

Is it time to revisit PPP ratings?

Infrastructure investment analyst **Robert Bain** suggests it might be time to re-assess the credit quality of UK public-private partnerships – a mature, resilient sector characterised by low volatility, essentiality, strong government support under successive political regimes and few defaults

ANALYSIS OF THE Treasury's Private Finance Initiative (PFI) Signed Projects List¹ shows that the average maturity of PPP projects in the UK – taken from the date of financial close – is now over 8 years (see Table 1); this is past midway between the 5- and 10-year horizons employed by rating agencies when publishing cumulative default rates. The majority of rated PPPs sit clustered in the low investment-grade neighbourhood. This is no surprise. The transactions were specifically structured with this rating target in sight for economic reasons, including possible credit substitution by the (once thriving) monoline insurance industry. On a standalone basis, few break through the 'BBB' ceiling into 'A' territory (and none above it).

Only a small proportion of UK PPPs are publicly ratedⁱⁱ – around 5 percent (see *Rating agencies and UK PPP projects* panel p40) – and it is reasonable to assume that those that are presented to rating agencies are structured less aggressively and generally have stronger credit quality attributes. This assumption is supported by my analysis of PPP projects that sit in some bank portfolios (and have credit characteristics upon which rating analysts would frankly frown) – but let's keep the argument simple. Let's assume that all PPPs are of a similar credit quality and that 'BBB' is the correct rating.

The 5-year cumulative default rate for a 'BBB' issuer is fractionally above 2 percent, while the 10-year rate lies just above 5 percentⁱⁱⁱ. At 8 years, the default rate should be around 3.75 percent (see Figure 3, p41). The Treasury's List provides details of 667 UK PPP projects; the majority of which use similar project finance structures. Applying 3.75 percent to that portfolio infers that, by now, 25 PPP projects in the UK should have defaulted. That number would of course be higher if we accept that a proportion of bank-financed projects have weaker credit profiles, but let's run with the simple argument for now.

Getting details on defaulted PPP projects is not easy but, despite extensive research and many discussions with experienced project finance bankers, the number I calculate – using a broad definition of 'default' – falls a long way short of 25. In correspondence with the Treasury, they identified 6^{iv}; 8 if you consider Metronet BCV and SSL to have defaulted (which S&P does, but Moody's does not). Other than the Metronet transactions, which some argue were defaults on an agreement but not on debt^v, there have been no defaults at all in the rated PPP universe to date. Given the sector's credit history, set against published expectations for 'BBB' loan performance, and the critical mass of project exposure and financier experience accumulated over nearly 20 years, is it perhaps time to revisit PPP credit ratings?

IN THE BEGINNING

So why do PPP projects attract low investment-grade ratings? History may offer an explanation. Back in the early years of the PFI, UK credit analysts – faced with these new, highly leveraged, single asset project-financed transactions supporting long-dated, non-recourse debt – had limited experience on which to call and few comparators to use. Our American cousins, however, had witnessed such structures before; being employed as risk mitigants in the energy and utility sectors. This established the rules of the game, including setting the 'appropriate' credit metrics and benchmarks. Debt service coverage ratios (DSCRs) above 1.35x, for example, were typical basic requirements for investment-grade ratings; along with 12-month reserve accounts.

Today – with the benefit of hindsight – we understand that PPPs are very different from project-financed credits in the energy and utility sectors – such as US power plant assets (with much more operational risk and

weaker off-takers than PFI projects). That was not understood back in the mid-1990s. This, together with inherently conservative views about the unknown (and untested) suggested that, if investment-grade at all, low investment grade was probably the right call.

Then came that most powerful of cognitive biases; anchoring. Having rated some early PPP projects as 'BBB', it would be counterintuitive to have (and awkward to defend) different ratings on frankly similar deals. Inconsistency is not the friend of rating agencies. But the deals were not similar. The investment bankers' game was to push the

TABLE 1: MATURITY OF PFI PROJECTS

PFI Project Maturity (years)	Number of Projects
1	5
2	35
3	31
4	57
5	57
6	50
7	61
8	51
9	54
10	52
11	68
12	54
13	46
14	24
15	15
16	1
17	0
18	0
19	1
n/a	5
Average Maturity	8.2 Years
Total Projects	667

envelope with each successive project, squeezing the financials yet still achieving investment-grade ratings. Gearing increased; coverage and lock-up ratios fell; reserves shrank; construction risk mitigants thinned. Despite increasing comfort with the asset class, the continual stripping away of lender protection is a credit landscape against which ratings were unlikely to trend upwards.

