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## A public good approach to credit ratings – From concept to reality

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### ABSTRACT

From the onset of the 2008–2009 financial crisis to the subsequent European sovereign debt crisis, credit rating agencies have been assigned considerable blame. Reforming the credit rating industry has hence become an important policy issue. In addition to the regulatory efforts in the context of accepting the for-profit business model of ratings, there is a growing realization that credit ratings bear the characteristics of a *public good*. Financial market participants need reliable, transparent and independent assessment of credit risks. Credit ratings are therefore better viewed as an infrastructure matter. However, the proposed regulations seem to have missed this point. This paper introduces a new approach to credit ratings undertaken by the Risk Management Institute at the National University of Singapore that is predicated on the provision of credit ratings as a *public good*. With a *public good* alternative in place, the currently predominant for-profit business model may be counterbalanced.

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### 1. Introduction

For many observers of financial markets, credit ratings play an essential role as an independent and objective measure of credit quality. A significant proportion of debt issuers believe that having an external rating is indispensable for an issuer to attract investors in international capital markets (Poon and Firth, 2005). In the past decade, ratings have gained further importance due to the development of advanced credit risk models, their use in structured finance, etc. (Altman et al., 2002; Carey and Hrycay, 2001; Saunders, 2002; Van Gestel et al., 2005; Van Gestel and Baensens, 2009). In addition to market practices, legislations, regulations and supervisory policies have also accentuated their current role.

At the same time, negative publicity has drawn attention to Credit Rating Agencies (CRAs) whose expertise and independence has regularly come under attack. There have been multiple unanticipated default events and sudden credit downgrades involving major issuers such as Enron, Parmalat and Tokyo Electric Power. In addition to these corporate events, CRAs also failed to foresee severe financial problems suffered by sovereign issuers (e.g., the East Asian and Latin-American debt crises, European sovereign debt crisis) and banks (e.g., Lehman Brothers), casting further doubts on

the gatekeeper role of these agencies.<sup>1</sup> In the past two decades and prior to the 2008–2009 financial crisis, there has been approximately one ratings crisis every 3 years (Moody's Investor Service, 2007). The unanticipated and abrupt downgrades increase systemic risk in the form of large market losses, forced fire sales, a dry up of liquidity, etc., and are pro-cyclical in nature, helping fuel bubbles in good times and exacerbate losses in bad times.

Since the 2008–2009 crisis, the credibility of ratings issued by CRAs as indicators of credit risk has diminished even further. Naturally, the rating agencies have been subjected to considerable scrutiny by investors, regulators and policymakers. The main criticism focuses on opaque and questionable methodologies for assessing credit risk, failure to accurately capture the risk associated with derivatives, lack of accountability and conflict of interests (Hunt, 2009; Morgan and Westerfield, 2009; Sy, 2009).

The credit rating paradox, where credit ratings are very influential and critical to the proper functioning of financial markets on the one hand, and have questionable informational value on the other, is the central issue that we address in this paper.

With repeated financial crises in which CRAs have been assigned considerable blame, reforming the industry has thus become one of the most important policy issues in the effort to reconfigure the international financial architecture. There is a

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<sup>1</sup> For example, the Big Three CRAs gave an investment-grade rating to the debt of Lehman Brothers until the day the bank filed for bankruptcy on September 15, 2008.

general consensus amongst market participants that loopholes in the regulation of the credit rating industry had encouraged CRA malpractices and thus helped to precipitate the collapse of the global financial system. As part of the general initiative to increase the resilience of the financial system, some jurisdictions have adopted legislative measures or signaled the need to strengthen the regulatory framework governing the credit rating industry. The current efforts to regulate CRAs mainly focus on micro-prudential issues and typically aim at reducing conflicts of interest and increasing transparency and competition.

In addition to these regulatory efforts undertaken in the context of the current business model of issuing ratings for profit, there is a growing realization that credit ratings bear the characteristics of a *public good*. Financial market participants need reliable, transparent and independent assessment of creditworthiness of issuing parties. Credit ratings are therefore better viewed as an infrastructure matter, much like roads, air traffic control and the public education system. However, the newly proposed and/or adopted regulations that are expected to fundamentally change the operations of CRAs seem to have missed this point. We introduce a new approach to credit ratings undertaken by the Risk Management Institute at the National University of Singapore that is predicated on the provision of credit ratings as a *public good* and relies on a Wikipedia-style collective undertaking in the rating model development. With a *public good* alternative in place, the for-profit business model of the Big Three credit rating agencies and many smaller ones in various jurisdictions may be meaningfully counterbalanced.

