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Elizabeth M. Murphy

Secretary

Securities and Exchange Commission

100 F Street, NE

Washington, DC 20549-109

Dear Ms. Murphy:

I commend the SEC for hosting the Credit Ratings Roundtable at a critical juncture in the rating agency reform. Also, I appreciate the opportunity to comment on this event. Given that the debates on credit ratings have been exclusively centered on the issue of conflict of interests, I would like to add some diversity to the debates by sharing my view on alternative creditworthiness standard, an issue that has not received its proper share of attention despite its importance. Hence, in my comments, I will focus on the emergence of insolvency resolution practices that have subverted the analytical utilities of credit ratings in risk assessment as well as the urgent need for an alternative rating methodology that can adequately analyze insolvency risk and economic recourse of insolvency resolution and better serve investors' interests.

I am an unaffiliated independent researcher, having conducted research on Going Concern Rating (GCR) since September 2010 when I resigned from Fitch Ratings and published two

articles on the subject. The first article, entitled “Convergence of Audit and Credit Rating Practices: Going Concern Ratings<sup>1</sup>,” published in International Journal of Disclosure and Governance in June 2011; and the second article, entitled “Going Concern Rating and Economic Analysis of Insolvency<sup>2</sup>,” published in the newsletter of the Global Association of Risk Professionals (GARP) in October 2012. The GARP article is attached to my submitted comments.

### **Uncertainty and Insolvency Resolution**

The history of financial uncertainty can be traced as far back as ancient Mesopotamian times when sheep were commonly provided as loan collaterals, but pregnancy of ewes often created “counting” (accounting) uncertainty during the loan periods. As a result, new born lambs created actual counting volatility that usually led to legal disputes over ownership and collateral valuation.

While societal progresses have advanced economic activities both in form and sophistication, financial uncertainty has always been a major source of economic distresses for firms and sovereign (and state) governments. Given the recent adverse economic conditions, volatility has in fact surpassed default to become the number one corporate killer. As volatilities are often manifested as liquidity crunches caused by asset valuation collapses and activation of contingent claims on cash flow, they do not always constitute breach of debt obligations, so bankruptcy may not be an appropriate resolution regime for insolvency caused by volatilities.

As a result, insolvency resolution has become an additional resolution regime to bankruptcy resolution for “non-default” economic distress situations since 2008, such as regulatory resolution (SIFI living will resolution) and contractual resolution (principal conversion or write-down of CoCos). In addition, definitive phrases such as “gone concern” and “non-viability” have appeared in financial regulations (Basel III and Solvency II) that also require insolvency resolution instead of bankruptcy resolution. However, the emergence of the

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<sup>1</sup> <http://www.palgrave-journals.com/jdg/journal/v8/n4/full/jdg201115a.html>

<sup>2</sup> <http://www.garp.org/risk-news-and-resources/2012/october/going-concern-rating-and-economic-analysis-of-insolvency-risk.aspx>

insolvency resolution regime has created several insurmountable analytical challenges for the current credit rating methodology as listed below:

1. Unlike credit rating analysis in which firms are rated to legally defined events with robust historical data, such as default, insolvency risk of firms would have to be rated to economic events, such as “gone concern” or “non-viability,” which currently are not quantitatively defined either in accounting disclosure (annual reports), SEC filings (10K and 10Q) and regulatory reporting. In other words, the threshold, or trigger, for insolvency resolution is NOT precisely defined and, as such, it is often litigated
2. In addition, unlike the bankruptcy resolution regime in which creditors maintain exclusive control for legal recourse (recovery of liquidation value), the economic resource of insolvency resolution is the equitable redistribution of going concern (GC) values of distressed firms among multiple stakeholder groups with competing financial claims, such as creditors, shareholders, current and retired employees
3. Moreover, unlike credit rating notching analysis in which only inter-creditor notching for legal recourse is defined by contractual subordination and bankruptcy priority, stakeholder notching (stakeholder conflicts) for redistribution of GC value in insolvency resolutions would require a different kind of notching concept that is not defined by inter-stakeholder contractual relationship, which does not exist in the first place

