japan's revitalization strategy to boost the country's transportation infrastructure sector?*

As part of the Japan Revitalization Strategy, the government has announced its intention to develop infrastructure (such as airports and ports) to stimulate

economic growth. The strategy will likely focus on greater involvement of private sector companies in the ownership and operations of existing assets. While the actual structure of the ownership and operating model is uncertain at this stage, this strategy is consistent with trends we are seeing in other countries globally and regionally.

In our view, the degree of predictability and stability of the regulatory and operating framework that will be implemented will greatly influence the continued stability of the transportation sector during this transition. We believe that certain key drivers for this sector (such as passenger growth for airports or trade volumes for ports) are generally very steady, given the typically significant barriers to entry that temper competition. As such, predictability of revenue, which would be supported by the contractual, regulatory, and legal framework, will be critical to the overall credit quality of the sector.

However, too much regulation and fierce competition between airport and land transportation are key hurdles to encouraging private investors. We estimate that most of the domestic airport operations have relatively low profitability compared to airport operators in other regions. Consequently, we believe that the central and local government's push for flexible regulation will be key to the successful implementation of the strategy. **CW**

For more articles on this topic search RatingsDirect with keyword:



Analytical Contacts:

Aurelie Hariton-Fardad
London (44) 20-7176-3677

Stuart M. Clements
London (44) 20-7176-7012

Olli Rouhiainen
London (44) 20-7176-3769

Juliana C. Gallo
London (44) 20-7176-3612

Varvara Nikanorava
Frankfurt (49) 69-3399-9135

Thomas Jacquot
Sydney (61) 2-9255-9872

Veronica Yanez
Mexico City (52) 55-5081-4485





U.S. Public Finance

Short-Term Savings On Infrastructure Spending Could Prove To Be Short-Sighted

Overview

- Standard & Poor's believes that establishment and upkeep of regional infrastructure is necessary to maintain a locale's competitiveness.
- Investment in infrastructure has been declining since 2009.
- Delaying infrastructure maintenance or needed advances might make sense in the short run, but in the long run such decisions could weaken credit quality.

Infrastructure quality is a key component of maintaining a competitive economic advantage regionally and globally for all segments within U.S. public finance (USPF). Standard & Poor's Ratings Services assesses a wide variety of public and not-for-profit entities, and one of several rating factors linking all segments in USPF is economic competitiveness and the economic strength underlying the region an entity serves. Standard & Poor's assesses an issuer's infrastructure needs and whether growth, age, or regulations will require additional capital investments within the rating's outlook horizon.

Governments that fail to maintain and invest sufficiently in new infrastructure undermine their economic bases and potential for growth, in our view. It is also our opinion that deferral of capital needs poses credit risk in the long term, similar to the way increasing pension liabilities become a credit weakness if an entity defers pension contributions or the pension actuarial liability funded status is significantly underfunded. The most common incentives for maintaining infrastructure are to attract economic development, to provide services, or to comply with federal or state regulatory requirements.

Infrastructure Is Key To Regional Economic Development And Global Competitiveness

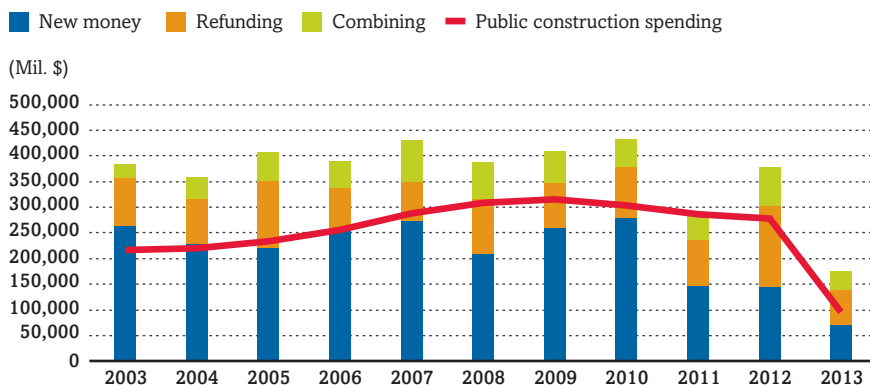
From a credit perspective, maintaining or improving infrastructure can provide a regional and greater global economic advantage because the positive effect is often reflected in an area's GDP, wealth and income levels, and employment base over the long term. According to the World Economic Forum, the U.S. ranked seventh in competitiveness in 2012, falling from second in 2009. (1) The World Economic Forum ranked 144 countries by assessing several economic factors. The U.S. ranked 25th in quality of infrastructure, 34th in health and primary education, and 140th in macroeconomic environment. (1) Physical infrastructure (popularly referred to as utility and transportation infrastructure) lays the groundwork for economic development, whereas social infrastructure

(health care, affordable housing, and higher education) provides health services, improves quality of life, and develops the skill sets needed for the economy. The social infrastructure groups also have facilities to maintain to serve and attract consumers. The American Society of Civil Engineers (ASCE) assigned a grade of "D+" (poor) to the quality of infrastructure in the U.S. in its 2013 infrastructure report card. (2) However, this is an improvement from "D," originally assigned in 1998. The ASCE study estimated that the nation's quality of transportation, energy, and water and public facility capital needs required an investment of \$1.6 trillion to achieve a grade of "B" (good) using its definitions. (2)

Investment and maintenance of infrastructure are components of remaining economically competitive for USPF sectors. For instance, utility infrastructure and transportation access to regional economic centers are key economic development catalysts. State and local governments often compete for major employers, which compare the labor force, cost of doing business, cost of living, and taxing structure when selecting a site. State and local governments commonly offer economic development incentives in an effort to entice large employers in exchange for the increased employment and tax base diversification. The combination of economic development incentives and quality of infrastructure often determines a prospective employer's choice between two cities, counties, states, or countries.

