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Many securities within the asset-backed security (ABS) universe bear Triple A ratings from the primary rating agencies (Moody's Investors Service, Standard & Poor's, Fitch IBCA Investors Service, and Duff & Phelps). There are three conceivable justifications for the Triple A rating of an asset-backed security: the individual receivables are themselves all Triple A; there exist subordinated investors to absorb losses of the receivables; or there exists a third party to guarantee the performance of the ABS. Joe Pimbley looks at the ratings rationale for monolines.

Are the monoline insurers really Triple A?

There are three conceivable justifications for the Triple A rating of an asset-backed security: the individual receivables are themselves all Triple A; there exist subordinated investors to absorb losses of the receivables; or there exists a third party to guarantee the performance of the ABS.

The first possibility is unusual but not non-existent. For example, an issuer of municipal debt obligations in the United States may "escrow to maturity" its borrowing by placing Treasury obligations in a bankruptcy-remote trust. The debt then becomes a Triple A obligation of the special purpose vehicle (SPV) supported by Triple A collateral. The SPV receivables are Triple A and there is, therefore, no need for any other requirement to give the trust certificates a Triple A rating.

In more general ABS, the trust receivables are likely not Triple A. Dividing the SPV debt obligations into tranches such that one or more tranches absorb losses first, the "senior" tranche (ie the last tranche to take losses) may earn a Triple A rating. Of course, this "senior/sub" structuring is the most prevalent construction technique for ABS and is well known to all market participants.

The third method, in which a third party guarantees performance of the SPV debt obligations, is the guarantee or "wrap". One often hears that the debt security is "wrapped to Triple A" when a Triple A entity guarantees the security. On its surface, the rating technique is simple. The security will have the higher of the ratings of the guarantor and the underlying obligation. One

would think that the market would understand the rating of wrapped securities more easily than those of senior/sub structures.

But the existence of "monoline guarantors" (or monoline insurers) confounds this expectation. The rating of these entities, whose sole business is the provision of financial guarantees, stems from the nature and extent of all risks in combination with the amount of claims-paying capital to support the risks. Some participants in the market question the Triple A ratings that many of these monolines enjoy. This article describes the monolines, the monoline rating analysis and the market perception.

The major monoline insurers are MBIA, Ambac, FGIC, and FSA. All public ratings for these guarantors are Triple A. As US insurance companies, they are subject to

regulation by the insurance commissioner in all states in which they operate. The designation of "monoline" implies that these companies do not provide other lines of insurance such as property and casualty, automobile and life.

The monolines insure financial obligations. These obligations are generally bonds but can also include derivative obligations. In these financial guarantees, the insurer agrees to make all principal and interest payments, when due, if the insured borrower is unable to make the payments. The policies cover the borrower's inability to make payment for any reason whatsoever and are irrevocable. For an investor to suffer a loss on an insured security, then, both the underlying borrower and the monoline must default.

To manage their risk, the monolines routinely buy insurance policies from reinsurers. The reinsurers themselves present a credit risk to the monolines since the monolines remain contractually committed to perform on all insurance policies whether or not they have ceded a portion to a reinsurer. This risk is small since the reinsurers themselves tend to be Triple A.

To insure or not to insure

The monolines are similar in some respects to rating agencies in that monoline analysts must judge credit quality and make a "rating decision" of whether or not to insure and at what premium. In fact, many analysts migrate between the monolines and the rating agencies. Due to this cross-fertilisation and the nature of the businesses, the cultures of monolines and rating agencies are similar. Monolines are more responsive to the market while the agencies provide a public education function.

While on this mission of comparing the monolines to other industries, it is surprising to realise that monolines don't behave more like banks. The latter build up loan portfolios that are generally illiquid (just like the policies that guarantors write). Banks must be conscious of the diversification of their credit portfolios. State-of-the-art banking – which many banks ignore – demands that loan portfolios be optimised for risk and return. The monolines have little interest in this sort of credit portfolio optimisation.

The rating agencies have virtually complete dominion over the markets that a monoline may serve and the risk it may take since the monoline must preserve its Triple A rating. Further, since the rating agencies set capital requirements for this premier rat-

ing, the monoline's return on equity stems from the rating agency view of risk as much as it does from the premium of the policy. For example, a monoline rarely insures an underlying risk that the agencies deem non-investment grade regardless of the credit opinion of the monoline's own analysts.