Because credit rating agencies focus only on default risk and inter-creditor notching analyses, financial uncertainty and stakeholder conflicts are not on the radar screen of fundamental credit analysis. Hence, the analytical deficiency helps to explain why credit ratings did not predict the volatilities and cannot explain the stakeholder conflicts that brought Lehman Brothers and several other firms to their demises during the financial crisis in 2008. Similarly, sovereign credit ratings do not analyze the notching implications of the political conflicts among stakeholders with competing financial claims (voters, creditors, pensioners, entitlement

recipients and others) in the Euro zone debt crisis. Therefore, the sovereign credit rating on Cyprus did not predict and cannot explain why the Cypriot government chose nationalization of private bank accounts instead of tax increase or default.

### **Recommendation**

I believe an alternative rating methodology that can adequately analyze insolvency risk and stakeholder notching for economic recourse of insolvency resolution is urgently required, not only for fostering competition and innovation in the rating industry, but also in the interests of investors who are exposed to a significant, volatile risk that is not well understood.

While conflict of interests and rating fee model are important issues to the current debates on rating agency reform, the debate on alternative creditworthiness standard would have the substance to define the shape of the next generation of rating practice. To this end, I would like to recommend that the SEC organize a roundtable on alternative rating methodology and innovation in the rating industry as soon as possible. As insolvency risk and stakeholder conflicts are significant risks that have not been studied within the rating discipline, the sooner the roundtable is held, the more investors' interests would be advanced.

Yours Truly,

Simon Hu

# Going Concern Rating and Economic Analysis of Insolvency Risk

By Simon Hu

In the good old days, the bond market was undisputed king of capital markets and senior creditors were protected subjects of the kingdom. Their inalienable rights were written into bond indentures and enforced by an army of lawyers. There were different classes of creditors whose rights were further defined by what is called subordination or the priority ranking for distribution of liquidation value in case of bankruptcy.

Credit rating agencies, aided by privileged access to non-public information of debt issuers, equalized “information asymmetry” between the issuers and investors via letter ratings and, at the same time, translated complex legal language of subordination into “rating notches” that represent the relative differentials in distribution of liquidation value among different classes of creditors.

Together, lawyers and credit rating analysts were in full control of risk creation and risk reporting in the kingdom of the bond market. Lawyers used legal language (such as “waterfall” and “credit enhancement”) to define what credit risks were, and rating analysts translated the risks of noncompliance of legal obligations into easily understood letter ratings, with each rating scale representing a certain probability of default risk.

Simultaneously, accountants remained quietly at a distance from the disciplined, regulated activities inside the kingdom of bond market. Their turf was the rambunctious jungle of stock market. In most circumstances, audit opinions were simply rubber-stamp approval of listed companies’ financial statements that few investors cared to read.

Once in a while, when a going concern opinion was issued to a listed company, the auditor was often accused of fabricating a “self-fulfilling prophecy”; however, when the listed company filed for bankruptcy, the auditor would most likely be taken to court swiftly for its failure to warn investors of the impending financial distress.

What makes the auditor’s professional fate so precarious and investors’ responses to bad news of relative degrees so irrationally polarizing? It is the dichotomy of the binary audit reporting model that produces only two opinions: going concern or gone concern, with no choices in between for investors.

While credit rating analysts felt lucky that they did not have to deal with such dichotomy issues in their credit rating analysis, auditors never felt comfortable about the notion of using a rating scale for financial audits. Therefore, each was happy with their respective roles in credit risk reporting and financial reporting, and the two practices had remained apart since the birth of the credit rating practice. Then, on one fateful day in late 2008, their world changed.

## **The Uncertain Roles of Auditors and Credit Rating Analysts in a New World**

When fair value accounting was officially implemented for financial reporting in 2008, the parallel worlds of credit rating analysts and auditors collided, because risks were brought into financial reporting via valuation uncertainty. Shareholders and creditors suddenly found themselves exposed to non-contractual credit risk. In addition, certain numbers that used to be definitive in financial statements suddenly had probabilities attached, and thus became “uncertain.”

