Municipal Bond Insurance

Re-Poised for Growth

Fixed Income Strategy

September 16, 2016

- No longer enjoying the 50% plus market share of the pre-recession years, bond insurance is now about 6% of new issuance.
- Current low interest rates and tight credit spreads are a constraint on expansion of insurance use.
- Three insurers are active underwriters with market leader Assured (53%) and newcomer BAM (44%) capturing most new business, while National (3%) has yet to fully regain its footing.
- We look at three other insurers that are operating in run-down mode with most municipal claims being paid amidst continuing uncertainty.
- Puerto Rico exposures of Assured and National are significant but manageable, which we expect to be increasingly evident as Puerto Rico's restructuring plays out in coming months and years.
- We remind investors of the important role insurers played in protecting (and paying P&I to) bondholders in distressed situations such as Detroit, Stockton, Harrisburg and Puerto Rico.
- We believe that acceptance and use of bond insurance will grow when and if interest rates rise and very tight credit spreads widen.
- For a different perspective we've included comments on Assured Guaranty and MBIA corporate bond debt from Analyst Jody Lurie.

We review bond insurance and its relevance and value to municipal bond investors. To add perspective, we also include credit comments that should be of interest to investors in corporate bonds issued by Assured and MBIA.

The Challenge of Low Interest Rates

On the surface, it seems that the municipal bond insurance industry is in a rut. Compared to the pre-financial crisis decade, when bond insurance was ubiquitous and half of each year's new issue volume was wrapped by insurance, the business seems almost moribund, with market share of new issuance hovering in the 6% range in recent years. As difficult as the current low rate environment is for investors, low rates have an even more pronounced impact on bond insurers and their ability to write new business.

For starters, low rates constrain returns on the insurers' investment portfolios, impacting profitability. The overwhelming majority of Assured Guaranty's $10.9 billion of investments and cash, for example, is comprised of fixed rate securities (municipal bonds, corporate bonds, US Treasury and agency securities, and mortgage backed securities). Lower interest rates means lower interest earnings.

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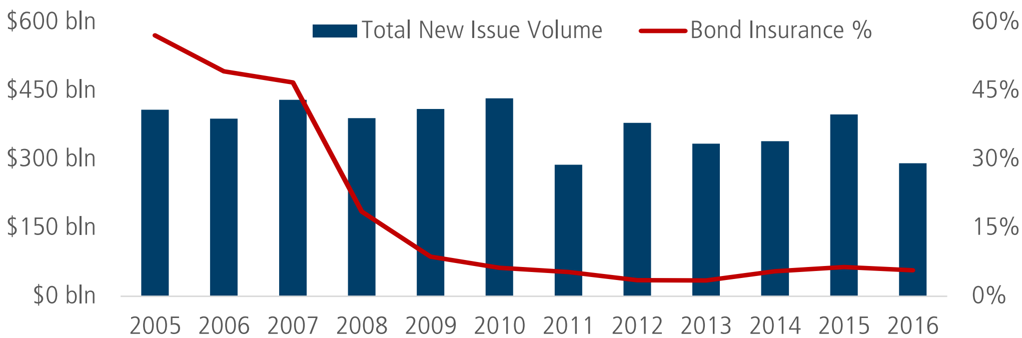
Bond Insurance Market Share is Stagnant in Current Low Interest Rate Environment



Source: Janney Fixed Income Strategy; Thomson Reuters Bond Buyer

See page 12 for important information regarding certifications, our ratings system as well as other disclaimers.

It is less palatable for an investor to give up 20 basis points of yield in exchange for insurance if this lowers the yield from 1.6% to 1.4%, than it was in years gone by when the tradeoff might have been 4.6% with insurance vs 4.8% without.

As the only insurer to survive the 2007-2008 financial crisis relatively unscathed, Assured owned the new business insurance market from 2009 until BAM came along in late 2012.

The bigger challenge comes with credit spread compression, which often accompanies low interest rates as investors are willing to accept increasingly more risk to pick up ever smaller slices of incremental yield. This is particularly evident among institutional investors, who typically have in house research capability, and so choose to forgo the bond insurance wrapper in order to attain a higher yield. Individual investors, stretching for yield, often decide to accept BBB or A rated municipal bonds without insurance to maximize return. Put another way, it is less palatable for an investor to give up 20 basis points of yield in exchange for insurance if this lowers the yield from 1.6% to 1.4%, than it was in years gone by when the tradeoff might have been 4.6% with insurance vs 4.8% without. This largely explains why bond insurance market share is stuck at around 6% of new issuance. If and when interest rates rise, the bond insurance industry should see an increase in volumes.