It is essential to look through the wrap to the underlying security. Yet there is often not enough information for the investor to assess the underlying

For the later discussion of the rating methodology of monolines, it is useful to give some brief history. The first of the monoline insurers started business more than 20 years ago. The original business plan was to insure only (US) municipal general obligation (GO) bonds. The municipality has full taxing authority to service debt payments on these GO bonds. The market considers such bonds to be relatively safe since a municipality will presumably always choose to service its debt (by raising taxes). In the beginning, both the monolines and the agencies believed there would be "zero losses". At worst, the monoline might need to make a timely payment for the municipality. But the local government would always choose to make full restitution to the insurer in order to be able to access debt markets in the future. It was on the basis of this "muni GO" risk that the agencies formulated their first rating methodology for the guarantors.

But the monoline insurance business began taking other risks. First came municipal revenue bonds in which taxing authority is not available to pay creditors. Then there followed asset-backed and mortgage-backed securities. The "zero loss" paradigm, if it ever was meaningful, certainly fell away as an accurate description of the risk profile. It would be fair to say that the market did not understand the change in rating agency analysis that likely accompanied this drastic change in underlying risk.

The monoline guarantors now insure roughly half of all US municipal debt obligations. The penetration of the ABS market in the US is about 20%¹.

The strongest evidence that the market questions the Triple A ratings of the monolines is the yield at which wrapped securities trade. In the municipal market (where yields are not comparable to Libor or the risk-free sovereign rate due to tax-exemption of most issues), the insured bonds trade significantly wider than the debt of municipalities rated Triple A for their own creditworthiness. Further, the yield can vary considerably with the quality of the underlying obligation.

In the ABS market, wrapped securities trade well above Libor depending on the nature of the securitisation. A natural Triple A issuer, by contrast, issues debt below Libor. This particular argument is not complete since even senior/sub asset-backed securities yield above Libor. The market requires a yield premium for any "story" that an investor must hear in order to understand the rating.

The investor's opinion

But, according to Robert Drutman of the European Bank for Reconstruction and Development (EBRD), the decision to buy a wrapped deal is more complex than that for a senior/sub structured security. "It is essential to look through the wrap to the underlying security," he says. "Yet there is often not enough information for the investor to assess the underlying."

To buttress the proposition that the quality of the underlying security is relevant to the market value of the wrapped obligation, Drutman notes the extension risk. "A Triple B underlying asset that has been wrapped by a Triple A monoline has the extension risk of a Triple B and not a Triple A and should be priced accordingly. On default of the underlying, the insurer may extend the principal and interest to the legal, final maturity. Beyond the extension risk, poor performance of the underlying Triple B does impact the security value irrespective of the wrap." A wrapped deal behaves less predictably than does a senior/sub-structured deal, in Drutman's opinion.

"There is no price differentiation among the monolines and this could change suddenly as the market focuses on credit differentiation and/or institutional lines are filled." For these reasons and others, Drutman's EBRD does not currently purchase insured ABS.

Jim Irvine, head of the investment team at Halifax plc, does own both structured and wrapped ABS. Irvine concurs that "a wrap is not a wrap is not a wrap" (imply-

ing that investors should not view all wraps of the same insurer similarly) and that the investor "must look beyond the wrap" to the underlying credit in evaluating prospective deals.

But Irvine also has kind words for bond insurance. "Wrapped paper trades better [than structured] when an issuer defaults [or is in distress]," he notes. For example, if the original issuer of an auto loan ABS defaults, it is likely the loan servicer will be in default since the issuer often services the loans. In such cases, according to Irvine, the investor would prefer to have a guarantor rather than an equity tranche as his Triple A protection.

Investors do question the huge leverage of the guarantors. The net par of insured debt obligations reaches and exceeds, in some cases, 100 times the claims-paying capital of the monolines. Leverage of 100:1 is breath-taking in most industries and rarely associated with Triple A credit quality. Without a simple and compelling rating explanation, it is difficult to understand why the monolines should trade as Triple A.

As a general rule, there are two types of rating analysis appropriate for different obligors: "fundamental" and "quantitative". A credit rating is an opinion on the likelihood that a borrower will service its debt as per its contract with the investor. The fundamental and quantitative approaches are two techniques for formulating this opinion for different types of risky issuers.

Fundamental and quantitative

The fundamental method, which is also the traditional alternative, analyses a business by inspection of its balance sheet, income statement, present and projected cashflow, projections for both the industry as a whole and the company's specific projects etc. The fundamental analyst also meets with management to determine what the company's plans and strategy are and whether the latter will likely achieve the former.

A fundamental rating is a judgement of a committee within the rating agency regarding the probability of issuer default. This rating methodology applies to all conventional borrowers (industrial companies, banks, municipalities, sovereigns - anything that is not a structured finance transaction).