When marked to market, credit risk is no longer created only by lawyers but also by the fickleness of capital markets. Credit Value Adjustment (CVA) volatility loss, for example, is “accounting” credit risk; asset migration from level II to level III due to market illiquidity creates “modeling” credit risk; and there are other factors, such as the risk of debt-to-equity conversion for contingent capital securities and the reversal of creditor seniority in a resolution for systemically important financial institutions (SIFIs).

These non-contractual credit risks are inherent in financial reporting, but are not captured in credit risk reporting. While auditors may see the risks in financial statement audits, the current binary audit model does not allow them to convey this incremental risk information to investors (other than “going concern” and “gone concern”), which creates a huge distortion in going concern valuation because of the draconian choice between going concern value and liquidation value.

At the same time, such non-contractual credit risks cannot be included in fundamental credit analysis, because they do not constitute default events, unless lawyers write them into bond indenture and make them contractual credit risk. To debt investors, however, credit losses are credit losses, and they see little distinction between contractual and non-contractual credit losses. Likewise, equity investors are now exposed to non-contractual credit risk, and they want more incremental risk information as a result.

Apparently, both auditors and credit rating analysts are confined by the scopes of their respective roles in capital markets. The role of auditors is to verify reporting entities’ compliance with accounting standards and principles, while credit rating analysts’ role is to perform fundamental credit analysis that largely focuses on contractual default risk. This is causing anxieties among auditors and credit rating analysts, because deviation from their stated missions in order to capture these non-contractual credit risks would turn statutory audit into an analytical practice and credit rating into a credit valuation practice, which may create a host of problems, ranging from regulatory to practice-liability issues.

Therefore, in the new world of fair value accounting reporting, a different breed of largely unmonitored risk has emerged – the rapid gradation of going concern risk. As the 2008 financial crisis vividly demonstrated, this type of risk is capable of pushing otherwise financially sound companies (like Lehman and AIG) over the insolvency cliff in a matter of just a few days during volatile economic conditions.

## Going Concern Risk

Insolvency is the economic consequence of three financial scenarios: (1) assets are less than liabilities; (2) inadequate cash flow to cover due obligations; and (3) significant losses of capital. Bankruptcy is the legal consequence of insolvency.

Going concern risk is defined as uncertainty in going concern valuation, which is a discounted cash flow (DCF) valuation exercise. When a firm's residual going concern value falls below zero – i.e., when going concern value - liquidation value < zero – the firm is said to have become insolvent. Therefore, going concern risk is insolvency risk. However, going concern risk analysis would simultaneously involve all three definitions of insolvency (solvency, liquidity and capital), and thus is a multidimensional analysis of insolvency risk.

Like default risk, insolvency risk is a continuous domain where going concern and gone concern represent two static, dichotomous risk scenarios. However, what constitutes the proper definition for going concern has been debated for decades in the accounting profession, and continues to be the subject of disagreement today.

In addition to the dichotomy issue of the binary audit reporting model for going concern assessment, another difficulty in defining going concern risk in financial reporting is the prevalent use of probability phrases for going concern disclosure, such as “substantial doubt” (in GAAP), “significant doubt” (in IFRS), “more likely than not,” “reasonably likely” and “imminent.”

Ponemon and Raghunandan (1994) conducted a survey that examined statistical interpretations of “substantial doubt” in going concern assessment by a group of stakeholders that included 45 auditors, 95 bank loan officers, 88 financial analysts and 32 judges. It was found that the judges were the most conservative in estimating probability value with the mean (median) 0.33 (0.30) assigned to “substantial doubt”; they were followed by auditors 0.57 (0.51), financial analysts 0.71 (0.70) and bank loan officers 0.72 (0.75).

In an investor survey conducted by the PCAOB in March 2012, it was recommended that “more likely than not” be assigned a probability value of 51% and that “substantial doubt” be assigned a probability value of 80%. It was also suggested that the threshold for going concern should be lowered to “more likely than not” from “substantial doubt.” However, no final decisions have been reached by the FASB and PCAOB.