The Bond Insurance Value Proposition

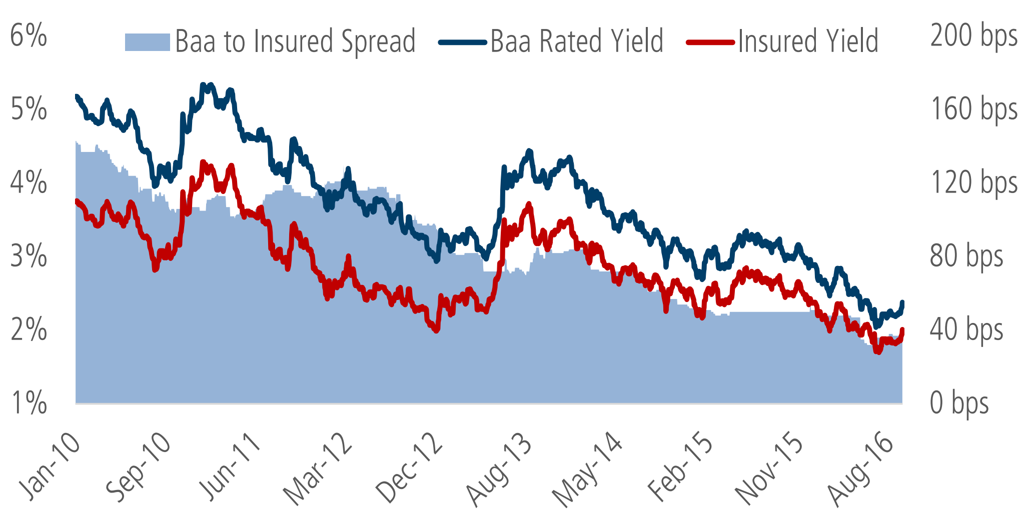
As noted, in exchange for the added security and reduced risk of a bond insurer guaranty, the investor accepts a lower return. Bond issuers (or underwriters) typically pay a premium (usually up-front) in exchange for the insurance wrapper. Using present value calculations this dollar premium can be converted into an annual basis point cost. If the premium cost to insure a Baa rated municipal utility district is equivalent to 40 basis points and the borrower can save 40 basis points of interest expense by marketing its issue with the insurance wrapper and associated higher rating, the situation is break even for the issuer. If the issuer can save 50 basis points, insurance is the right choice, but if the savings is only 30 basis points, no insurance is the correct financial decision.

This decision to use insurance was easier when the yield differential between an insured bond and a Baa rated bond was in the 100 basis point neighborhood, but in today's tight spread environment, insurance often makes little economic sense.

Three Insurers Still Standing

Only Assured Guaranty (Assured), National Public Finance Guarantee (National) and Build America Mutual (BAM) are active underwriters of new municipal financial guarantee business. As the only insurer to survive the 2007-2008 financial crisis relatively unscathed (BHAC was active for about 12 months in 2008-2009), Assured owned the new business insurance market from 2009 until BAM came along in late 2012. BAM, with its public finance-only focus, lack of distressed legacy exposures and unique mutual business model, carved out significant market share almost immediately, insuring $4.5 billion in 2013 for a 38% share of the bond insurance market. In early 2014, National was upgraded to AA- from A by S&P and to A3 from Baa1 by Moody's, but these ratings were not quite sufficient to support National's effort to re-engage with the new issue market against two competitors with slightly higher ratings and less Great Recession-related baggage.

Very Narrow Credit Spreads Limit Use of Bond Insurance



Source: Janney Fixed Income Strategy; Thomson Reuters MMD

We should note that in this report, we generally treat each insurer as a single entity, but the organizations can be far more complicated. Assured Guaranty, for example, is actually three active insurers plus a reinsurer. Moody's considers AGC and AGM separately, rating AGC at A3 and AGM at A2. S&P looks at the consolidated enterprise, and so rates both AGC and AGM (as well as MAC) at AA. Kroll Bond Rating Agency, a relatively new (2010) entrant to the ratings business, rates Assured's AGM and MAC subsidiaries as well as National at AA+.

Acquisitive Assured

Assured Guaranty holds the important distinction of being the only pre-recession municipal bond insurer to maintain ongoing operations, including the underwriting of new business, before, during and after the recession.

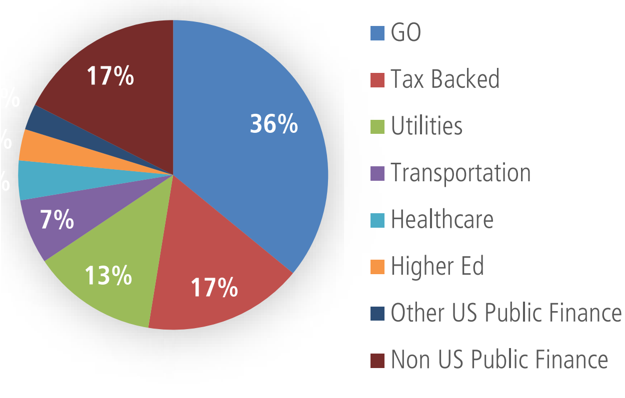
Assured Guaranty holds the important distinction of being the only pre-recession municipal bond insurer to maintain ongoing operations, including the underwriting of new business, before, during and after the recession. Like other pre-recession AAA rated bond insurers, Assured Guaranty had exposure to non-municipal guarantees of securities such as residential mortgage backed securities, collateralized debt obligations and other structured securities, many of which became problematic during and following the 2008 financial crisis. As other insurers were downgraded in 2008 from AAA to low investment grade (MBIA, Ambac) or even junk (FGIC, CIFG, Syncora), Assured weathered the storm best, finishing 2008 with Aa2/AAA/AAA ratings. Although ratings were subsequently lowered further, S&P's rating never fell below the AA category.

Taking advantage of the atmosphere of fiscal stress, Assured announced purchase of AAA rated insurer FSA in November 2008, completing the transaction in July 2009. The merger tripled Assured's book of par insured to $640 billion, at the same time increasing claims paying resources from $5.0 billion to $12.5 billion. Non-municipal exposure as a percent of net par fell from 52% to 34%, leaving about 2/3 of total par exposure in the more stable public finance sector. In the same time period, October 2008, Assured assumed, through reinsurance, about $13 billion of par exposure from CIFG. Subsequent acquisitions include Radian, which was acquired by Assured in April 2015, adding about $14 billion of insured par, and most recently, in July 2016, purchase of CIFG, including remaining exposures such as a few Puerto Rico wraps which were not included in 2008 reinsurance agreement.

