Credit Ratings: A Literature Review

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ABSTRACT

The behavioural finance literature focuses on the impact of investor sentiment on the underlying value of individual stocks. Leanness can also additionally enhance performance, because it implies decrease expenses and advanced operational skills that sell a firm’s aggressive advantage. On the alternative hand, leanness can be destructive to performance, because it restricts flexibility, hampering a firm's capacity to reply to organizational modifications and marketplace shifts. Credit ratings can be viewed as a link between borrowers and issuers that reduce information asymmetry in the financial system through an independent view of creditworthiness. Credit ratings given by credit rating agencies are designed to ignore temporary economic shocks and are therefore less likely to change in the short term and it is also confirmed that rating agencies have focused on measuring the relative default risk over a long period of time. The purpose of this study was to determine the variables related to credit ratings. This research is a literature study, which uses 21 articles as study material. The results of this study indicate the variables related to credit ratings, both influencing and being influenced. This study did not find credit ratings used as a moderating variable, which can be used as research material in the future.

Introduction

The behavioural finance literature focuses on the impact of investor sentiment on the underlying value of individual stocks (Ryu et al., 2019). Due to the massive downgrade of credit ratings by credit rating agencies during and after the 2007-2009 financial crisis, many observers, regulators and politicians believe that poor credit ratings (against default risk) were a major contributing factor to the global financial crisis (Baghai et al., 2014). Credit ratings given by credit rating agencies are designed to ignore temporary economic shocks and are therefore less likely to change in the short term (Viswanathan et al., 2021). It is also confirmed that rating agencies have focused on measuring the relative default risk over a long period of time (Altman &
Rijken, 2004). Credit rating agencies also argue that both financial and non-financial information are included in corporate ratings (Chen & Shih, 2006).

Credit ratings can be viewed as a link between borrowers and issuers that reduce information asymmetry in the financial system through an independent view of creditworthiness (Adelson, 2012). This puts a lot of pressure on credit rating agencies (CRAs), which have been unpredictable and scrutinized for their role in the financial crisis since the early 2000s with the collapse of WorldCom and Enron (Papadimitri et al., 2020). Therefore, our work relates to the literature on credit rating determinants. Early research focused on the relationship between traditional accounting ratios and credit ratings (Blume et al., 1998). More recent studies include profit management (Alissa et al., 2013), corporate social responsibility (Jiraporn et al., 2014), and operating leases (Lim et al., 2017), environmental performance (Chabowski et al., 2019) and graded industry structure (Jiang & Packer, 2019). Based on the previous description, the purpose of this study to know things related to credit ratings, to get references on research that can be done in the future.

Literature Review

Bendig et al. (2017) show that inventory leanness is positively associated with credit ratings in a concave relationship and this is consistent with previous research that has looked at the impact of relative inventory leanness on equity performance. Conversely, Bendig et al. (2017) found that Preparticipation Physical Evaluation (PPE) leanness is negatively related with credit ratings in a concave relationship in contrast to prior studies addressing the impact of PPE leanness on equity performance.

Barakat et al. (2018) found that firms with lower credit ratings incur a much more severe debt-based reputational damage, and credit ratings are more instrumental in mitigating the debt-based reputational damage caused by fraud incidents or incurred in non-banking activities. Furthermore, the misconduct of senior management could demolish the reputation of firms with less heterogeneous stock recommendations and finally, credit ratings serve as an equity-based reputational asset in the short term but turn into an equity-based reputational liability in the long term.

Joe & Oh (2018) present that, due to the costs and benefits associated with different rating levels, credit ratings are a major consideration for corporate cash management, specifically, firms that become relatively sensitive to rating changes increase their cash holdings, either to improve the chances of an upgrade, or to avoid a downgrade. Furthermore, this effect is driven by chaebol business groups that increasingly rely on external financing that depends on credit ratings following the attenuation of their internal capital markets, and show that the impact of credit ratings on firms’ cash holdings is more noticeable when firms are more prominent in the market. Kedia et al.
(2017) found an alternate way to mitigate the effect of ownership-related and other conflicts of interest is to reduce the regulatory reliance on credit ratings.