The higher education, health care, and housing sectors rely somewhat on the status of utility and transportation infrastructure to allow for growth and development. Higher education institutions, particularly large public university systems, often contribute significantly to a state's overall economic base. A better educated workforce typically leads to higher income jobs, which translate into more tax revenue to fund public services. In addition, some research universities attract private industry, particularly through research parks, which foster innovation and create jobs. Because these research parks are typically not proximal to an institution's main campus, infrastructure is important from an access standpoint. And because regional universities and community colleges often rely on a large commuter base,

Municipal Bond Volume And Total Public Construction Spending Trends



Source: Thomson Reuters data originally published by The Bond Buyer.
© Standard & Poor's 2013.

underinvestment in infrastructure could diminish enrollment. Health care providers are often one of the largest employers in a geographic area, and any significant expansion (e.g., a new hospital, bed tower, health center), will typically create new jobs.

In addition, health care availability is a competitive factor for employers who may be expanding or relocating to a specific area. Access to high-quality, low-cost health care for employees is a strong incentive to employers and increases their ability to attract and maintain healthy and productive employees, who will, in turn, boost the economic base. Although physical infrastructure rarely affects patient utilization patterns or physician referral patterns, as service areas grow, governments must maintain, and possibly expand roads and water and sewer lines to keep up with the physical demand for the health care facility.

Housing is less simple, as properties can be scattered across a state, and federal government guarantees have more weight on the rating outcome than the quality of infrastructure does. However, a neighborhood with insufficient infrastructure investment could suffer lost housing development. Multifamily housing would be more affected, as it concentrates units in a specific location. This could result in less affordable housing availability.

Thus, in our opinion, an extended period of deferred investment in infrastructure can lead to a decline in economic competitiveness across all of the USPF sectors over time.

Infrastructure Regulatory Requirements Create Budget Challenges

Federal and state regulations can create a challenge to managing capital costs. While all infrastructure, both physical and social, must comply with federal or state code requirements, requirements and regulations have become a bigger factor in our rating assessments of utilities than of other USPF sectors. Federal and state regulations can make managing capital costs more difficult for public utilities, because they have a direct effect on such entities' capital plans and budgets. Investments that regulatory compliance requirements trigger provide a

degree of uncertainty in local capital planning and increase the need for long-term borrowing. Not only have capital requirements increased for public utilities, but the costs of providing goods and services have increased over time as well. Compliance with the federal Safe Drinking Water Act and Clean Water Act, or electric grid reliability makes many projects less discretionary than, for example, a general government's choices. For instance, according to a 2013 U.S. Conference of Mayors' Report, per capita spending on local public water investments increased by 60% between 2001 and 2010, which outpaced growth in overall nonmilitary GDP by 37%. (3) Compliance generally comes by way of the U.S. Environmental Protection Agency or a state environmental regulator stipulating the timeline to complete certain projects, which is usually about a decade. This can cause capital budgets to spike, making utility managers reprioritize or even defer other projects.

Municipal electric systems face even more uncertainty. The federal government has introduced or announced a number of Clean Air Act amendments. Some, such as the Clean Air Interstate Rule, have become law. Others, such as the Cross-State Air Pollution Rule, have not yet made it into law but still create placeholders—usually very large placeholders—in capital budgets because compliance can be extremely costly. Compliance may even come in the form of mothballing or even retiring power plants. No utility board, city council, or other local government body is apt to act unless it is highly confident that existing or future regulation won't undermine the investment.

Resources For Infrastructure Needs Vary

USPF sectors have varying degrees of flexibility to raise revenues to address infrastructure needs. We have found, however, that those sectors that rely on federal or state funds are susceptible to revenue challenges during economic contractions. Although utilities, transportation, health care, and higher education issuers can pass through cost increases to consumers by raising fees, there is a limit to what is considered

affordable and competitive. These sectors evaluate the rates by comparing them to peers' to determine how much flexibility remains to raise rates without permanently altering demand or potentially deterring new customers. All USPF segments have explored various means of expenditure cuts in the past few years. However, we view deferrals of large capital projects or pension and other postemployment benefit contributions that provide immediate budget relief as a negative rating factor.

Even though state revenues are recovering from the recession well, states have been slower to increase spending due to the looming uncertainty about the adoption of the federal budget and the slow pace and seemingly fragile recovery of the economy. The most recent USPF credit conditions forecast provides downside, baseline, and upside forecast scenarios for the state and local government sector and our expectations for economic indicator trends through 2014. (4) States are exploring new funding mechanisms to enhance their existing infrastructure funding sources with other methods such as public-private partnerships, gas taxes, tolling, and bonding.

Shifts In State And Federal Priorities Affect USPF Infrastructure Spending

Both federal and state funding and financing programs can influence how much USPF sectors invest in infrastructure. Given the federal government's fiscal imbalance and initiatives to cut spending, the burden of infrastructure improvement is shifting to state and local municipalities. USPF's task will be attaining the flexibility needed to also address local infrastructure needs amid state and federal funding constraints.