See page 10 for comments on Assured Guaranty's corporate credit quality

Currently, Assured Guaranty Ltd., the parent, operates through four subsidiaries. The legacy insurer is AGC (A3/AA/NR), which is also the subsidiary that assumed Radian and CIFG insurance obligations. The second subsidiary, the FSA acquisition, became AGM (A2/AA/NR), which writes most new business, and benefits from a slightly higher Moody's rating. The third and newest subsidiary, Municipal Assurance Corp or MAC (NR/AA/NR), a municipal only insurer, was launched in July 2015, probably in response to Build America Mutual's (BAM) emergence as a strong competitor following its 2012 debut. Like BAM, MAC eschewed a Moody's rating and focuses entirely on US public finance. The fourth subsidiary is Assured Guaranty Re, a reinsurer with about 84% of its exposure in the public finance sector.

Assured's Insured Portfolio Sector Distribution



Source: Janney FIS, Assured Financial Supplement June 30, 2016

Assured's Largest Insured Exposures

Issuer	Par Insured (mln)	Internal Rating
New Jersey	$4,713	BBB+
California	$2,242	A
Illinois	$2,126	BBB+
Hydro-Quebec, Canada	$2,037	A+
New York City, NY	$1,948	A+
Puerto Rico	$1,821	CCC
Massachusetts	$1,771	AA
New York State	$1,756	A+
Los Angeles UFSD, CA	$1,615	AA-
Pennsylvania	$1,611	A
Chicago, IL	$1,606	BBB+
Philadelphia, PA	$1,510	BBB+
Wisconsin	$1,444	A+
Miami Intl Airport, FL	$1,401	A
Puerto Rico Hwy & Trans Auth	$1,275	CCC-

Source: Janney FISR, Assured Financial Supplement June 30, 2016

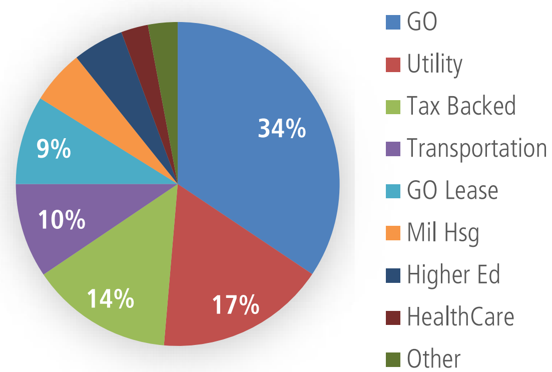
In 2009, MBIA announced a restructuring plan centered around formation of a public finance only insurance subsidiary, National Public Finance Guarantee,

See page 9 for comments on MBIA's corporate credit quality.

NEW NATIONAL

In December 2007, as the Great Recession storm clouds were darkening, MBIA was the leading insurer of municipal bonds, covering about $431 billion par value of municipal bonds, well over 10% of municipal bonds outstanding. Like other monoline insurers in that era, MBIA also wrapped non-municipal securities, with the municipal portion of exposures adding up to only 57% of the total. Included in the non-municipal portion of MBIA's exposures were $163 billion of collateralized debt obligations (CDOs) and $54 billion of mortgage backed securities (MBS). As time passed and the dimensions of the growing fiscal crisis emerged, many of the non-municipal exposures deteriorated and failed. With $14.6 billion in claims paying resources at the end of 2007, MBIA had paid out only $1.3 billion in claims since inception in 1974, but the financial crisis took a toll, leading to MBIA paying $1.5 billion of claims in 2008 and $3.0 billion in 2009. Most of the claims were related to defaulted mortgage backed securities wrapped by MBIA. In contrast, MBIA was called upon to pay claims on only $54 million of public finance debt service in 2007 and 2008.

National's Insured Portfolio Sector Distribution



Source: Janney FISR, National Operating Supplement June 30, 2016

National's Largest Insured Exposures

Issuer	Par Insured (mln)	Internal rating
California	$1,760	a1
Puerto Rico Elec Power	$1,354	d
New Jersey EDA - Pension Ob	$1,348	a3
Massachusetts	$1,322	a1
Oregon School Boards Assoc	$1,307	aa3
New Jersey Trans Trust Fund	$1,265	a3
Long Island Electric Power	$1,222	a3
Army Hawaii Family Housing	$1,135	aa2
Camp Pendleton Quantico Hsg	$1,061	aa2
New York City TFA	$1,037	a2
Illinois Regl Trans Auth	$1,036	aa3
Chicago, IL	$989	bbb2
San Diego Family Hsg	$989	aa1
Puerto Rico	$985	d
Chicago Board of Ed	$918	bbb3

Source: Janney FISR, National Operating Supplement June 30, 2016

In 2009, MBIA announced a restructuring plan centered around formation of a public finance only insurance subsidiary, National Public Finance Guarantee, into which it placed existing municipal bond exposures along with claims paying resources of $5.5 billion, leaving the non-public finance exposures and $6.5 billion of claims paying resources with subsidiary MBIA Insurance Corp. This attempt to insulate the public finance (municipal) business from the more problematic MBS and CDO exposures met with litigation from 18 banks that fought to stop the restructuring. In Spring 2013, the last of these bank lawsuits was settled, confirming National's status as a separately capitalized subsidiary, triggering rating upgrades from both Moody's and S&P.