Quantitative rating methods apply to structured financings. The clearest example is that of the collateralised bond obligation (CBO). In a CBO, the SPV purchases a portfolio of risky bonds. The credit rating of this

portfolio is simply the average rating in the absence of any "structuring". But the conventional CBO designates an equity tranche that absorbs the first default losses and a senior tranche that the equity tranche protects. The equity tranche is riskier than the senior tranche and pays a commensurately higher yield. Quantitative models help the rating analyst decide just how much risk this partitioning transfers from the senior tranche to the equity tranche. CBO ratings are primarily quantitative rather than judgemental.

The risks of a monoline insurer are quite similar to those of a CBO. That is, the monoline business risk is simply the sum of all default risks of its insurance policies that the rating agency may analyse as it does for a CBO. The monoline, therefore, does not differ all that much from an SPV and one would expect the monoline rating to be similar to that of a comparable CBO. But the problem is the comparable Triple A CBO would require about 10% equity rather than the 1% equity typical of the monolines.²

● A wrapped deal behaves less predictably than does a senior/sub-structured deal, in Drutman's opinion ●

Jack Dorer, vice-president and senior credit officer of Moody's Investors Service, agrees that monoline rating analysis relies to a great deal on the underlying credit risks as in CBO analysis. But he adds he "would always look at other aspects of the company" (such as quality of surveillance and management). Dorer confirms that monoline ratings are unique in that they combine both fundamental and quantitative analysis, but at this point the analysis is predominantly fundamental.

Dick Smith, managing director of bond insurance ratings at Standard & Poor's, adds that "rating a bond insurer is more than that of a CBO because there are management issues to assess and the insurer can potentially mitigate its losses through reinsurance and early intervention in troubled credits".

The analysis of monoline guarantors at Moody's is evolving. "The original approach applied capital charges to each insured

credit and specified a 'depression scenario' that the insurer needed to survive for the Triple A rating. This method does not explicitly incorporate correlation among the risks." Dorer continues by noting that "going forward, a portfolio model makes increasing sense as the industry increases the fraction of its risk in ABS".

Regarding the issue of the equity level discrepancy between a monoline and a similar CBO, the Moody's analyst noted that "the capital in the industry is now sufficient to support the ratings in that most risk is now municipal and municipal recovery rates are quite high".

Smith of S&P, as an alternative, argues that a monoline leverage of 100:1 can be consistent with a Triple A rating since insurers do not suffer default losses immediately. That is, upon the default of an insured debt obligation, the insurer need only make interest and principal payments to maturity. Smith claims that this feature "substantially reduces the need for capital. CBOs are likely not as diversified in their risks as are bond insurers."

If, as some investors claim, the market does not understand the ratings of monoline insurers, Smith explains one possible reason might be that "this is not an industry that everybody who went to business school can analyse. It is not a common business." In other words, the rating methodology is not equivalent to standard credit analysis. "Public information on the portfolio of risks that an insurer has is not easily obtained."

In response to this question of monoline ratings, John Uhlein of MBIA-AMBAC International concedes "we are a 'story-Triple A'. 'But we have been designed and stressed by the rating agencies," he says. "We've written 20,000 policies and our history of losses is miniscule."

To address the comparison to the CBO tranche that needs 10% equity for the top rating, Uhlein stresses first that monolines are more diversified than typical CBO asset pools. Further, not only do the rating agencies "shadow rate" each underlying credit as investment-grade, but the guarantors themselves help structure the trades. That means the guarantor is quite comfortable with the risk. Given this intimate knowledge of the deal, "the investor looks to the monoline to explain the trade", according to Uhlein.

Russ Brewer, chief underwriting officer of FSA, says "in order to talk about leverage, one must consider the risks that are being assumed. In our case, and for all participants in the industry, the risks are all investment grade. The municipal business has very low

loss severity in terms of both default probability and recovery. Similarly, the ABS business has both low default probability and high recovery. The rating process we go through is very detailed and thorough. That process is critical to understanding the types of risk we assume and the important ability we have to manage risk."

The diversity justification

The most compelling argument supporting the contention that the monolines deserve Triple A ratings even with operating leverage of 100:1 is Smith and Uhlein's diversity justification. Even large CBOs do not generally have 100 distinct issuers of debt in their asset pools. By contrast, the larger monoline insurers have more than 10,000 outstanding policies.

By making a simple assumption of zero correlation among all of these insured risks, the 100-fold increase in the pool size implies a 10-fold increase in the allowable leverage (since the standard deviation of a normal distribution of portfolio returns decreases as the square root of the number of independent portfolio elements). Thus, this diversification difference could conceivably explain why Triple A CBOs need 10% equity and monolines only have 1% equity.

