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1700 G Street NW
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12 CFR Part 567
Docket ID: OTS-2010-0027
RIN 1550-AC43

Monday 25th October 2010

Dear Sir or Madam,

www.FirstKnow.It produces default probabilities and implied credit ratings for some 9,000 companies worldwide based on the well known "Merton Method", specifically the Black & Cox version of the model. We have been in operation for about 10 years and have produced daily default probabilities and implied credit ratings since inception of our service. During our time in operation, our system has predicted by a matter of weeks or months most of the major collapses: Worldcom, theoretically non-viable from late April 2002, collapsed late July; Bear Stearns, theoretically non-viable from October 2007, firesale to JP Morgan mid-March 2008; Lehman Brothers, theoretically non-viable from May 2008, collapsed Mid September; General Motors theoretically non-viable from June 2008, collapsed June 2009.

We appreciate the opportunity to comment on the advance notice of proposed rulemaking issued by the federal banking agencies to remove references to credit ratings and substitute other standards of creditworthiness in their risk-based capital guidelines in compliance with section 939A of the Dodd-Frank Act. It appears that the existing organizational, regulatory and methodological approaches to credit evaluation have resulted in crises, each of which seems to make the previous crisis seem a mere pinprick in comparison. First there was Enron followed by Worldcom, then there was the CDO debacle which in turn was overtaken by the almost complete destruction of the US and world financial and banking system at a cost measured in trillions of dollars. In assessing proposals we would urge the agencies to consider the costs of implementing compliance with the Dodd-Frank Act in the context of the costs that the existing failed system has already caused and extrapolating the magnitude of costs of potential future crises if the current system is not substantially revised.

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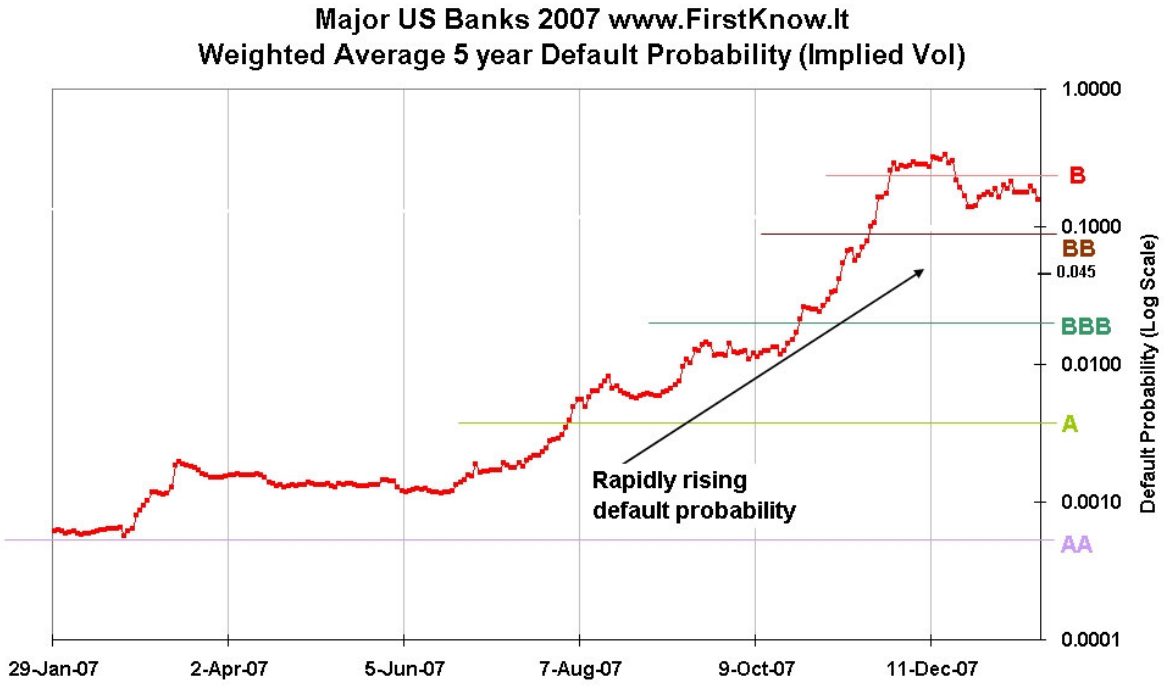
Our model takes liability, stock price and equity options data and from this calculates the probability of a company defaulting. An interpretation of this process is that our model effectively takes a company's status in these other markets and calculates the implication for the credit market. It is therefore the case that a company's financial status is already "in the market", in the sense that it is already known in the equity and options markets and our model is acting as a conduit for making this news explicit in the credit market.