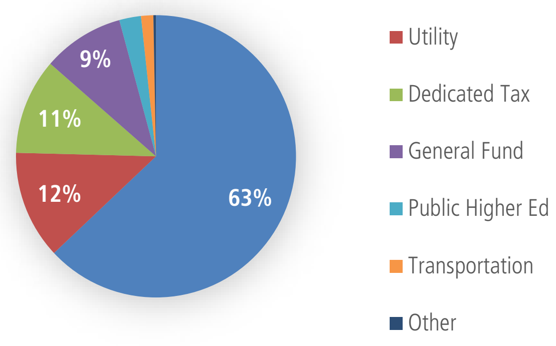
With legal challenges behind and commensurate ratings in place (A3/AA-/NR), National was poised to reclaim its role as an active municipal bond insurer, but multiple factors have delayed market acceptance, which of course is key to re-entering the arena. The A3/AA-/NR rating is a notch below Assured (A2/AA/NR) and BAM (NR/AA/NR), so unless the insurance premium for an issue is significantly lower than competitor's quotes, most investors and underwriters choose the higher rated insurers. Puerto Rico exposure, as explored in more detail below, has also slowed National's ability to re-enter the market as an active underwriter. In the three years since litigation challenging restructuring was resolved, National has insured about 65 new issues totaling about $1.2 billion in par value, equal to just under 2% insurance market share in 2014 and 2015, rising to almost 3% share in the first half of 2016.

BAM – The Mutual Model

Unlike the other two active insurers, and as the name indicates, BAM is structured as a mutual company, essentially owned by policyholders (bond issuers) rather than stockholders.

Build America Mutual (BAM) came on the scene in late 2012, grabbing a significant portion of new issue market share (38%) in 2013 and growing it to 44% in the first six months of this year. Unlike the other two active insurers, and as the name indicates, BAM is structured as a mutual company, essentially owned by policyholders (bond issuers) rather than stockholders. Besides its mutual structure, BAM is unique in that it offers insurance on only core US state and local government issuers, avoiding healthcare, private higher education and other peripheral sectors of the US municipal market. Although the company is relatively new, its management has extensive industry experience. Senior executive management (Chair and CEO) are alumni of FSA and its successor Assured, where they served in similar leadership roles.

BAM's Insured Portfolio Sector Distribution



Source: Janney FISR, BAM Operating Supplement June 30, 2016

A key advantage to being the new kid on the block is lack of legacy problems.

Of course a key advantage to being the new kid on the block is lack of legacy problems. Harrisburg, Stockton, Detroit, and Puerto Rico are all missing from BAM's list of exposures. BAM's narrower core municipal focus keeps it out of the riskier (although potentially more profitable) healthcare and non-public higher education sectors. BAM lists no below investment grade exposures (BIG), whereas 4.5% of Assured's and 2.8% of National's par exposure is BIG (as defined by insurers' internal ratings). A disadvantage of being a startup is size, with BAM's claims paying resources of $617 million dwarfed by Assured ($11.9 billion) and National ($4.7 billion).

BAM's Largest Insured Exposures

Issuer	Par Insured (mln)	Internal rating
New Brunswick, NJ	$164	A
New Jersey	$149	A-
Monroe Countyy, NY	$125	A-
Beaver County, PA	$121	A-
Marysville Sewer, OH	$116	A-
Hamden, CT	$113	A-
Greenwood SD 50, SC	$112	A-
New Jersey Trans Trust Fund	$110	A-
Elk Grove USD, CA	$110	A+
Val Verde USD, CA	$105	A
Tulsa Airport, OK	$105	A-
Shreveport, LA Wtr and Sew	$104	A-
Sacramento Fin Auth, CA	$104	A
Jersey City, NJ	$100	A+
West Clermont Loc SD, OH	$99	A

Source: Janney FISR, BAM Operating Supplement June 30, 2016

Insurers in Run Off Mode

Besides the three active bond insurers (and Berkshire Hathaway) there are several financial guaranty companies that are now in run off mode, writing no new business, but managing remaining exposures.

Ambac – Former AAA rated insurer, Ambac, filed for bankruptcy in November 2010, emerging 2 ½ years later. Under supervision of the Wisconsin Insurance Commissioner, Ambac is undergoing rehabilitation, which included establishment of a segregated account into which more toxic exposures such as those relating to credit default swaps, mortgage backed securities, certain student loan debt, and one particular distressed municipal issuance for Las Vegas Monorail, were placed. Other than the LV Monorail and a few student loan issues, claims submitted to Ambac for municipal bonds have been paid, including most recently, those on defaulted Puerto Rico bonds. Ambac has $8.7 billion in claims paying resources, but distribution of these funds is subject to oversight and approval from regulators including the Wisconsin Insurance Commissioner. Total par value exposure is $94.4 billion, about 60% of which is public finance. Considering that Ambac remains in rehabilitation and has significant deferred claims associated with exposures within the segregated account, there is no assurance that these resources will be available in the future to pay claims.

Janney

In September 2008, $188 billion of FGIC's public finance insured par outstanding was reinsured by MBIA.

Syncora (XLCA) – By late 2008, losses and claims had pushed Syncora's policyholders' surplus to negative $3.8 billion, leaving Syncora unable to meet the minimum policyholders' surplus required by New York State law. The company entered into a master transaction agreement (MTA) with many of its financial counterparties under which many exposures including credit default swap contracts and mortgage backed securities, were restructured, commuted, or defeased. Despite its inability to fully pay claims on much of its exposure, Syncora has paid valid claims on municipal bonds as, when, and in the amounts due, including most recently claims on Puerto Rico issuers. Syncora has $2 billion in claims paying resources and $24.6 billion of par value exposure, of which 56% is public finance. In 2015 year end financials, Syncora noted, "there is not substantial doubt about the ability of the Company to continue as a going concern", but further noted that "the company remains exposed to significant risks and uncertainties."