Even when the going concern bar is officially calibrated at 51% or 80%, the dichotomy issue of binary audit reporting model would still remain. In addition, going concern opinions and credit ratings are not “notched,” meaning a single “B” rated issuer is as much a going concern as an “AAA” rated issuer, as shown in Table 1 (below).

Furthermore, the lowest rung of the credit rating scale is calibrated at the “CCC” scale by an annual cumulative default rate of approximately 24.5%, which is a distance away from the “more likely than not” going concern threshold at 51%. Intuitively, this suggests that credit risk is a subset of

insolvency risk and that credit rating cannot be used to assess insolvency risk (or going concern risk), due to a lack of a causal (or notching) relationship between them. Moreover, to give the credit rating the power to assess insolvency risk, the rating scale would have to expand to possibly “III” or “JJJ”.

**Table 1: Mapping of Going Concern Opinions (GCO) on Credit Rating Scale**

GCO status	Going concern	GC	GC	GC	GC	GC	GC	Gone concern	Gone concern
Credit rating	AAA	AA	A	BBB	BB	B	CCC/C	More likely than not	Substantial doubt
Annual default rate	0%	0%	0.06%	0.13%	0.95%	2.9%	24.47%	51%	> 80%

Sources: Fitch Global Corporate Finance Average Cumulative Default Rates: 1990-2011. Also, the PCAOB Investor Advisory Group Going Concern Survey, March 28, 2012.

The dichotomy issue of the binary audit reporting model and the resultant analytical difficulties in assessing going concern risk are further illustrated by McKinsey & Company in a May 2011 working paper that analyzed ICAAP practices for economic capital assessment, on the basis of “going concern” vs. “gone concern,” at 19 European banks. In this paper, titled “*Mastering ICAAP: Achieving Excellence in the New World of Scarce Capital*,” McKinsey found that the banks had “little consensus on the precise distinction between the two scenarios, despite the fact that the choice of scenario is the foundation of a bank’s capital-adequacy framework and is currently at the center of regulators’ attention.”

Since the binary audit reporting model cannot convey incremental insolvency risk information to investors when going concern status of listed companies would be subject to severe volatility during adverse economic conditions, the utility of the going concern assumption in fair value financial reporting has been eroded, or may have even been subverted. Consequently, going concern disclosure in financial reporting should be complemented by economic analysis of insolvency risk, where gradation of going concern risk is analyzed in a continuum. In other words, going concern should be analyzed as a risk instead of simply as regulatory compliance status for financial reporting.

**Consolidated Risk Measurement vs. Unconsolidated Risk Measurement**

Traditional risk analytical approaches typically include identification of individual risks, such as credit risk, interest rate risk, market risk and operational risk; the risk capital is then calculated by adding the risks together with various statistical adjustments for correlation, covariance, concentration, etc.

Basel I focused on credit risk only, while Basel II added market risk and operational risk, and Basel III added liquidity risk. With each new Basel accord, the calculation of risk capital became more complex and convoluted, and less intuitive.

The false sense of completeness of the VaR measures in the Basel accords is just a typical feature of such a traditional, “unconsolidated” risk measurement approach. Under this type of approach, if any

individual risk is missed, the tail risk would be much closer than what VaR models suggest. And what a risk they missed in late 2008 when most VaR models did not capture the rapid gradation of going concern risk!

Can a “consolidated” risk measurement system be developed? If we take the view that the final resting place of all individual risks is in a firm’s going concern value, then going concern risk is, in fact, a “consolidated” risk. As going concern risk is defined as uncertainty in a firm’s going concern valuation, going concern risk and cash flow volatility is intuitively considered correlated, because going concern valuation is basically a DCF valuation exercise.

In a December 2005 white paper titled *Earning Volatility, Cash Flow Volatility and Firm Value*, Allayannis, Rountree and Weston observed (using a large sample of non-financial firms) that 1 standard deviation increase in cash flow volatility is associated with a 30%-37% decrease in firm value. In an updated version from March 2008, the same authors found that a 1% increase in cash flow volatility would result in approximately 0.15% decrease in firm value. Therefore, it can be assumed that going concern risk and cash flow volatility are causally correlated.