The assumption of a normal distribution with zero correlation, however, is unwarranted. Return distributions in credit portfolios are asymmetric. Even in the absence of correlation, this asymmetry makes it much more difficult to limit losses by diversification.³

Further, correlation among the insurers' underlying credits is not negligible. More than half of the exposures of all monolines is concentrated in US municipalities. Such entities should have significant internal correlations. Though this municipal market may be generally independent of mortgage and auto loan securitisations, these securitisations themselves will be correlated with one another.

Clearly, then, Dorer is on the right track when he notes that the rating agency will introduce quantitative models with correlation into rating analysis for the monolines. Such an inclusion is critical to the credibility of a hedge fund-like leverage of 100:1. A key element in the deployment of a quantitative correlation model is the measurement of default correlations that the model would require as inputs. The credit derivative industry has not yet surmounted this obstacle.

The argument that rating agencies and insurers alike proposed for the high leverage of the bond guarantors is the special nature of the insurance policy. When the underlying entity is unable to continue to service its debt, the insurer makes these payments itself. Even if the underlying ceases to exist, the guarantor makes payments to the original stated maturity of the debt obligation.

Thus, some have argued, the insurer does not suffer a huge loss all at once. It only makes interest payments and suffers the principal loss at some future time. The thought is that this "soft landing" in a default loss makes it easier for monolines to bear losses and thus permits the higher leverage.

But this polemic does not present a distinction relative to the CBO. When a bond within a CBO defaults, the asset pool no longer receives the coupon of the defaulted security. At the stated maturity of the defaulted bond, the pool does not receive the principal redemption. As partial compensation, the asset manager will likely have sold the bond into the market upon default for its recovery value (a fraction of par).

Even without comparison to a CBO, when the underlying credit upon which an insurer has written a policy defaults, one expects that the insurer would set aside capital from its equity to cover the expected loss. This loss of equity should be essentially equivalent to what the insurer would pay immediately if the policy had specified an immediate loss payment.

There is yet another argument supporting monoline Triple A ratings that nobody seems to have advanced. Very simply, while the default probability of a guarantor might be higher than that of "natural" Triple A credits, the rating agencies should rate the default risk of the wrapped security. This default risk would be the risk that both the underlying and the insurer default. Perhaps the true insurer rating is Double A. With a Single A underlying rating, the probability that both of these entities will default within some period might well be equivalent to a natural Triple A.

The rating agencies do not take this approach. If they did, investors would see that wrapped securities of the same insurer would have different ratings depending on the strength of the underlying credit. In the extreme case, the wrapped security would be downgraded from Triple A when the underlying defaults. This perspective appears to be consistent with the comments of the EBRD's Drutman.

Specifically, investors must be able to analyse the underlying risk and realise that different insured obligations of the same guarantor will trade differently based on the performance of the underlying.

In brief, this section discussed the most evident explanations that monoline proponents would put forward to rationalise Triple A ratings that are consistent with the requirements for collateralised bond obligations. The greater diversification that monolines enjoy points in the right direction, but quantitative argument is lacking. The "maintain debt service only" peculiarity of insurance policies is not persuasive. Finally, the rating agencies do not subscribe to the "joint probability of default" hypothesis that makes qualitative sense and would be simple to quantify.

The monoline insurance companies are a large and growing presence in the asset-backed securities universe. The Triple A ratings they bring are certainly welcome, but there are thoughtful investors who question the rating. The greatest concern seems not to be outright default but rather the potential for loss of value as market uncertainty increases.

Beyond expressing investor concerns, this article described the business of the monolines, its similarity to a collateralised bond obligation, and the rating agency approach. The rating methodology appears to be evolving in a direction that may impose reduced leverage on the Triple A guarantors.

1. See, for example, J Dorer, *Moody's Investors Service Global Credit Research, "Financial Guaranty Insurance Companies - Industry Outlook", October 1998, available on <http://www.moody.com/insuranc.nsf/web/index?OpenDocument>; or the Standard & Poor's "Bond Insurance Book" available on <http://www.ratings.com/publicfinance/index.htm>.*

2. The quotation of 1% equity for a monoline (equivalent to 100:1 leverage does not take into account the unearned premium reserve or the present value of future premiums. This exclusion makes the comparison to a CBO "fair" in that the CBO equity requirement does not permit consideration of future risky coupon spreads to the risk-free rate.

3. See "Introduction to CreditMetrics™" available on the Internet site <http://www.riskmetrics.com/cm/pubs/CMTD1.pdf> and the March 28 1995 presentation at "The Comprehensive Forum on Credit Derivatives" at the Marriott Financial Center, New York, by Ron Levin.