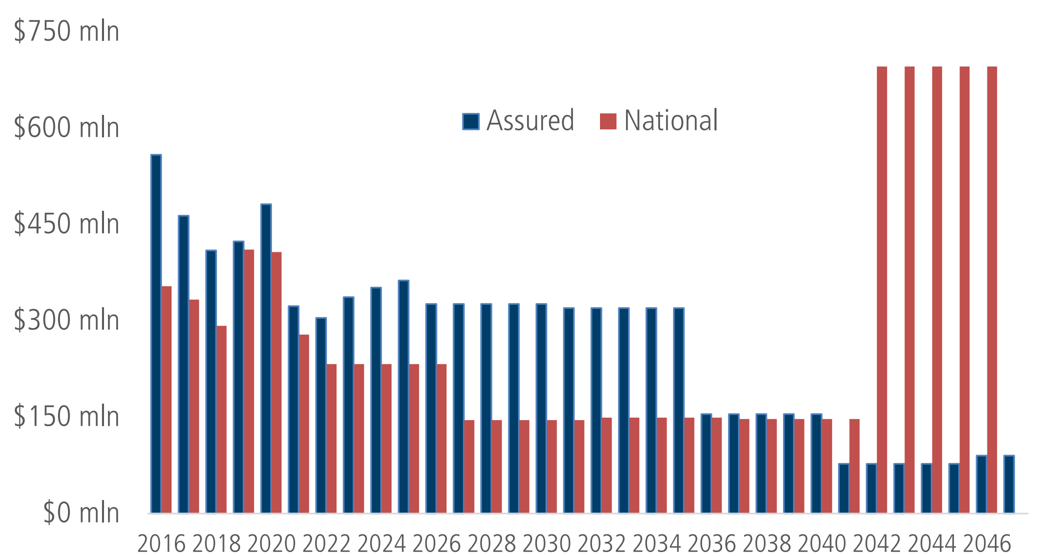
FGIC – In 2007-2008, claims against exposures insured by FGIC, primarily related to CDO and MBS exposures, eroded FGIC's capital base to the point where it was downgraded to below investment grade. In September 2008, $188 billion of FGIC's public finance insured par outstanding was reinsured by MBIA, reducing FGIC's direct municipal exposure to $19.6 billion, but leaving $73 billion of structured finance, such as CDO and MBS, and international exposures. In November 2009, FGIC was ordered to cease writing new business and to suspend payment of claims. FGIC was placed into rehabilitation (the insurance version of restructuring/bankruptcy) by the New York State Superintendent of Insurance in June 2012. FGIC Corp, the parent, filed for protection under Chapter 11 of the bankruptcy code in August 2010, emerging from bankruptcy in April 2013. In June 2013 the rehabilitation plan was approved with an initial cash payment on claims of 17%, later increased to 21% and most recently to 22%, which is the percentage FGIC paid on Puerto Rico claims resulting from the default by many Puerto Rico issuers earlier this year.

Puerto Rico Exposures

Puerto Rico's fiscal crisis has certainly had an impact on insurers. Of the three active insurers, only BAM can claim no exposure to Puerto Rico. As of June 30, 2016, Assured Guaranty insured $5 billion net par value of Puerto Rico bonds, which grows to $8.5 billion if future interest (including zero coupon accretion) is included. National's gross par on that date was $4.3 billion, which totals $8.9 billion with future interest. These are big numbers, especially in the context of the insurers' claims paying resources, which are $11.9 billion for Assured and $4.7 billion for National (6-30-16). The exposures are less intimidating when we consider that bond insurance guarantees timely payment of principal and interest only when due.

Assured and National Puerto Rico exposures are less intimidating when we consider that bond insurance guarantees timely payment of principal and interest only when due.

Assured and National Exposures to Puerto Rico Are Manageable



eSource: Janney Fixed Income Strategy, Assured and National Financial Supplements

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www.janney.com

In 2017 guaranteed debt service on Puerto Rico bonds is $464 million for Assured and $333 million for National, much more digestible numbers than the total Puerto Rico exposure levels. Once the restructuring dust settles in future months or years, recovery on Puerto Rico debt will almost certainly be much better than zero, so claims payments by the two insurers should be a fraction of the annual debt service exposure. To add perspective consider that in 2015, Assured generated net income of $1.1 billion including $423 million of income on its investment portfolio and National had net income of $284 million, $115 million of it from investments. Both insurers have sufficient resources to make payments on Puerto Rico claims.

Assured, with a stronger capital base and leading market share of new business, is certainly in the stronger position to work through Puerto Rico defaults.

Assured, with a stronger capital base and leading market share of new business, is certainly in the stronger position to work through Puerto Rico defaults. National's position is less strong, since it has a smaller capital base and has yet to significantly penetrate the new business market to set the stage for future revenue generation, but we would not be surprised to see National's market acceptance improve and market share grow once Puerto Rico's bond restructuring is accomplished and there is more certainty about National's actual future payments on Puerto Rico claims.

Ambac and Syncora have met Puerto Rico claims in full thus far but we consider their longer term ability to continue payments in some doubt (particularly in the case of Syncora) since they are in run off mode and are generating no new business. FGIC is already paying less than full amounts on claims presented (22%).