When insolvency risk is measured against cash flow and its volatility, implied probability of insolvency can be derived by observing the volatility and uncertainty in going concern valuation. Consequently, economic analysis of insolvency risk is essentially consolidated risk analysis, which combines considerations for both solvency and liquidity in assessing uncertainty of going concern valuation.

### **Notching between Insolvency Risk and Credit Risk**

Unlike credit rating notching, which is defined by the contractual relationship among different classes of creditors that is static, notching of insolvency risk and credit risk is governed by the basic rule that cash flow allocation to all stakeholders cannot exceed 100% of a firm’s economic cash flow; as such, this notching is dynamic. Therefore, the relative differentials in cash flow allocation among different classes of stakeholders would determine the notching relationship among them.

Since shareholders are the bearers of insolvency risk and creditors are the bearers of credit risk (and since these are the two major stakeholder groups for corporate issuers), their relative differentials in cash flow allocation would best approximate the notching differentials between insolvency risk and credit risk (or equity-debt notching).

For public sector issuers, such as sovereign or municipal issuers, economic analysis of insolvency risk would obviously involve different groups, because there are no shareholders. A conjectural economic analysis of sovereign insolvency risk may include stakeholders such as creditors, pensioners and voters (as beneficiaries of public services), as well as recipients of budget allocations such as education, healthcare and defense. The notching relationship between these stakeholder groups would still be defined by the basic rule that cash flow allocation to all stakeholders cannot exceed 100% of the sovereign issuer’s annual budget.

Given that most governments in the world have deficit spending, creditors are naturally a major stakeholder group, but their notching relationship with other stakeholder groups could potentially be more dynamic than a simple analysis of traditional credit risk exposure, especially with the voter stakeholder group. Sovereign cash flow is often exposed to significant uncertainties, including natural disasters, national politics, social unrest and changing demography. These notching factors tend to collide more intensively during uncertain, volatile economic conditions.

For example, popular referendums or bloodshed in social unrest can often change government policies for cash flow allocation among stakeholder groups. As a result, voters in representative democracies tend to have stronger standing in sovereign cash flow allocation than citizens of less democratic regimes, who either have less interest in claiming cash flow allocation or are completely unrepresented. Any relative increase in cash flow allocation to the voter group during fiscal austerity periods would likely come at the expenses of other stakeholder groups, including creditors.

### **Endgame of Rated Risk**

In any rating and notching schemes, the endgame of rated risks must be established and all major classes of stakeholders must be exclusively identified. Endgame analysis would involve calculating how the remaining value is distributed among stakeholder groups and how the notching relationship is derived from that process. If the endgame changes or if a new claimant suddenly emerged with *pari passu* or more senior priority than that of existing stakeholders for the distribution of the remaining value, the original notching order would be disrupted and lose its analytical meaning.

When a large SIFI bank is said to be too large to fail, it means its endgame has changed from bankruptcy to resolution. But would bankruptcy-centric credit rating notching practices still be applicable to the SIFI bank? When the SIFI bank is financially distressed and taken over by the FDIC for orderly resolution, its endgame is to redistribute going concern value equitably among shareholder and creditors instead of distributing liquidation value among creditors according to bankruptcy priority ranking. Clearly, the credit rating and its notching practice would not make analytical sense for SIFI resolutions, because there is no direct causal relationship between default risk and the resolution endgame, which may not be a default event.

What is the endgame of a sovereign debt issuer from a rating perspective? This is less obvious and intuitive than the corporate endgame. From a credit rating perspective, the endgame is obviously bankruptcy. However, no sovereign nations have been dissolved and liquidated by creditors in modern history. They are perpetual going concerns. Clearly, economic analyses of sovereign insolvency risk, or assigning going concern ratings to sovereign issuers, would require a different endgame.

What is the business of government? The principle role of government is to maintain social justice by providing public services to every citizen in the country, so that they can maintain respectable, decent livelihoods. To achieve that objective, a government would have to manage various

competing interests, from legal obligations (legal contracts) to social obligations (social contract), and would also need to maintain equitable allocation of cash flow among all stakeholder groups.