The Great Recession squeezed state and local budgets. State revenues declined 12% during fiscals 2008 through 2010 as a result of the economic downturn. General fund and capital spending dropped during the same time period to close significant budget gaps. From 2010 through 2012, state revenues increased \$61.6 billion, but American Recovery and Reinvestment Act (ARRA)

funds declined \$91.1 billion during the same time period. (5) As a result, state spending growth slowed and remained relatively flat during 2012. Spending restraint at the state level combined with reduced federal funds inevitably compounded a reduction in capital spending at the local level during 2012.

Notable shifts in federal and state budget priorities often trickle down to the local level. Elementary and secondary education represented the largest share of total state spending during 2008, but in 2009 the largest spending category shifted to Medicaid, and it has remained so since then. General fund spending in all areas increased from 2011 to 2012 except for higher education, public assistance, and corrections. (5) During 2012, transportation represented the largest category of state capital expenditures. Overall, state capital spending decreased 2.9% during 2011 and increased 9.5% during 2012, which closely mirrors the trends in transportation capital spending during the same years. In addition, we estimate state capital spending for higher education decreased by 4.3% in fiscal 2011, and it will decrease by 13.7% in fiscal 2012. (5) While housing capital spending represents just 2% of total state capital spending, we observed a 29% increase in state spending for the sector during 2011 and an 18% increase in spending during 2012. However temporary, ARRA partly financed capital spending during the past several years. According to the National Conference of State Legislatures' report published October 2012, the top three state spending priorities for 2013 are education, economic development, and utility and road infrastructure. (6)

Post-Recession Cautiousness May Lead To Regret

We believe that USPF has held back on new money bond issuance as a prudent measure to keep recurring expenditures low, given uncertainties regarding the federal budget and possible disruptions to the economic recovery. As interest rates begin to climb, local governments

may currently find opportunities for refinancing existing debt to be less economically advantageous, and they may continue to defer new investments as the cost of borrowing rises.

New money bond sales have fallen for two consecutive years (2011 and 2012), indicating that record-low interest rates alone were not enough of an incentive for issuers to borrow more new money. Per The Bond Buyer 2012 Annual Review Report, refundings increased to \$157.5 billion in 2012 from \$86.6 billion in 2008 to take advantage of the debt service cost savings. (7) In our recently published state debt review commentary, we reported that 62% of all municipal debt issuances during last year were refundings, which was a historical high. (8) However, 2012 new money bond issuance declined to \$144.8 billion from \$208.2 billion in 2008 despite the low cost of borrowing. (7) New money issuances surged to \$261.3 billion in 2009 and then peaked at \$279.8 billion in 2010, which we believe is partly attributable to the Build America Bond Program and incentives under ARRA—skewing the total borrowing figures higher during those years. However, according to the U.S. Census, actual total public spending on infrastructure has steadily decreased since 2009, the start of ARRA, as a prudent measure to allow for budget flexibility during the Great Recession. The U.S. Census measures total public construction spending by valuing infrastructure projects for the USPF sectors that are owned and funded at the local, state, and federal levels. The declining trend in total public construction spending demonstrates that investment in infrastructure improvements has slowed despite the decline in the cost of borrowing, rise in demand for services, and the necessity to improve the quality of infrastructure. Although some sectors have debt limitations (some from legislative action and some self-imposed by local charters), we do not believe that this is an accurate explanation for the past two calendar years, which exhibited the weakest volume in new money issuance for the decade.

A few program proposals in the 2014 federal budget could affect the municipal bond market and infrastructure investment. The program proposals include:

- **Fix It First:** This program proposes to address the backlog of infrastructure projects. The president's plan proposes \$50 billion in infrastructure investment with \$40 billion allocated toward reducing the deferred maintenance of highways, bridges, transit systems, and airports.
- **America Infrastructure Fund:** The fund is a bipartisan infrastructure bank that leverages private and public capital to support infrastructure projects. The fund will invest through loans and loan guarantees in infrastructure projects for transportation, energy, water, education, and communications.
- **America Fast Forward Bonds:** This is an extension of the Build America Bonds program to attract new sources of capital infrastructure investment.
- **Water Infrastructure Finance and Innovation Act (WIFIA):** This act would create a program modeled after the Transportation Infrastructure Finance and Innovation Act and proposes a five-year pilot that includes \$50 million of annual issuance to fund large water projects or for state revolving funds that would provide low interest loans to water utilities.
- **Rail authorization:** This proposes a \$40 billion, five-year authorization for high-speed rail projects.

At this point in time, we are unable to measure the net impact on the USPF sector

because the proposals are subject to change, and the appetite for USPF issuers to issue debt as a result of these financing programs is an unknown. Lastly, the 2014 federal budget includes a proposal to eliminate or reduce the mortgage interest deduction and tax exemption on municipal bond interest. It is our opinion that the removal or reduction of the mortgage interest deduction and tax exemption on municipal bond interest could be a detriment to the housing market, the bond market, and the health of the economy. In our recently published commentary analyzing the effect of the removal of the municipal bond tax exemption programs, we state our view that elimination of these programs would increase debt service costs, which would force issuers to make difficult choices between capital investment, reserve maintenance, taxation and user fee levels, and key services. (9) Assuming interest rates remain stable, and the federal budget does not enact a cap on the municipal bond tax exemption, we expect that municipal bond issuance volume will return to normal levels three to six months after the federal budget is approved. If the federal government does approve a cap on the municipal bond tax exemption, we will likely see a decline in new money bond sales, since the cost of borrowing will increase due to the reduction in the tax benefit. Either through enforcement of a municipal bond tax

exemption cap or as a result of interest rates rising, new money bond volume will likely drop further. An increase in borrowing costs could hinder infrastructure investment and, therefore, put the nation at an economic disadvantage.