An Under-heralded Success Story

Bond insurance was a much easier sell to investors in the pre-recession heyday of AAA ratings and higher interest rates. In 2007 there were seven AAA rated bond insurers (Ambac, Assured, CIFG, FGIC, FSA, MBIA, XLCA) with more than 50% of the new issue market. By 2009, only Assured Guaranty, comprised of Assured Guaranty Corp and Assured Guaranty Municipal Corp (formerly FSA), was writing new business (Berkshire Hathaway Assurance Corp entered the market as a AAA rated insurer in 2008 and stopped writing business about a year later). The legacy of those insurers is impressive. The Great Recession preceded noteworthy municipal defaults and bankruptcies including Stockton, CA; Detroit, MI; Harrisburg, PA; Jefferson County, AL; and more recently and most significantly for municipal investors, Puerto Rico. Bond insurers wrapped many of the bonds issued by those insurers.

The legacy of bond insurers as it relates to municipal bonds is impressive.

- **Harrisburg** – Bondholders who owned Harrisburg debt issued to finance the city's incinerator project (about $270 million) received timely payments from Assured Guaranty (and Dauphin County). Although based on the Harrisburg Strong Plan Restructuring, Assured Guaranty's initial recovery was only 60% (per Moody's), bondholders received 100% of payments on time. Similarly, Ambac has made timely principal payments on maturing general obligation zero coupon bonds, even though Harrisburg is making these payments on an extended amortization schedule.
- **Stockton** – Assured was the largest insurance creditor with $281 million of exposure through two 2007 deals, including pension obligation bonds. Assured is taking a haircut of 40% to 50% on the pension obligation bonds, although recovery could improve based on contingent payments. On a 2007 lease backed issue, Assured ended up owning an office building for which the city pays rent. Bondholders were paid all principal and interest as scheduled on the Assured wrapped debt, as well as on smaller exposures of National and Ambac.
- **Detroit** – Detroit is the largest municipal bankruptcy to date (although Puerto Rico will not likely use the federal bankruptcy code, the size of its recent and likely future defaults and debt restructuring will dwarf Detroit's debt adjustment totals). Detroit's total bond debt exceeded $8 billion. Water and sewer revenue debt totaled about $5.4 billion with another $1.4 billion in pension obligation bonds and $1.1 billion in general obligation bonds. Based on Detroit's final Plan of Adjustment, water and sewer revenue bondholders were largely unimpaired, Unlimited Tax GO bondholders recovered 73%, Limited Tax GO bondholders had 42% recovery and pension bond holders (COPs) received only 12% recovery (some GO bonds secured by state aid payments received 100%). Five bond insurers backed most of the debt, with Assured and National wrapping the majority of water and sewer bonds, FGIC and Syncora backing the pension obligation bonds and multiple insurers, including Ambac, guaranteeing the majority of general obligation bonds. With the exception of FGIC backed pension obligation issues, bondholders of insured Detroit debt were paid scheduled principal and interest.

In all three situations, bond insurers were aggressively involved in negotiations leading up to final settlements. In the case of Detroit, Assured and National agreed to wrap certain new bond issues as part of the restructuring of Detroit's water and sewer system. In Harrisburg's plan, Assured backed certain new bonds issued to finance the long- term lease of the city's parking system.

Poised for Growth

Bond insurance plays an important role for many municipal investors. We expect that role to expand, along with market share, if not immediately, then in coming months and years, especially if and when interest rates rise and credit spreads widen. One side effect of a slower new business pace is that leverage ratios are improving. As we've noted in other publications, refundings are a key driver of municipal new issue volume in recent years. When a 30 year insured municipal issue is retired after 10 years due to refunding, the remaining unearned premium is earned in one stroke. Furthermore, the liability of the insured exposure disappears. Since par value of refundings and maturities has been exceeding the pace of new business, total insurer exposures have been dropping at a faster rates than claims paying resources. For this reason, capital ratios have been improving.

In Harrisburg, Stockton and Detroit situations, bond insurers were aggressively involved in negotiations leading up to final settlements.

For example, Assured's par exposure has dropped by 36% from $558 billion in 2011 to $359 billion at year end 2015. During the same period, claims paying resources have fallen from $12.8 billion to $12.3 billion, a 4% decline, reducing leverage in the form of the claims paying resources ratio from 43:1 to 28:1. Since it has written little new business, National's ratio improvement is more dramatic. National's par exposure dropped by 61% from $398 billion to $157 billion, while claims paying resources fell by only 18% from $5.7 billion to $4.7 billion, lowering the ratio from 70:1 to 33:1.

After a difficult post-recession transition, bond insurance remains an important tool for individual investors, although the days of 50% market share are increasingly distant. Insured bondholders have benefitted significantly from the insurance wrapper, with bond insurers paying the vast majority of claims on municipal debt as presented in recent defaults, including Stockton, Detroit, Harrisburg and most recently Puerto Rico. Furthermore, we'd argue that holders of some uninsured bonds as well as the municipal market in general have been helped by the insurers' active and, when necessary, litigious activities not only in headline distressed situations, but others that escape headlines. Insurer surveillance actions often contribute to addressing problems ahead of default.

If and when interest rates increase and credit spreads widen, the value proposition supporting the use of bond insurance will become more attractive.

If and when interest rates increase and credit spreads widen, the value proposition supporting the use of bond insurance will become more attractive. We advocate this type of belt and suspenders approach. Credit quality of the underlying issuer should remain a primary consideration, but the additional security provided by bond insurance will serve investors well in the future as it has in the past.

Selected Financial Metrics of the Three Active Insurers

As of June 30, 2016	Assured	BAM	National
Claims Paying Resources	$11.9 bln	$0.6 bln	$4.7 bln
Par Exposure	$329.9 bln	$27.8 bln	$134.4 bln
Net Debt Service	$488.4 bln	N/A	$225.5 bln
Par to CPR Ratio	28:1	45:1	28:1
US Public Finance Par %	82.5%	100.0%	100.0%
Puerto Rico Par %	1.7%	0.0%	2.9%
BIG Par %	4.5%	0.0%	2.8%

Claims Paying Resources (CPR) consist primarily of statutory capital (policyholders' surplus and contingency reserve) and unearned premium reserves. Par Exposure is net of reinsurance for Assured and National and gross excluding first loss reinsurance treaty for BAM. BIG is below investment grade based on insurers' internal ratings.