Any departure from that mission would disrupt the equitable allocation of cash flow, benefitting certain stakeholders at the expenses of others and potentially creating political risks. Therefore, in a situation in which a government is incapable of maintaining a positive balance between evolving obligations and a shrinking budget, a potential endgame of a sovereign issuer (from a rating perspective) could be the forced redistribution (in potentially politically harmful ways) of the budget cash flow allocation between the government's legal contracts and its social contract.

### **Going Concern Ratings and Credit Ratings for Public and Corporate Issuers**

Going concern rating<sup>1</sup> is a hybrid rating-audit practice that measures the implied probability of insolvency by observing the level of reporting uncertainty in going concern valuation. Given that one understands the concept of notching of insolvency risk and credit risk, as well as the definition for the endgame, assigning going concern ratings and credit ratings to issuers on the same rating scale becomes analytically possible.

As going concern rating measures the level of uncertainty in going concern valuation, the purpose of notched insolvency risk-credit risk analysis (or going concern rating-credit rating notching analysis) is to reveal competitive relationships among all stakeholder groups for the allocation of cash flow and going concern value, especially when companies are experiencing financial distresses or approaching insolvency.

When corporate profitability is growing, shareholders are the main beneficiaries of the upside potential, because they can use their voting rights to claim more cash flow allocation. On the other hand, creditors tend to get more cash flow allocation than shareholders during periods of financial distress, because of contractual protection by way of covenants. In severe scenarios, creditors' contingent claims on cash flow allocation, such as accelerated collateral posting, can drive companies to implosion.

Since going concern rating essentially measures "reporting uncertainty" and probability of insolvency, the higher the going concern rating, the lower the uncertainty (or potential volatility), and vice versa. So a higher credit rating with a lower going concern rating would mean part of shareholders' cash flow and going concern value allocation is likely to be reallocated to creditors, because of their contractual protection. If negative market performance is anticipated, investors may want to consider selling equity and buying credit default swaps (CDS); if positive market performance is expected, investors should instead consider buying equity and selling CDS. A lower credit rating with a higher going concern rating simply means that the equity upside of the company is bigger than its credit risk downside.

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<sup>1</sup> For more details on going concern rating, please refer to Simon Hu's article, titled "Convergence of Audit and Credit Rating Practices: Going Concern Ratings", published in *International Journal of Disclosure and Governance* in November 2011, or visit his blog at [www.goingconcernrating.wordpress.com](http://www.goingconcernrating.wordpress.com).

## **Closing Thoughts**

By bridging the information gap between audit and credit rating in assessing the “information uncertainty” of fair value accounting reporting, and by notching between insolvency risk and credit risk, going concern ratings would complement audit and credit ratings data in the financial reporting supply chain in a rapidly evolving world.

However, much additional research is required for further development of going concern rating and economic analysis of insolvency risk. For example, current corporate governance guideline for directors’ fiduciary responsibilities to creditors beyond contractual obligations in the “zone of insolvency” is so nebulous that cash flow allocation between shareholders and creditors in the zone of insolvency may be unpredictable. Similarly, given the lack of disclosure for fixed-income securities and derivatives, how equity decoupling and debt decoupling may influence allocation of cash flow among stakeholders with hybrid (long-short-equity-debt-derivative) investment strategies is still unclear.

By observing going concern risk as the “consolidated risk” through a different prism, going concern rating would likely present analytical challenges that would cause people to reconsider generally accepted practices in financial reporting, valuation, bankruptcy resolution and insolvency early warning. Moreover, this approach could eventually yield an alternative audit model and an alternative creditworthiness standard that provides better incremental risk information to investors in the new ecosystem of fair value financial reporting.

### **BIO:**

Simon Hu has spent more than 15 years in the global credit rating industry, most recently with Fitch Ratings as a senior director in the insurance group. Prior to joining Fitch, he was the managing director and general manager for A.M. Best Asia-Pacific. He holds a bachelor’s degree in electrical engineering from Rutgers University and an MBA from Golden Gate University. He is currently on an academic sabbatical for his independent research on alternative creditworthiness standards and alternative audit models. He can be reached at [REDACTED] .