It is often argued by the rating agencies that market-based credit tools are particularly vulnerable to destabilizing feedback loops and in contrast their own credit ratings represent a more measured and considered response. We would argue that the opposite is in fact the case. The credit rating agencies, in the name of long-term views and ignoring the "bumps in the road" that accompany any business, tend to fail to reflect for an extended period the deterioration of a company's situation. The markets in the meantime are usually reflecting these events and a disconnect develops between the conditions the company encounters in the credit markets and the company's ratings. This causes ambiguity in the market and even for the company's own management as to the company's credit status. Who should be believed, the markets or the rating agencies? It is only when the company is in full-blown crisis that ratings downgrades are applied by which time the rating agencies create heightened instability in an already fragile situation and may be effectively performing a *coup de grace* on the company. This was very evident during the Lehman collapse for example where the rating agencies failed to reflect realities surrounding the bank until it was too late and the bank was still A2/A rated on the day it collapsed. If the rating agencies were to reflect real deterioration as it occurred, the markets would merely acknowledge that ratings were responding to the same events that were driving the markets and management could take this information and potentially respond to the unambiguous signals confronting them, perhaps even preventing an ensuing crisis. This is very well demonstrated in the lead up to the 2008 banking crisis. The chart below shows the deterioration of the average www.FirstKnow.It 5 year default probability and mapped implied average credit rating, weighted by enterprise value, of the major US commercial and investment banks during 2007.



The analysis shows that by end 2007, the average 5 year default probability had risen to over 20% from 0.02% at the beginning of the year denoting a deterioration of the mapped credit rating from approximately AA- to B. This occurred due to the deteriorating capitalization of the banks with credit losses in the CDO markets reflected in stock price attrition and uncertainties reflected in rising asset volatility. It is fairly self-evident that a decapitalized banking system is in no position to borrow or lend, so the chart foreshadows the second leg of the financial crisis in 2008 as the credit markets froze and banks cut back lending, bringing the danger of depression. The chart indicates the urgent need for bank recapitalization at a time when this might have been possible through public markets, with the S&P 500 in mid December 2007 still only 6% below its peak. Unfortunately this did not actually occur until a year later with the launch of the TARP program after the banking system had already effectively collapsed and Lehman Brothers had failed. This timely signal of urgent need for action contrasts with the rating agencies which did not begin to downgrade the banks until well into 2008. Critically, so far as the rating agencies were concerned, there was no need for a recapitalization of the banking system even as it collapsed whereas downgrades reflecting the real situation in December 2007 could have seen earlier moves to recapitalize, avoiding the exceptionally damaging economic hiatus and associated financial collapse that occurred in the final quarter of 2008. Again, rather than reducing instability, failure to downgrade ratings gave a plausible endorsement for inaction and meant opportunities which could have mitigated the ensuing crisis were not taken, resulting in greater instability.

We urge the federal agencies to pay due consideration to the nature of banks' businesses when they consider appropriate capitalization regimes within the Basel Framework. Given the economic and social consequences of the effective collapse of the world banking system, it is entirely understandable that politicians demand broad brush measures to prevent these recalcitrant banks from jeopardizing the world economy again. However, broad brush measures can in themselves have dangerous and unintended consequences. Our own analysis shows wide divergence in empirical underlying asset volatilities between banks around the world stemming from the nature of their underlying business. To require a major German universal bank with asset volatility of just 1% to have the same capitalization as a major US commercial and retail bank with asset volatility of 3.8% is incentivizing the German bank to take more risk to compensate its enhanced capital structure which clearly is not congruent with the intentions of the regulatory framework or judicious risk management.