Source: Janney FISR, Assured, National and BAM Financial Supplements

Alan Schankel

Corporate Credt Overviews: MBIA and Assured Guaranty

MBIA Inc.
Company Rating: Ba1 (Negative)/A- (Stable)/NR
Senior Unsecured Rating: Ba1/A-/NR

MBIA Inc. has come a long way since the recession. The firm came under pressure from insuring non-muni securities such as collateralized debt obligations, mortgage backed securities, and the like. Consequently, the firm carved out these troubled assets into one subsidiary, MBIA Corp. (Caa1/CCC/NR; not to be confused with parent MBIA Inc.), and its muni insurance assets into another, National Public Finance Guarantee Corp. (A3/AA-/NR). As legacy issues were running off, the firm made progress with legal issues, and management right-sized the balance sheet, MBIA experienced momentum on the credit side, receiving ratings upgrades at both parent and subsidiary (National) levels.

National's public finance insurance operations represent all of LTM pretax income, despite being about half of revenue and the other half being the international/structured finance insurance (i.e. MBIA Corp.). The firm structured its corporate tree such that legacy MBIA Corp. is a separate legal entity. Management does not see a potential trigger of cross-company default should MBIA Corp. be unable to meet obligations. This step-up is relevant in the context of recent claims payments related to collateralized loan obligation Zohar I, and the likelihood that the firm will incur another claims payment in January 2017 on $772MM of a related CLO Zohar II. National has dealt with challenges as well, the most notable being Puerto Rico (see comments on Puerto Rico page 6). In its 2Q 2016 earnings call, management commented, "We continue to believe that our ultimate losses will be relatively modest and that we are well situated for receiving meaningful recoveries on our paid claims."

MBIA is decreasing its complexity through being more selective in its core focus, along with utilizing divestitures to shore up liquidity.

Select Financials: MBIA

MBIA Inc. ($USD in millions)	LTM Jun-16	Fiscal Year Ending Dec-15	Dec-14	Dec-13
Asset Growth YoY	-22.2%	-8.9%	-3.9%	-22.0%
Ttl Revenue	$539	$853	$1,270	$1,209
Net Income/Ttl Revenue	NM	21.1%	44.8%	20.7%
Cash & Investments	$9,222	$11,785	$12,221	$13,229
Total Debt	$5,329	$7,956	$7,815	$8,415
Statutory Surplus & Capital	$3,142	$3,087	$2,732	$2,489
Net Claims Ratio	55.5%	33.1%	33.5%	25.6%
Insurance Investment Yield	1.8%	2.8%	2.9%	3.3%
Insurance & Invt Reserves/Ttl Assets	16.3%	14.2%	15.3%	18.2%
Tangible Equity/Tangible Assets	30.3%	25.2%	24.3%	19.5%

Source: Janney FISR; SNL Financial; SNL includes cash held at VIEs, which totaled $37MM at 2Q 2016 end; data may differ slightly from as-reported due to certain adjustments

MBIA is a shadow of its former self. Although the firm has the ability to write muni bond insurance again, the dynamics of the industry have changed and MBIA's muni bond insurance is a small sliver of the industry total. Parent MBIA Inc. depends on National to upstream dividends in order to repay corporate debt outstanding. Such a structure causes MBIA bondholders to be one-step removed from the underlying assets of value. National, however, does not have any corporate debt outstanding, so this issue is less of a risk currently. The firm's insured assets have decent credit quality, though below investment grade assets totaled 4.5% of gross par outstanding as of 2Q 2016 end versus only 3.2% as of 2Q 2015 end, so recent erosion is notable.

MBIA is decreasing its complexity through being more selective in its core focus, along with utilizing divestitures to shore up liquidity. Among the transactions MBIA completed in recent years, it offloaded noncore assets, including asset management business Cutwater Holdings to BNY Mellon in January 2015. Additionally, management intends on selling MBIA UK—which has a book value of roughly $500MM—before year-end 2016, and guided that it is in discussions with potential buyers.

MBIA ended 2Q 2016 with $568MM in cash & equivalents, including $273MM in a tax escrow account, plus $6.3B in short- and long-term investments. MBIA Corp. had $288MM in liquid assets, $755MM in statutory capital, and $2.2B in claims paying resources at 2Q 2016 end, which management guided should be "well above [its] insurance loss expectations." National had $3.5B in statu-

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tory capital and $4.7B in claims paying resources as of 2Q 2016 end. MBIA's debt maturity profile is fairly spread out over the next 15 years. The firm has been buying back shares strategically—its current plan of $100MM has $88MM remaining—to improve its equity value and mask challenges at the bottom line, which we view as a risk for bondholders. Nonetheless, it does not have a quarterly dividend program in place.

MBIA focused on achieving investment grade ratings at parent and subsidiary National levels in order to have the credit quality to write insurance. Since the firm achieved its goal in May 2013, the ratings agencies have monitored the credit carefully in light of recent issues. Subsidiary MBIA Corp. is somewhat ring-fenced, so credit quality improvement at this subsidiary has been less of a priority for management. In May 2016, Moody's affirmed its ratings of both MBIA Inc. and National, but kept their outlooks as "negative" and downgraded the ratings of MBIA Corp. due to risks related to Zohar I and II CLOs. S&P affirmed the ratings of both MBIA Inc. and National in June 2016, but downgraded the credit ratings of MBIA Corp. as it viewed "its liquidity position [as] weak."