Support for the anchoring theory comes from outside the UK and explains a number of apparent rating discrepancies commented on by others^{vi}. Some later PPP projects, particularly in Australia and Canada, were assigned higher ratings – yet look not dissimilar in terms of credit quality to their UK counterparts (in some cases weaker). Local analysts focusing on local markets and an investor appetite for ‘A’-rated paper were less constrained by earlier rating actions from across the globe and benefitted from the experience which comes with the passing of time.

In write-ups, greater emphasis appeared to be placed on the public-sector off-takers, their credit standing (typically ‘AAA’) and the incentives on them to ensure project success through adequate support. In terms of analytical approach, this moves PPPs away from standalone projects towards the ‘government-related entity’ (GRE^{vii}) end of the credit universe. GRE credit ratings are notched up from standalone project ratings to reflect their important public policy roles, typically in the delivery of social services. In most cases PPPs are exactly that; state-initiated public policy instruments delivering essential social services.

CORPORATE COMPARISON

In some roles credit analysts are exposed to both structured transactions (such as project finance deals) and corporate debt

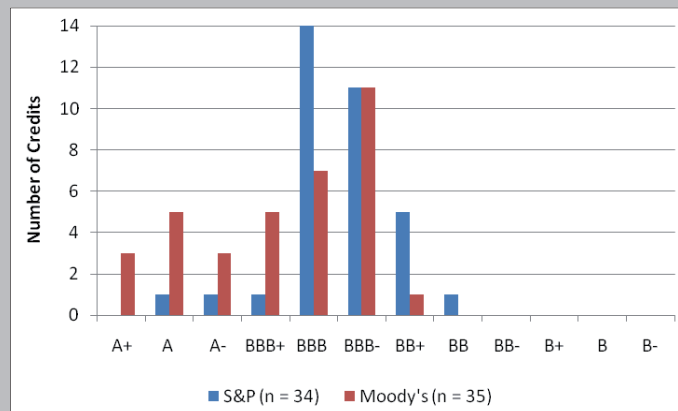
RATING AGENCIES AND UK PPP PROJECTS

Standard & Poor’s rates 34 PFI projects^{viii}. Moody’s rates 40^{ix}, five of which are not made public. 27 PFI projects are rated by both agencies. On average, for those 27, Moody’s

66 percent of Moody’s (public) PFI ratings and 75 percent of S&P’s PFI ratings respectively lie clustered in the low investment-grade (‘BBB’) rating category. However it is in the ‘A’ rating category where the agencies’ views diverge most.

Whereas 31 percent of Moody’s PFI credits sit in ‘A’ territory, only 6 percent of S&P’s credits share the same space. A key reason for this derives from a fundamentally different approach taken to rating transitions – a fact that is not immediately discernible from snapshots of rating distributions. Moody’s credit research repeatedly highlights the fact that – particularly for

FIGURE 1: RATING DISTRIBUTIONS FOR PFI CREDITS



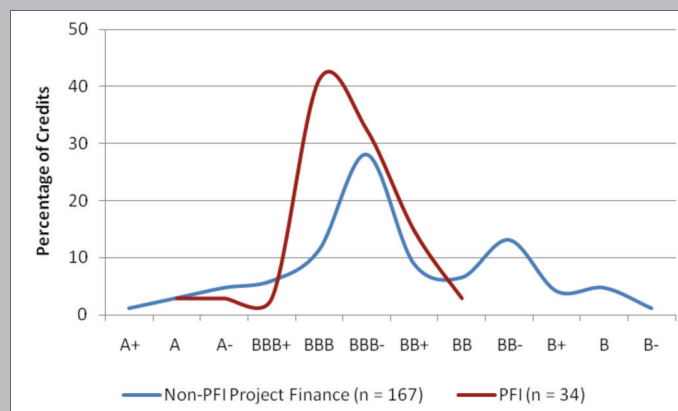
rates one notch higher. The rating distributions are shown in Figure 1.