We respond below to the individual questions posed in the ANPR.

Sincerely,

Dr. Andrew Bagley

Question (1)

We believe a sound system of credit-worthiness standards should have the additional principles:

a) Incentive Issues: It is important that any regulatory regime is designed in a way that it does not of itself incentivize or disincentivize provision of credit to particular markets other than on the grounds of risk.

b) Formulation of creditworthiness standards should avoid ambiguity as to their meaning to the extent possible. The present ratings system is inherently ambiguous, in contrast to default probabilities for example, as there is no inherent mathematical meaning attributable to the rating grades. For example, a rating of BBB- does not of itself convey unambiguously a mathematical likelihood of default occurring within a time frame in the same way as a 5 year default probability of 0.02 for example. The latter means a 1 in 50 probability of failure over a determinate time horizon which is unambiguous to all readers, whereas BBB- does no more than convey a general sense of general quality. Default probabilities therefore represent an inherently superior means of expressing credit quality.

c) To the extent possible, a sound system of credit-worthiness should not discriminate against companies on the basis of size. Arguably, the current issuer-pays model is disadvantageous to smaller entities which have less issuance to amortize rating agencies' fees and also are often assessed as inherently less creditworthy simply because of their smaller size.

Question (2)

a) Although they are administratively convenient, one undesirable side-effect of risk buckets is from incentive effects which penalize banks holding less risky assets. This is most evident where all corporate exposures receive the same risk weightings regardless of variation in real risks. Assuming markets operate in such a way as to remunerate higher risks with higher returns, if there is no risk differentiation between regulatory capital assignments, the lower risk assets will give lower returns on regulatory capital assignment and the regulatory regime will therefore have the effect of disincentivizing holding these assets and incentivize holding higher risk assets. Although use of narrower risk buckets reduces this problem, there are still incentive effects, with holding lower risk assets within each risk bucket being disincentivized compared to higher risk assets. For example, the rating interval BBB+ to BB- carry a risk weighting of 100% under the Standardized Approach. However, the default probability of the worst BB- rating is almost 30 times the default probability of the best BBB+ rating. Assuming returns are negotiated to remunerate these risks effectively, the margin on assigned regulatory capital from holding a BBB+ risk is very substantially less than on the BB- rating even after allowing for expected losses.

b) It is possible to conceive of circumstances where overly simplistic capital assignment might exclude banks entirely from competing in certain low-risk markets. Particularly, enhanced regulatory capital requirements for certain low-risk assets might render banks unable to compete versus the bond markets or private placements, for example. This would take these lower risk assets out of the universe of bank-investible assets, leaving a universe of more risky assets for banks to invest in.

c) Points (a) and (b) demonstrate possible unintented consequences of risk systems and regulatory capital regimes that although designed to provide a robust and administratively convenient regime, fail accurately to measure risks and fail to ensure that capital is assigned commensurately to those risks. The effect is to provide incentives to hold more risky assets which is certainly undesirable in a well designed risk measurement and capital assignment regime. These incentives are removed where risk is accurately measured on a continuous scale and capital is assigned accurately in response to risk and this is a benefit of a default probability approach, assigning exposure-specific risk weights, versus a ratings-based or risk bucket system of risk measurement and capital assignment.

Risk Weights Based on Exposure Category. Simply eliminating altogether references to credit ratings in capital assignment and requiring a 100% risk-weight creates particularly high exposure to the incentive issues discussed (2a) and (2b) above. A high quality borrower would be better to borrow in the bond markets and avoid the costs of capital assignment involved in borrowing from a lender who for regulatory reasons could not take into account the quality of his credit. The effect would be to drive quality credits out of bank portfolios through a process of adverse selection - only riskier borrowers would find the regime cost-effective and would borrow from the banks.