This paper continues as follows. We start with a discussion on the current practice of CRAs, the current regulatory framework and the new regulatory measures that have been adopted. Then, we introduce a new conceptual framework which views credit ratings as a *public good*. We describe the research and production infrastructure that have been built up at the Risk Management Institute at the National University of Singapore. In addition, we touch upon the daily updated default predictions produced under that initiative for 30 economies around the world, and comment on the system's performance thus far. Finally, we comment on future research and development.

## 2. The sell-side rating practice and its inherent weaknesses

We classify credit ratings into buy-side and sell-side where the credit ratings issued by familiar CRAs such as Moody's, Standard & Poor's, Fitch and alike fall in the sell-side category. When a bond issuer hires a CRA to give a sell-side rating, it constitutes part of the effort to successfully market the bond. This is because some investors are legally bound to hold investment-grade bonds and others see such ratings as necessary information before they will even consider a particular bond issue. The sell-side ratings are therefore based on the "issuer-pays" business model. Buy-side credit ratings are initiated by investors who are interested in taking positions on debt instruments. The buy-side credit rating efforts are self-motivated and naturally proprietary. We cannot expect the credit information produced this way to be shared with others. If a buy-side rating is generated by an outside agency like Egan-Jones Ratings, it will only be distributed to its subscribers. When a commercial bank studies its clients' credit quality to manage its credit portfolio, it is a buy-side activity and strictly for internal usage. The buy-side ratings obviously rely on the "user-pays" business model.

According to Randhawa (2011), sell-side credit ratings started in the early 1970s when the CRAs switched from an "investor-pays" to "issuer-pays" business model, in part due to the advent of the photo-copying technology. The "issuer-pays"

business model has since been the preferred mode of operations by big CRAs, whereas smaller CRAs experiencing difficulty in gaining entry into the sell-side credit ratings market typically opt for the "investor-pays" model. It is our contention that the sell-side credit ratings market, not the buy-side, needs to be reconfigured if one wants to reduce future occurrences of financial fiascos tied to credit ratings.

Sell-side credit ratings hold a key position in today's financial markets, where high-quality, widely recognized ratings are a basic condition for the proper functioning of a financial market. CRAs' rating reports often provoke comments from regulators, politicians and the business community. Furthermore, a rating change influences stock and bond prices and, more generally, the terms on which funding can be attracted (Baker and Mansi, 2002; Li et al., 1999). External credit ratings allow uninformed parties to assess the risk properties of thousands of securities quickly using a single, familiar scale and are therefore used by many market participants. According to financial intermediation theory, the principal role of external ratings is to reduce information asymmetry about a firm's ex-ante economic value and the likelihood of financial distress (Millon and Thakor, 1985). Accordingly, CRAs could be regarded as financial market gatekeepers where they perform an information dissemination and verification function.

In some cases, issuing bonds to a particular category of investors or in a particular market may only be feasible if a credit rating is available. More specifically, debt issuers will seek a credit rating to improve access to financial markets and to satisfy investors, creditors or any other stakeholders. Corporate behavior is very indicative of the importance of credit ratings. For example, Kisgen (2006) shows that firms alter their capital structure to keep a certain bond rating, and Faulkender and Petersen (2006) show that firms that have a rating prefer higher levels of debt.

Institutional investors such as pension funds, insurance companies and fixed-income mutual funds, being among the largest owners of debt securities, represent another large group of CRA information users. More specifically, they use sell-side credit ratings to complement their own internal credit assessment, in order to comply with internal restrictions or investment policies and to ensure compliance with various regulatory requirements. Brokers that make recommendations and sell securities to their clients will use sell-side credit ratings in a similar way.

In addition, sell-side ratings are relied upon comprehensively in financial regulations and private contracting as a tool to measure and control risk (Partnoy, 2009; Becker and Milbourn, 2011). For example, many investors can only hold investment-grade securities and various financial institutions face regulatory capital charges related to ratings (e.g., the Basel Accords). Moreover, macroeconomic dynamics and financial globalization have encouraged their use as well. For instance, Caballero and Krishnamurthy (2009) note that global imbalances have led to a large demand for what are known as "riskless assets".

With so many underlying forces supporting the sell-side credit rating business, no wonder that the sell-side credit rating market has developed into a multi-billion dollar industry with the bulk of the revenues being derived from the fees of issuing bond ratings (Deb and Murphy, 2009).

It is clear that the quality of ratings is crucial for the proper functioning of financial markets. By allowing investors to assess the risk of various issues and issuers quickly, ratings provide a key source of information. Setting aside their dominance in financial markets, there appears to be a fundamental disagreement on the economic role of credit ratings. They are blamed for being backward rather than forward looking. The empirical evidence on the informational content of credit ratings is also far from conclusive (Boot and Milbourn, 2006). Ratings tend to be sticky, and then tend to overreact when they do change. In recent years, this

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