The average underlying PFI rating from Moody’s lies between ‘Baa2’ (equivalent = ‘BBB’) and ‘Baa1’ (‘BBB+’). The average from

standard, availability-based PFI projects – the agency expects ratings to be upwardly adjusted on successful completion of construction; typically to ‘A’. Reflecting the perception of lower project risks post-construction, much of the bank market clearly thinks similarly. Witness margin step-downs in lending documentation and the trend for (lucrative) post-construction refinancing – before the 2002 introduction of compulsory gain-sharing with public sector promoters.

S&P does not share this view. The majority of their PFI credits initially assigned ‘BBB’ category ratings remain there. Conceptual arguments

FIGURE 2: RATING LANDSCAPES FOR S&P’S PROJECT FINANCE UNIVERSE



Note: Projects with local country ratings and monoline guarantees are omitted from this figure^x

Standard & Poor’s lies between ‘BBB-’ and ‘BBB’ (just one notch higher than the average for all of S&P’s non-PFI project finance ratings – see Figure 2).

can be (and are) advanced in support of either approach but two things are for certain. Empirical evidence would help strengthen such arguments – and both can’t be right.

issuers. This provides an interesting basis for comparison – and low investment grade corporate issuers simply look and feel different from many similarly rated PPPs. In the transport sector – which is my focus – this difference has widened given the increasing use of benign performance and availability-based payment mechanisms; thus shielding

the norm. However, credit quality can be assessed as a blend of business and financial strengths/weaknesses – and it's difficult to identify many business weaknesses in the case of post-construction PPP schools, office and accommodation projects, hospitals and availability-based road and rail projects. Just how aggressive do the financials

differentials that could be maintained by different credits (with contractual versus market-based income streams) at the same rating level. It would also suggest when the ratings – on PFI shadow toll roads and schools, for example – should draw distinctions.

THEY DON'T FALL OVER

In the context of PPP defaults, having to estimate post-default recovery (the complement of loss-given-default) for PPP projects is instructive. The simple approach is to (a) define the most likely default scenario; (b) calculate the discounted present value of – perhaps impaired – subsequent cash flows; then (c) divide this value by a measure of exposure (quantum of outstanding debt) at default. The starting point for the analyst is to define a credible default scenario. And here's the rub.

In a PPP project with market risk exposure – a toll road, for example – it is not difficult to imagine a default scenario. Asset under-performance (lower-than-anticipated traffic usage) has historically been a, if not the, default trigger in distressed post-construction road projects – with toll income failing to meet debt servicing obligations. But toll roads are in a minority. The vast majority of the PPP universe relies on state payment albeit with penalties for under-performance or non-availability.

It's one thing to talk glibly about penalty regimes in PPP projects, the discipline they instil and the incentivising role they play in terms of service delivery. It's quite another to wade through the contractual documentation of availability-based PPP projects to construct a realistic default scenario. Sure – the accumulation of sufficient penalty points for (non-trivial) contract violations will eventually do it. But when you translate this into 'real life', if it means hospital wards being closed for extended periods or entire wings of schools being out of service, buying in to this state of affairs seems a big ask. Especially when the scenario requires project participants to sit back, watching the escalating crisis, with zero intervention. Money is at risk and reputations on the line, so early warnings and cure periods would not be ignored. Remedial measures would be taken; stakeholders would – and

have to be for the blended view of creditworthiness to sit at 'BBB'?

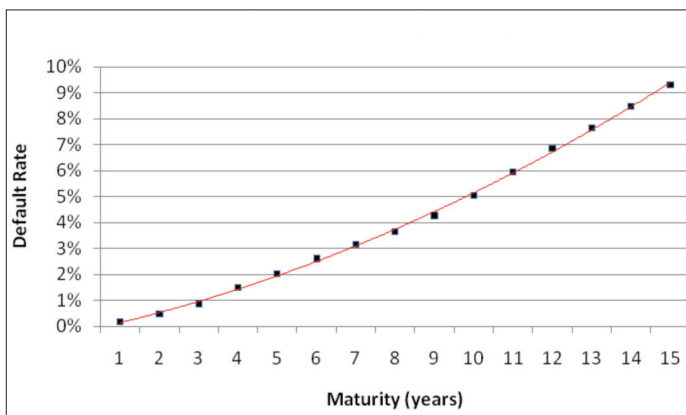
Perhaps there has been over-emphasis placed on the absolute values of coverage ratios, whereas more attention should be paid to coverage ratio volatility or absence thereof? As the illustrative example in Figure 4