Exposure-Specific Risk Weights: There must surely be a need to replace the existing ratings-based system with an alternative that is at least approximately as good. Unfortunately, there are significant shortcomings with using the measures that are proposed: Credit default swap prices and bond prices can be useful sources of assessment of credit quality, however, prices are only a useful guide if there is liquidity and trading. Reviewing credit default swap prices in the ThomsonReuters 3000XTRA CDS gateway for US corporates shows that 10% of the top 100 US corporates by equity capitalization have either no CDS price quote or the quote is more than 3 weeks old. This rises to 28% for the group ranking in the range 100-200. These are the very largest US corporations and CDS prices are therefore unlikely to give any useful guidance on credit quality at all outside the top 350 US corporates. This approach would prejudice smaller entities' access to bank lending and capital markets. The alternative of using simple debt-to-equity ratios fails to take into account the nature of an entity's business - service companies, such as advertising agencies, would be systemically relatively disadvantaged under this approach for example. High leverage in the real estate sector might be entirely appropriate due to its low asset volatility whereas high leverage in the highly volatile gold mining sector might be entirely inappropriate. Sound risk evaluation systems should consider the risk of

deterioration of assets and cashflows as well as their absolute magnitude relative to liabilities.

Over-simplistic solutions are also liable to encourage "gaming the system" creating undesirable incentives which encourage risk concentrations and create systemic biases which are prejudicial to long-term system stability.

Use of third party service providers begins to foster a competitive landscape that opens the possibility of participation for new providers of credit evaluation services. The NRSRO designation and official incorporation of credit ratings into governmental risk-oversight bodies has had the effect of creating a quasi-monopoly for the NRSRO organizations and suppressed competition. It is possible to outsource testing of credit evaluation systems to third parties using well-known approaches. It should be possible to ensure a credit evaluation system carries a minimum of coverage, attains minimum standards of discriminatory power between defaulters and non defaulters and it should be possible to sample analysis to determine whether, over time, predicted default probabilities correspond to outcomes.

Question (3)

No comment

Question (4)

No comment

Questions (5) & (6)

Questions (5) and (6) pose rather similar questions and so are answered together here. Firstly, we would refer to (a) and (b) above, in response to Question (2), that risk-buckets in themselves carry incentive effects which penalize low risk assets in a portfolio and encourage holding higher risk assets. Again, as in response to Question (2) use of simplistic financial metrics instead of detailed risk analysis is liable to cause undesirable systemic consequences. For example, relying on balance sheet ratios can systemically prejudice credit evaluation against service companies which are typically not asset rich and ratios suggest would have a low debt service capacity. Similarly, a ratio such as debt service to cash flow although attractive in its simplicity would probably incorrectly assign poor credit quality to pipeline companies which can be highly indebted because their revenues are typically very stable because they are based on take-or-pay contracts. Sound risk evaluation systems should consider the risk of deterioration of assets and cashflows as well as their absolute magnitude relative to liabilities. Market-based credit measures are intrinsically more objective and responsive to changing circumstances than the current ratings based approach. Arguably, efficient markets rapidly reflect available information about companies and banks and therefore are excellent measures for determining current credit quality. Credit default swap prices and bond prices can be useful sources of assessment of

credit quality, however, prices are only a useful guide if liquidity and trading occur. Reviewing credit default swap prices in the ThomsonReuters 3000XTRA CDS gateway for US corporates shows that 10% of the top 100 US corporates by equity capitalization have either no CDS price quote, or the quote is more than 3 weeks old. This rises to 28% for the group ranking in the range 100-200. These are the very largest US corporations and CDS prices are therefore unlikely to give any useful guidance on credit quality at all ourside the top 350 US corporates, if indeed they are available. This contrasts with the www.FirstKnow.It system which is market-driven and uses stock and options prices data and the Black-Cox formulation of the Merton Model to produce 5 year default probabilities where default probabilities are available on a daily basis for some 3,000 North American companies and banks.