Short-Term Considerations Could Undermine Long-Term Competitiveness

Several variables have weakened USPF's appetite for additional debt and infrastructure spending: the economy's slow recovery, federal budget uncertainty, and interest rate trends. The reluctance to invest in infrastructure and restore expenditures to pre-recession levels as a conservative budgeting measure is, in our opinion, a missed opportunity for job creation and economic development. By deferring capital investment, the USPF sector is hindering its economic and competitive advantage. Therefore, we view these measures as likely to be contributing factors to the slow rate of economic recovery. **CW**

For more articles on this topic search RatingsDirect with keyword:



Analytical Contacts:

Jennifer K. Garza (Mann)
Dallas (t) 214-871-1422

Theodore A. Chapman
Dallas (t) 214-871-1401

NOTES

- (1) Schwab, Klaus. 2012. "The Global Competitiveness Report 2012-2013." Retrieved from <http://reports.weforum.org/global-competitiveness-report-2012-2013/#> on Sept. 10, 2013.
- (2) American Society of Civil Engineers. 2013. "2013 Report Card for America's Infrastructure." Retrieved from <http://www.infrastructurereportcard.org/a/browser-options/downloads/2013-Report-Card.pdf> on Sept. 10, 2013.
- (3) Anderson, R.; Gatton, D.; and Sheahan, J. 2013. "Growth in Local Government Spending on Public Water and Wastewater—But How Much Progress Can American Households Afford?" April. Retrieved from <http://usmayors.org/publications/media/2013/04-water-local-costs.pdf> on Sept. 10, 2013.
- (4) "U.S. State and Local Government Credit Conditions Forecast: The Rebounding Housing Market Supports Slow Growth," July 8, 2013.
- (5) National Assn. of State Budget Officers. 2012. "State Expenditure Report 2010-2012." December. Retrieved from http://www.ncsl.org/documents/transportation/Infrastructure_Priorities2012.pdf on Sept. 10, 2013.
- (6) National Conference of State Legislatures. 2012. "State Legislative Infrastructure Priorities 2012-2013." October. Retrieved from <http://www.ncsl.org/issues-research/transport/ncsl-state-legislative-infrastructure-priorities.aspx> on Sept. 10, 2013.
- (7) "The Bond Buyer. 2013. The Bond Buyers 2012 in Statistics Annual Review: Refundings Take Biggest Piece of the Pie." Feb. 11.
- (8) "2013 U.S. State Debt Review: Despite Large Infrastructure Needs, Debt Issuance Remains Muted," July 10, 2013.
- (9) "Cutting Popular U.S. Tax Programs Could Harm Tax-Exempt Bond Issuers," Aug. 19, 2013.





2013 U.S. State Debt Review

Despite Large Infrastructure Needs, Debt Issuance Remains Muted

It may be a surprise to casual observers of U.S. state budgets, but U.S. states aren't laboring under unbearable debt burdens. Yes, the Great Recession and its aftermath inflicted much pain on state and local governments resulting in lower service levels, fewer government employees, and revenues that, while back to prerecession levels, have not kept up with inflation. And indeed, municipal debt issuance rose significantly in 2012 relative to 2011. However, in our opinion, this is much more a reflection of a lower-than-average level of issuance in 2011 following a significant surge in debt issuance in 2010 to take advantage of the American Recovery and Reinvestment Act, than a significant increase in debt issuance in 2012. In fact, debt issuance in 2012 reflects a return to more average levels. It is also very telling that refinancing transactions accounted for more than half of issuance in 2012, which primarily reflects states taking advantage of a low interest rate environment to reduce the cost of servicing their debt. Despite an improved revenue environment, the significant demands on governments to reinstate services, reduce taxes, and fund rising pension and health care costs leave limited appetite for additional debt.

Relative to many of the sovereigns we rate, U.S. states have lower debt ratios when measured against the size of their economies. State debt levels compared with GDP and personal income are not significantly higher

now than they were before the Great Recession, despite the recession's impact on these wealth measures. We believe this reflects a fundamental strength of the U.S. state sector relative to the sovereign sector with which

it is sometimes compared: U.S. states issue the overwhelming majority of debt for one-time capital projects, not to support recurring operations and finance budget deficits. An additional strength is that U.S. states almost exclusively issue amortizing debt, which eliminates rollover risk. In short, Standard & Poor's does not believe that U.S. states, in general, face a debt crisis.

Our research, as reflected in the debt statistic table in this report, shows that state debt burdens are moderate overall (*see table 2*). For example, median tax-supported debt is 2.3% of states' GDP, ranging from 8.3% (Hawaii) to less than 0.1% (Nebraska).