Assured Guaranty Ltd.
Company Rating: Baa2 (Stable)/A (Stable)/NR
Senior Unsecured Rating: Baa2/A/NR

Assured Guaranty exited the 2008-2009 recession better positioned than many of its peers. Since then, the firm has been the leader in the muni bond insurance space, as legacy competitors worked towards improving credit quality. What's more, Assured utilized its more solid financial standing to increase its position in the industry, as seen by its purchase of Assured Guaranty Municipal Holdings (fka Financial Security Assurance Holdings) from Dexia (NR) in 2009. Most recently, it acquired financial guaranty insurer CIFG for $450MM in July 2016, and peer Radian Asset Assurance from Radian (Ba3/BB-/NR) for $805MM. Management indicated previously that "supplementing its book of business through acquisitions" is a "key" business strategy.

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Assured primarily writes insurance in the public finance sector, but also offers insurance on structured finance securities. Geographic concentration in the US is notable and represents 90% of Assured's assets and a majority of its new business. The firm historically provided reinsurance to other financial guaranty insurers, though the need for such a product has evaporated as the industry has become more consolidated. In 1H 2016, the firm insured $6.9B in par amount of 465 muni bond new issuance, over 50% of total muni bond insurance, versus $8.7B and 594 in 1H 2015. Net par exposure consists 82% of US muni bond insurance, 9% US structured finance insurance, 8% non-US muni bond insurance, and 1% non-US structured finance insurance. Assured agreed with regulators that its European unit would guarantee new business using a co-insurance structure with Assured's primary US muni bond insurance unit. Assured benefits from cash flows generated from its $11B investment portfolio, for which the firm outsources 85% of the management to BlackRock, Goldman Sachs, General Re, and Wellington.

Management remains focused on solid credit quality of its underlying assets, which currently have an average rating of single A. Below investment grade assets and cash represent 10% of the total port-

Select Financials: Assured Guaranty

Assured Guaranty Ltd. ($USD in millions)	LTM Jun-16	Fiscal Year Ending Dec-15	Dec-14	Dec-13
Asset Growth YoY	-9.0%	-2.5%	-8.4%	-5.5%
Ttl Revenue	$1,784	$2,207	$1,994	$1,608
Net Income/Ttl Revenue	42.8%	47.8%	54.6%	50.2%
Cash & Investments	$10,905	$11,358	$11,459	$10,969
Total Debt	$1,303	$1,300	$1,297	$814
Statutory Surplus & Capital	$10,650	$10,901	$10,623	$10,454
Net Claims Ratio	51.1%	55.4%	22.1%	20.5%
Insurance Investment Yield	7.9%	9.8%	10.2%	4.7%
Insurance & Invt Reserves/Ttl Assets	34.7%	34.8%	33.9%	31.9%
Tangible Equity/Tangible Assets	44.3%	41.6%	38.5%	31.3%

Source: Janney FISR; SNL Financial; data may differ slightly from as-reported due to certain adjustments folio, and only 5% of net par exposure. The firm has been gradually terminating insurance contracts to reduce its exposure to legacy credit default swap and non-investment grade assets. Its legacy US residential mortgage backed securities portfolio has been in runoff mode, currently totaling $6.1B, and only investment grade securities. Exposure to direct pooled corporate obligations has decreased in recent years, with primarily high quality investment grade securities remaining. A recent pressure for Assured has been its exposure to Puerto Rico debt (see comments on Puerto Rico page 6).

As of 2Q 2016 end, Assured had $775MM in cash and short-term investments, plus $10.1B in long-term investments. As of the same period end, Assured had $5.9B in statutory capital, $11.9B in claims paying resources, and a ratio of net par outstanding to claims paying resources of 28x, meaningfully improved from 51x in 3Q 2009. Its net par outstanding to qualified statutory capital was 42x as of 2Q 2016 end. The firm has a long runway before its first corporate bonds mature in 2024, and the majority of corporate debt outstanding matures in 15 years and beyond. Although Assured has various subsidiaries that upstream dividend payments to the parent, the senior and junior unsecured bonds sit at various parts of the company structure, but are pari passu and guaranteed by the parent.

Assured has shifted focus recently towards shareholders over bondholders. In 2015, management repurchased $555MM of equity outstanding. The firm announced in February 2016 a $250MM share buyback plan, which management intends to complete gradually; as of June 2016, the firm spent $135MM on share buybacks. Additionally, Assured spends $0.13/share quarterly on dividends, amounting to roughly $70MM.

Assured's credit quality will continue to play an important role in its ability to remain relevant and identify new opportunities for generating revenue.

Demand for insurance has decreased lately, and the industry has become more competitive. Assured's credit quality will continue to play an important role in its ability to remain relevant and identify new opportunities for generating revenue. In August 2016, Moody's affirmed its ratings of Assured Guaranty and its subsidiaries, and revised its outlook to "stable" from "negative." The agency noted Assured's "strong overall capital profile and core earnings power," but noted the firm's exposure to below investment grade assets, including Puerto Rico and a potential for inconsistent earnings over time. S&P affirmed its ratings and "stable" outlook in July 2016, noting the company's "strong competitive position built on a proven track record of credit discipline and a market leadership position in terms of par insured and premiums written."

Jody Lurie

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Investment Grade Credit: Janney FIS ratings employ the "Barclay's U.S. Credit Index" as a benchmark.
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