Risk-Based Capital Assignment

Credit ratings are measures of probability of default. The www.FirstKnow.It system produces default probabilities over time horizons ranging from 3 months to 7 years. For additional information purposes, we map these default probabilities to loss experience of the major rating agencies' credit ratings to give implied credit ratings. There is, in fact, no need to map the default probabilities to credit ratings, the default probabilities can be, and in fact are best used in their native state. By way of example, the Basel II risk weightings for corporates under the Standardized Approach are

Credit Assessment	Risk Weight
AAA to AA-	20%
A+ to A-	50%
BBB+ to BB-	100%
Below BB-	150%
Unrated	100%

Substituting the www.FirstKnow.It default probability/rating mapping, the above table can be re-written in terms of 5 year default probabilities as

5 Year Default Probability	Risk Weight
< 0.0012	20%
>= 0.0012 to < 0.0063	50%
>= 0.0063 to < 0.1223	100%
>=0.1223	150%
Unrated	100%

Using this approach, it is possible to leave the existing Basel risk weightings unchanged, simply mapping the risk weightings to default probabilities instead of credit ratings. It is recommended that rather than seeking to renegotiate and restructure their commitments under the existing Basel accords by seeking altogether new financial strength measures, the agencies adopt a system of default probabilities which are determined from market-driven data, such as those calculated by www.FirstKnow.It, and adapt references to credit ratings to default probability bands as described above. In this way, existing international commitments can remain substantially unchanged, whilst the agencies attain the objective of a credit evaluation system which responds accurately and in a timely manner to changes in organizations' credit quality.

Based on experience of the recent banking crisis, there does seem a logic in retaining the rule that a banking entity's credit quality cannot be better than than the sovereign risk of its state of incorporation, although there does seem less logic to banks in non-OECD countries. The BRIC countries are not members of the OECD and, arguably, are in a stronger position to support their banks than some OECD countries (eg/ Ireland, Iceland or Greece).

Question (7)

No Comment

Question (8)

An external guarantee will only be exercised if the obligor fails to pay. Effectively, the guarantor issues a put option on the liability to the holder of the liability. Logically, the applicable credit quality is at least the better of the guarantor or the obligor.

Question (9)

www.FirstKnow.It is an example of a system which produces default probabilities derived from market data and therefore gives a measure of the relative burden from a market driven system in comparison with the existing ratings-based system. www.FirstKnow.It it produces default probabilities using the Black & Cox development of the well known Merton Method. This approach uses stock and option prices and accounts data such as total liabilities to calculate the probability of a company defaulting. Data is produced daily, although real-time analysis is available. www.FirstKnow.It default probabilities are mapped to default experience in the major rating agencies' ratings to provide implied credit ratings over 1 and 5 year horizons.

As www.FirstKnow.It is market-driven these ratings change much more frequently than corresponding ratings from the major rating agencies. For example, during the 2 year period to the summer of 2010 for the retail sector, major rating grade changes of

5 year ratings (eg/ A to BBB) occurred once a month on average. This has been a period of exceptional volatility and probably this rating variability is at least twice what would be encountered in more usual market conditions. Over a 12 month period before the current crisis began in August 2007, 43% of www.FirstKnow.It implied credit ratings remained unchanged which contrasts with the major rating agencies where about 90% of credit ratings remain unchanged over a 12 month period. This relatively higher migration rate from the www.FirstKnow.It data is a reflection of the system's greater ability to detect credit deterioration, with high discriminatory power represented by a Gini Coefficient of 93.5% (100% would be perfect discrimination of defaulting companies). The migration data would point to at least a doubling of rating changes from using market-driven credit data although naturally this has the benefit of a credit system which is more responsive to changes in a firm's condition. IT systems and response management systems could be upgraded to enable the higher data flow to be managed more effectively without equivalent increase in administrative burden.