Table 1 | Aggregate Debt Levels Of The 50 U.S. States (Median)

Debt metrics	—Fiscal year—				
	2012	2011	2010	2009	2008
Net tax supported debt service as a % of governmental expenditures	3.7	3.6	3.6	3.5	3.0
Net tax-supported debt per capita (\$)	1,036	1,009	932	870	739
Net tax-supported debt as a % of personal income	2.6	2.5	2.5	2.4	2.1
Net tax-supported debt as a % of GSP	2.3	2.2	2.2	2.0	1.8

Table 2 | State Tax-Supported Debt Statistics For Fiscal 2011

State	Total (mil. \$)	Rank	Per capita (\$)	Rank	As % personal income	Rank	To GSP* (%)	Rank	Debt burden as % expenditures\$
Alabama	3,579	27	745	33	2.15	30	2.07	27	1.04
Alaska	999	40	1,382	17	3.04	20	1.94	30	2.11
Arizona	5,663	21	874	29	2.44	28	2.19	26	2.00
Arkansas	989	41	337	44	0.99	41	0.93	41	3.48
California	88,932	1	2,359	9	5.30	9	4.54	9	7.90
Colorado	2,653	32	518	38	1.18	39	1.00	40	1.40
Connecticut	17,891	7	4,996	1	8.78	2	7.78	3	9.41
Delaware	2,288	33	2,522	7	6.06	5	3.48	15	7.40
Florida	25,251	6	1,325	18	3.35	18	3.35	16	7.75
Georgia	9,227	14	940	27	2.60	25	2.20	25	8.60
Hawaii	5,427	22	3,947	4	9.17	1	8.10	1	9.61
Idaho	233	46	147	48	0.44	47	0.40	47	0.50
Illinois	33,633	4	2,613	5	5.92	6	5.01	6	8.13
Indiana	3,052	30	468	39	1.32	37	1.10	39	2.83
Iowa	1,123	39	367	42	0.91	43	0.75	44	1.76
Kansas	3,411	29	1,188	20	2.93	21	2.61	21	2.40
Kentucky	8,387	16	1,920	11	5.70	7	5.09	5	4.04
Louisiana	4,915	23	1,074	24	2.78	23	1.98	29	4.32
Maine	972	42	732	35	1.93	34	1.88	32	4.53
Maryland	9,577	13	1,643	14	3.22	19	3.18	18	4.06
Massachusetts	30,803	5	4,676	2	8.72	3	7.86	2	7.20
Michigan	6,557	19	664	36	1.82	36	1.70	34	1.30
Minnesota	6,338	20	1,186	21	2.65	24	2.25	23	3.43
Mississippi	4,845	24	1,627	15	5.06	12	4.95	7	7.15
Missouri	4,689	25	780	31	2.04	31	1.88	33	4.32
Montana	174	47	175	46	0.48	46	0.46	46	1.37
Nebraska	27	50	15	50	0.04	50	0.03	50	0.09

And Hawaii's debt ratios are higher relative to other states because Hawaii issues debt for public education and other functions that many states fund at the local level.

We also view debt as moderate when measured against government spending and total personal income. The median for debt burden as a share of general government outlays is 3.7%, and it ranges from 11% (Hawaii) to 0.1% (Nebraska). In our view, an overall political environment emphasizing fiscal discipline and debt affordability models in many states have tempered debt issuance. Multiple states scaled back debt issuance in fiscal years 2012 and 2013 to stay within policy levels.

U.S. Infrastructure Is Reaching A Critical Financing Point

Debt issuance has not significantly increased despite revenue reductions that have lowered states' ability to finance capital through pay-as-you-go financing. This raises the question of whether state debt levels are too low given the infrastructure improvements identified by many as important for the U.S. to maintain economic competitiveness. The American Society of Civil Engineers (ASCE) issues a comprehensive assessment every four years on the state of the nation's infrastructure. The 2013 assessment is a "D+," a slight improvement from the "D" grades that it has given the U.S. since 1998. The

nearly failing grade reflects the enormous amount of capital needs from bridges to levees. For example, according to ASCE, one in nine bridges in the U.S. is structurally deficient, and to eliminate the backlog of repairs or replacements by 2028, local, state, and federal spending would have to increase by \$8 billion per year.

The ASCE report highlights similar needs in many other infrastructure areas. Roads and highway infrastructure received a "D" in the 2013 report, which was also an improvement from four years earlier. The Federal Highway Administration estimates that federal, state, and local governments would need to invest \$170 billion per year to

Table 2 | State Tax-Supported Debt Statistics For Fiscal 2011 (continued)

State	Total (mil. \$)	Rank	Per capita (\$)	Rank	As % personal income	Rank	To GSP* (%)	Rank	Debt burden as % expenditures\$
Nevada	2,037	35	748	32	1.96	33	1.56	36	3.69
New Hampshire	702	43	532	37	1.16	40	1.10	37	2.28
New Jersey	35,261	3	3,997	3	7.52	4	7.24	4	8.04
New Mexico	3,050	31	1,465	16	4.24	14	3.84	12	3.50
New York	50,477	2	2,593	6	5.13	11	4.36	11	4.10
North Carolina	7,090	17	734	34	2.03	32	1.61	35	2.13
North Dakota	237	45	346	43	0.76	45	0.59	45	1.30
Ohio	10,677	11	925	28	2.45	27	2.21	24	2.25
Oklahoma	1,707	38	450	40	1.21	38	1.10	38	1.76
Oregon	6,823	18	1,762	12	4.65	13	3.50	14	7.23
Pennsylvania	13,422	9	1,053	25	2.48	26	2.32	22	4.50
Rhode Island	1,835	37	1,746	13	3.97	15	3.66	13	7.96
South Carolina	4,516	26	965	26	2.87	22	2.72	20	5.01
South Dakota	134	48	163	47	0.39	48	0.34	48	2.38
Tennessee	2,036	36	318	45	0.87	44	0.76	43	2.47
Texas	10,005	12	390	41	0.98	42	0.76	42	1.40
Utah	3,442	28	1,222	19	3.62	16	2.76	19	4.28
Vermont	492	44	785	30	1.88	35	1.90	31	2.52
Virginia	8,719	15	1,077	23	2.35	29	2.03	28	4.50
Washington	16,119	8	2,360	8	5.33	8	4.54	10	4.38
West Virginia	2,125	34	1,145	22	3.42	17	3.18	17	5.70
Wisconsin	11,751	10	2,057	10	5.13	10	4.61	8	2.91
Wyoming	36	49	63	49	0.13	49	0.10	49	0.20
Mean	9,487		1,322		3.11		2.71		4.20
Median	4,603		1,009		2.54		2.20		3.60

*GSP—Gross state product. \$Calculated by Standard & Poor's (see "Measuring Debt").