demonstrates, if you halve cash flow volatility (standard deviation), you can significantly reduce the coverage ratio – in this case, from 1.3x to 1.15x – yet still retain the same probability of default (7.3% sitting south of 1.0x; the 20-year cumulative default rate for an 'A'-rated credit).

Regular contractual cash payments from 'AAA' or 'AA'-rated public-sector counterparties – none of whom have ever defaulted on their PFI payment obligations – to established, inflation-insulated projects operated

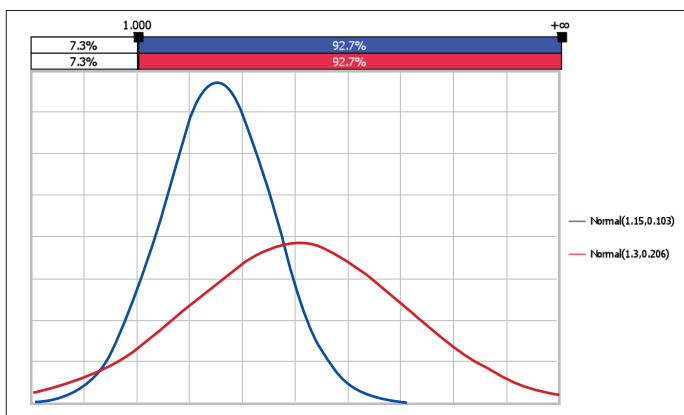
by experienced contractors (and easily-replaceable sub-contractors) suggests a degree of financial stability and predictability seldom observed in the world of corporate issuance. Historical analysis of cash flow stability from existing PFI projects would give greater insight into the coverage ratio

FIGURE 3: CUMULATIVE DEFAULT RATES (BAA2/BBB)



lenders from any market risk. Outside of transport it is very rare indeed for any PPP project to be exposed to the commercial and competitive risks – or operational challenges – that are part of the day-to-day business

FIGURE 4: CASH FLOW VOLATILITY AND PROBABILITY OF DEFAULT



of running, say, a bus and train operating company (FirstGroup and Stagecoach Group, for example, are also rated low investment-grade).

One counter-argument points to the 'aggressive' nature of PPP financing. High leverage and low coverage ratios are certainly

do – act. Sponsors' step-in rights are usually set to trigger at levels prior to lenders' step-in right triggers for this very reason.

From an analytical perspective, it is important that credits be subjected to stresses to demonstrate resilience – but these stresses need to remain commensurate with the rating. An 'AAA' credit, for example, should be bombproof; lenders insulated from almost all conceivable hostile conditions and downside scenarios. But you would not expect 'BBB' credits to survive 'AAA' stresses. This begs the question: exactly what situation or set of circumstances – commensurate with low investment-grade – would put a post-construction availability or performance-based PPP into default? If you have the financial model in front of you and the contract documents to your side, yet you still find it difficult to default the project – what does that say about its credit rating? Distance to default is an important concept in credit analysis.

JUSTIFY THE RATINGS

One of the most valuable services that rating agencies provide to the investor community is the publishing of generally high-quality credit research pieces. Recently, each of the 'big three' agencies has published articles on project finance default, recovery or both. However, this is of limited use to the PPP industry. Project finance is employed in a myriad of sectors – often as a risk mitigant in speculative, technology-driven (sometimes emerging-territory) investment ventures such as telecoms, power, oil and gas exploration, and mineral extraction. Where is the common

credit ground with social infrastructure PPPs in the UK, Canada or Australia? Furthermore, as PPPs are but a small subset of the rated project finance universe (UK PFI projects represent 16 percent of S&P's project finance portfolio – see Figure 5) PPP-specific credit traits and trends can easily be masked in any

How do they stack up against project finance transactions in other sectors? How does recovery compare? What is the evidence base used to justify the current ratings? I'm sure such an article would attract a wide audience.