Sources: Personal income and GSP—Bureau of Economic Analysis; population—U.S. Census. Totals may not add due to rounding.

significantly improve highway conditions. They're spending only \$91 billion annually now. The society asserts what most American policymakers already know: infrastructure is critical for long-term economic growth, increasing GDP, employment, and household income, and that deteriorating infrastructure can be a drag on an economy.

We believe that finding the appropriate balance of funding infrastructure and other priorities will remain an ongoing challenge given the prospects for tepid economic and revenue growth and the potential for reduced federal funding. Many states have recently had large proposed infrastructure programs,

particularly for transportation, including proposals for restructuring or increasing taxes. While many of these proposals were eventually downsized or not enacted, we expect that these debates will continue.

Debt Issuance In 2012

Total municipal bond issuance in calendar 2012 for all levels of government was \$366.7 billion, slightly below the 10-year average of \$381.3 billion, but 28% greater than the level of issuance in 2011. However, nearly 62% of last year's issuance was for refundings, which is a historical high according to the Securities Industry and Financial

Markets Assn. New-money issuance in 2012 was, therefore, only \$141.2 billion, which is that category's lowest amount since at least 2004. We believe several factors are causing this relatively low issuance, including formal state debt limits and an overall environment of fiscal restraint.

Our data show that total tax-supported debt in the 50 states increased to \$488 billion in fiscal 2012, a \$13 billion, or 2.8%, increase from fiscal 2011. The fiscal 2012 growth was slightly higher than the 0.9% fiscal 2011 growth rate, but significantly lower than the 9.5% growth in fiscal 2010 and 8.3% growth in fiscal 2009. Much of the fiscal 2012

Table 3 | State Tax-Supported Debt Statistics For Fiscal 2012

State	Total (mil. \$)	Rank	Per capita (\$)	Rank	As % personal income	Rank	To GSP* (%)	Rank	Debt burden as % expenditures\$
Alabama	3,514	28	729	33	2.05	32	1.91	30	0.99
Alaska	869	42	1189	22	2.54	27	1.68	35	2.37
Arizona	5,648	22	862	30	2.40	30	2.12	29	1.90
Arkansas	943	40	320	46	0.92	42	0.86	42	1.65
California	90,225	1	2372	9	5.27	10	4.50	9	7.97
Colorado	2,737	32	528	38	1.17	39	1.00	39	1.54
Connecticut	18,116	7	5046	1	8.57	3	7.90	3	9.80
Delaware	2,313	34	2522	7	6.01	5	3.51	13	7.10
Florida	23,579	6	1221	20	3.03	20	3.03	17	8.32
Georgia	9,265	16	934	28	2.53	28	2.14	28	8.00
Hawaii	5,995	21	4306	3	9.78	1	8.28	1	10.97
Idaho	207	47	130	48	0.38	47	0.36	47	0.56
Illinois	33,464	4	2599	6	5.80	6	4.81	7	7.40
Indiana	2,975	30	455	40	1.23	37	1.00	40	3.21
Iowa	1,087	39	354	44	0.84	46	0.71	44	2.04
Kansas	3,346	29	1159	23	2.77	21	2.41	21	2.70
Kentucky	8,620	17	1968	11	5.62	7	4.97	6	4.00
Louisiana	5,489	23	1193	21	3.03	19	2.26	25	5.45
Maine	932	41	701	36	1.78	36	1.74	32	5.26
Maryland	10,211	12	1735	14	3.34	17	3.21	16	3.65
Massachusetts	32,909	5	4952	2	9.05	2	8.15	2	7.60
Michigan	9,885	14	1000	26	2.67	22	2.47	20	1.90
Minnesota	6,586	19	1224	19	2.65	23	2.23	26	4.90
Mississippi	5,192	24	1740	13	5.26	11	5.12	5	6.30
Missouri	4,340	25	721	34	1.85	35	1.68	34	3.38
Montana	342	45	340	45	0.91	43	0.85	43	1.61
Nebraska	25	50	14	50	0.03	50	0.03	50	0.07

increase was from states that already had relatively high levels of debt, such as California and New York, but Michigan's \$2.9 billion unemployment insurance bond issuance accounted for the largest increase in debt levels for any state in fiscal 2012. When measured against government spending, debt burdens remained essentially flat in fiscal 2012, aided by historically low interest rates (see table 1).

Deficit Financing

One of the key analytical differences between U.S. state debt and sovereign debt is that states issue debt mostly for capital projects, not operations.