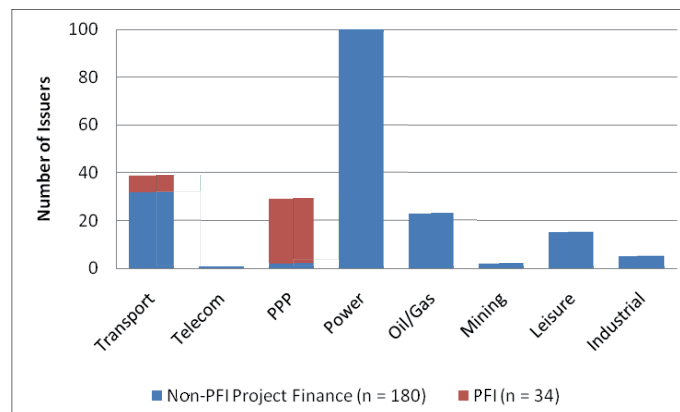
The primary focus for the research reported here has been availability or performance-based PPP projects in the UK. The research examined the sector from a number of different perspectives: historical performance, analytical heritage, contractual robustness and comparisons with other rated entities. Various parties were consulted, and many credit commentaries, rationales and rating reports were reviewed – yet the conclusion is the same. In the absence of a well-grounded, evidence-

based defence, PPP ratings simply look conservative. Very conservative.

The issues raised here won't go away. With the passing of time, more UK PPPs will celebrate their 10th anniversaries – on their way to 15. By then, as Figure 3 (p41) demonstrates, the default rate for 'BBB's will be close to 10 percent. That's around 60, maybe 70, PPP defaults – a mammoth hike from today's estimates. Given that the sector has survived successive political changes and the deepest financial and economic crisis that most of us have witnessed, precisely where are these defaults going to come from? ■

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FIGURE 5: S&P'S PROJECT FINANCE UNIVERSE BY SECTOR



aggregate analysis of project finance loan performance.

PPPs are different. They deserve to be treated as an asset class of their own. Launched back in the mists of time before Yahoo was born, Nick Leeson was arrested and the DVD arrived, it would not seem unreasonable to expect some specific statistical research and in-depth analysis – not just descriptive narrative – from the rating agencies. Gone are the days when reliance had to be placed on conjecture and theory; when an absence of visibility supported a fundamentally conservative stance. They could start with international empirical evidence. How have these assets (rated and non-rated) performed? How many have defaulted and under what circumstances?

NOTES

¹ http://www.hm-treasury.gov.uk/ppp_pfi_stats.htm (data provided up to and including February 2010).

² Rating agencies are exposed to considerably more PFI projects as they confidentially rate the underlying bank-financed PFI assets in CLOs. This provides analysts with a much broader evidence base from which to draw.

³ Emery K and Ou S (2010), *Corporate Default and Recovery Rates, 1920 – 2009*, Moody's Investor Service, February 2010, New York.

⁴ Email from Infrastructure UK dated 1st July, 2010.

⁵ On July 6, 2009, all Metronet bonds were repaid at par together with all accrued interest. Tennant J and Emery K (2009), *Default and Recovery Rates for Project Finance Debts, 1992 – 2008*, Moody's Investor Service, November 2009, New York.

⁶ Robinson R and Archer A (2010), *PFI/PPP Report: Developing a Market for Unwrapped*

PFI/PPP Bonds – the Canadian Example, Bridgecourt & Company, January 2010, London.

⁷ The definition of government-related entity includes "providers of important public infrastructure (prisons, social housing, schools)", Dimitrijevic A et al (2009), *Enhanced Methodology for Rating Government-Related Entities and Assessing the Potential for Extraordinary Government Intervention*, Standard & Poor's, January 2003, New York.

⁸ Simonson A et al (2010), *Global Project Finance Sector Still Resisting Economic Pressure*, Standard & Poor's, June 2010, New York.

⁹ Verhaeghe J et al (2010), *Sector Outlook on EMEA PFI/PPP*, Moody's Investor Service, October 2010, London.

¹⁰ A small number (less than 4%) of project finance credits with ratings below 'B-' have also been omitted from Figure 2.