However, the Great Recession slashed state revenue and resulted in occasional departures from this general rule, with a limited number of state-level deficit financings and debt restructurings. Illinois issued a total of \$7.2 billion of debt in fiscal years 2011 and 2012 to fund the state's current-year pension payments, reducing budgetary pressure by an equal amount. Arizona sold \$1.5 billion in appropriation debt and lottery bonds in fiscal 2010 to fund operations as revenues declined. In early fiscal 2012, Minnesota issued \$600 million of bonds backed by tobacco settlement revenues that it used for budgetary relief during the year. General obligation (GO)

bonds refunded these tobacco bonds in fiscal 2013. Connecticut issued nearly \$1 billion of deficit bonds for fiscal 2009 budgetary relief, and the enacted 2014 to 2015 budget authorized extending the repayment of the notes by two years. An additional \$750 million was authorized to fund the state's accumulated deficit on a generally accepted accounting principles basis. Ohio shifted about \$1.2 billion of debt payments due in fiscal years 2010 through 2012 to later years for budgetary relief. Wisconsin included debt restructuring to generate about \$212 million in savings as part of its larger set of solutions to close a projected \$3.46 billion deficit for the

Table 3 | State Tax-Supported Debt Statistics For Fiscal 2012 (continued)

State	Total (mil. \$)	Rank	Per capita (\$)	Rank	As % personal income	Rank	To GSP* (%)	Rank	Debt burden as % expenditures\$
Nevada	1,986	36	720	35	1.93	33	1.49	36	3.05
New Hampshire	735	43	557	37	1.18	38	1.14	37	4.05
New Jersey	35,907	3	4051	4	7.55	4	7.07	4	8.67
New Mexico	2,812	31	1348	16	3.84	15	3.49	14	1.48†
New York	51,514	2	2632	5	5.05	12	4.27	11	4.50
North Carolina	7,916	18	812	31	2.19	31	1.74	33	2.07
North Dakota	319	46	455	39	0.88	45	0.69	45	1.06
Ohio	11,378	11	986	27	2.51	29	2.23	27	2.57
Oklahoma	1,702	38	446	41	1.14	40	1.06	38	1.33
Oregon	6,428	20	1649	15	4.25	13	3.24	15	6.57
Pennsylvania	14,232	9	1115	24	2.56	26	2.37	23	4.40
Rhode Island	1,873	37	1783	12	3.96	14	3.67	12	7.85
South Carolina	4,241	26	898	29	2.62	25	2.41	22	5.03
South Dakota	126	48	151	47	0.35	48	0.30	48	2.30
Tennessee	2,406	33	373	42	0.99	41	0.87	41	2.40
Texas	9,522	15	365	43	0.88	44	0.68	46	1.40
Utah	3,786	27	1326	17	3.83	16	2.90	18	5.06
Vermont	504	44	805	32	1.87	34	1.85	31	2.31
Virginia	10,134	13	1238	18	2.63	24	2.27	24	4.12
Washington	16,743	8	2428	8	5.35	9	4.46	10	5.29
West Virginia	1,988	35	1072	25	3.11	18	2.87	19	5.26
Wisconsin	12,423	10	2169	10	5.35	8	4.75	8	3.14
Wyoming	33	49	57	49	0.12	49	0.09	49	0.20
Mean	9,750		1,355		3.11		2.70		4.15‡
Median	4,290		1,036		2.59		2.25		3.65‡

*GSP—Gross state product. \$Calculated by Standard & Poor's (see "Measuring Debt"). †Because the fiscal 2012 audited financial statements are not available, this figure is calculated using the fiscal 2012 budgeted general obligation and lease debt service and the budgeted general fund expenditures. This figure will not be comparable with the fiscal 2011 figure. ‡The mean and median for this column do not include the unaudited New Mexico figure.

Sources: Personal income and GSP—Bureau of Economic Analysis; population—U.S. Census, Bureau of Economic Analysis. Totals may not add due to rounding.

2011-2013 biennial budget. New Jersey and Kentucky have also refunded and restructured several debt issues to close general fund budgetary gaps in the past few years. However, we believe that deficit financings and restructurings will decline as the economy and state revenues improve.

Unemployment Insurance Fund Bonds

One unique use of state debt in recent years was for unemployment insurance fund bonds to repay federal loans that states used to pay unemployment benefits. Colorado, Idaho, Illinois, Michigan, and Pennsylvania have authorized or issued these bonds. The security on them varies, but typically involves a pledge of temporary special assessments on employers or other funds. An important determinant of the bonds' credit quality is whether the pledge to bondholders is a first lien or whether debt service is paid on parity with payments to the unemployed, which we view as a potentially weaker structure. For more details on these bonds, see *"Unemployment Insurance Fund Bonds Help States Pay Off Federal Unemployment Loans,"* published Sept. 6, 2012, on RatingsDirect. From a credit standpoint, we typically include these bonds as part of a state's debt burden. Because some states issued these bonds in fiscal 2013, our debt figures in the tables don't fully capture their impact on state debt levels. An important characteristic of these bonds is that although the amounts issued have been significant—Illinois, Michigan, Pennsylvania, and Texas each issued at least \$1.5 billion—the amortization schedule is typically rapid, which somewhat mitigates their negative impact on credit quality.

The State Debt Landscape For 2014

In our view, debt issuance will likely continue to be constrained in fiscal 2014 based on adopted budgets. With budget officials dealing with an improving but still-uncertain revenue picture due to sequestration, rising pension costs, and the implementation of the Affordable

Care Act, potential increases in debt service are being crowded out of state budgets. In addition to revenue and spending pressures, other areas that could significantly influence debt issuance through 2014 are changes in the municipal bond tax exemption and states' use of public-private partnerships (P3s) as a mechanism through which to fund large infrastructure projects.

We expect current state debt levels will remain moderate, and state new debt issuance in the near term will remain low by recent historical standards, despite low interest rates and large infrastructure needs. For the first half of 2013, state-level debt issuance was 17% lower than the same period in 2012, according to *Bond Buyer* market data. As the U.S. economy slowly improves and state budgets recover from the Great Recession, states' ability to service additional debt also strengthens. However, we believe that pressure to increase spending in Medicaid and to restore services cut during the recession will also mount. We also believe the current political environment emphasizing fiscal restraint will result in relatively muted debt issuance in the near term.

New federal proposals could increase borrowing costs and reduce issuance

President Obama's 2014 budget includes a proposal to cap the municipal bond interest exemption at 28% for individuals making \$200,000 or more per year—and couples making \$250,000 or more per year—from the current maximum rate of 39.5%. A more severe proposal would be to fully eliminate the exemption for municipal debt. Senators Baucus and Hatch, the leaders of the U.S. Senate Committee on Finance, have proposed to take a "blank slate" approach to tax expenditures that could result in the full elimination of municipal debt exemption, which was also recommended by the Simpson-Bowles Commission. Clearly, these proposals would make municipal bonds less attractive for many of their current buyers, which would lead to an increase in interest rates on new issues, everything else being equal. The president's budget also included a

proposal for America Fast Forward bonds, which would be taxable municipal bonds that receive a federal subsidy on the interest paid to bondholders, similar to Build America Bonds (BABs). However, the bonds would have a 28% subsidy rate, which is lower than the BABs subsidy and consequently could result in increased capital costs.

A report from the U.S. Conference of Mayors and other groups estimates that President Obama's proposed tax exemption cap would have increased debt service costs by about 15% over the past 10 years, and that full elimination of municipal bond tax exemption would have increased debt service by 45% over the same period. The National Governors Assn. estimates that taxing municipal bonds would raise borrowing costs by as much as 200 basis points and infrastructure costs by 25%.

We believe that given the current focus on fiscal restraint, the implementation of proposals that increase borrowing costs for states could reduce future issuance and therefore reduce some states' economic competitiveness due to inadequate infrastructure for transportation and other areas.

P3s offer an alternative infrastructure financing solution

Public-private partnerships (P3s) are a risk-sharing method that governments have used globally and are becoming more popular in the U.S. as states look for alternative ways of delivering large infrastructure projects. Currently, California, Florida, Indiana, Texas, and Virginia are some of the states that have participated in P3s. Under the P3 model, a partnership—consisting of a government and a private business—funds and operates an infrastructure project. The benefits of this structure are that it includes some level of private investment and that there is, typically, a transfer of construction and operating risk to the private party. These projects are done as either availability or volume-based projects. For availability projects, the government makes construction milestone payments and availability payments (payments for the

operation of the asset) in exchange for a new asset. In many, but not all, cases, these state commitments are backed by toll revenues, gas taxes, or appropriations, or a combination of these. Because they are often funded through a particular state's department of transportation and because of the private equity component, these issuances are often not constrained by a state's debt affordability models. We evaluate the nature of a state's obligation under the P3 agreements in determining whether we consider the obligation to be part of a state's tax-supported debt. For volume-based projects, the government receives an up-front payment in exchange for allowing the private entity to operate and collect the project revenues over the contract term.

In 2012, Standard & Poor's rated three new large transportation P3 issues. Although P3s have not yet gained widespread acceptance in the U.S., a few states have authorized P3 agreements for some additional large projects that are likely to be finalized in 2013 and 2014. Due to the size of projects financed under the P3 model, an increase in P3 activity could result in significant increases to debt levels for the private sponsor's joint ventures and government entities.

Measuring Debt

Debt analysis remains a primary focus of Standard & Poor's overall credit evaluation of states. Of particular importance are the annual costs of servicing debt compared with the funding of other long-term liabilities and operating costs for future tax streams and revenue sources.

Standard & Poor's debt ratio calculations for states aggregate all tax-supported obligations, including GO bonds, appropriation obligations, and special-tax bonds, such as sales, personal income, and gas tax bonds. In general, our calculation will not include debt that is issued for true enterprise or self-sustaining purposes, such as toll revenue bonds.

In addition, we do not include grant and anticipation revenue (GARVEE)

notes or GARVEE bonds in state debt calculations if they are payable solely from dedicated federal revenues. We also exclude bonds secured by tobacco settlement revenues from state debt calculations if they conform to our stress scenarios for rating such debt and are payable exclusively from settlement revenues. Contingent debt obligations that historically have not required state support are excluded as well.

We are including data on debt levels as of the last two fiscal years for which audited financial statements are available. Our *"U.S. State Ratings Methodology,"* published Jan. 3, 2011, provides details on the debt ratios that we include in our analysis of U.S. states.

Overall, despite much hand-wringing over state debt levels coming out of the Great Recession, the totality of our analysis makes it clear that states aren't barreling down the road to ruin. We believe that strong debt management policies, an environment of fiscal restraint, and increased pressure to reestablish service levels and to reduce taxes will contribute to limited debt issuance through fiscal 2014. States' efforts to refinance their debt for cost savings will provide some additional flexibility to issue debt while maintaining level debt service costs. We expect the already small group of states that have relied on deficit financings will decline further as the economy gradually improves. Absent widespread adoption of P3s to meet large infrastructure needs or additional issuance of unemployment compensation bonds, we expect debt levels to remain moderate—at least for now, although we expect that debate on funding infrastructure needs will continue. **CW**

For more articles on this topic search RatingsDirect with keyword:



Analytical Contacts:

Henry W. Henderson
Boston (1) 617-530-8314

John A. Sugden
New York (1) 212-438-1678