Kusano (2018) reports that the reliability of accounting information has significant effects on the risk relevance of operating leases, and these results indicate that a credit rating agency considers operating lease information in determining credit ratings to the extent that this information is reliable. Nakamura & Roszbach (2018) presented their research which results are consistent with bank loan officers placing too much weight on their private information, a form of overconfidence. Risk analyses of the loan portfolios in the data could be improved by combining the bank credit ratings with public credit bureau ratings. Chi & Meng (2019) present that in the debt rating of the small industry enterprises, the financial indexes are not capable of reflecting all the debt situations, and the qualitative indexes play a more important role in debt rating. Dyatchkova et al. (2018) found that the intensity of occurrence of credit ratings among industrial companies from Brazil, Russia, India, China, and South Africa (BRICS) were different, and it occurs that the investment grades were subsequently downgraded into a speculative ratings class (the problem of downgrading ratings in time).

Viswanathan et al., (2021) compared the classification learning capabilities of an Enhanced Support Vector Machine (BSVM) algorithm with other classification methods when predicting bank credit ratings. Further, Viswanathan et al. (2021) present that the performance of each algorithm was compared based on a single metric, geometric mean, also known as G-Mean (GM), which typically uses product values to represent class sensitivity, and finally the study results prove that the proposed BSVM method is superior to other methods.

Ryu et al. (2019) builds a firm-level investor sentiment indicator based on individual firms' transaction and price data, and shows that changes in credit ratings affect investor sentiment. The following empirical results: First, the reaction of investor sentiment to the rise (down) is quite positive (negative); Second, the larger the downgrade, the greater the negative response from investors, but we do not find similar results for the upgrade; Third, the cumulative abnormal return on the day of the event depends on the accumulated abnormal sentiment before the corresponding day.

Mutize & Nkhalamba (2020) compared and analyzed the scale of economic growth, a major factor that determines the long-term foreign currency credit ratings of 30 countries in Africa, Europe, Asia, and Latin America from 2010 to 2018 and the results from the probit and logit binary evaluation models show positive coefficients for the economic growth sub-factors of non-African countries (developing and developed) compared to negative coefficients for African countries. Choi et al. (2020) present empirical result is that the market measures change the change of the tubular rates, but in terms of market measures, market measures are more inferred than grade-based
strategies than grading strategies, showing inferred forced sales strategies. This result is related to the high volatility of market credit measures, which causes too often or too early to be delivered and this means that market credit measures have additional benefits to detect loan risk changes, and finally, these results are also trusted for credit conditions as well as handheld bond portfolios.

Choi et al. (2020) explores the effectiveness of qualitative information extracted from companies' annual reports in predicting corporate credit ratings. Experimental results conducted by Choi et al. (2020) from a series of multi-class classification experiments show that predictive models trained on both financial variables and vectors extracted from management discussion and analysis data outperform reference models trained on traditional financial variables only. Chen et al. (2020) found that the current credit rating system cannot distinguish the distribution of recovery rates, therefore, in this study, considering that online lending in China is much more developed than in other countries and regions, we propose a credit rating approach for online lending platforms using a Chinese sample. Finally, an advanced credit rating method for borrower reclassification was developed that combines factor analysis using recovery and K-Means clustering, while this final method allows you to clearly separate borrowers with different recovery rates by credit rating.

Zhang et al. (2019) shows that in theory there is an inherent balance in dynamic game models, and also propose an optimal response algorithm to help consumers and retailers iteratively reach a balance. Numerical simulations are provided to demonstrate the effectiveness and effectiveness of the proposed method and the basic behaviour of a selfish retailer can be severely constrained by even a slight deterioration in the interests of other participants, which contributes to creating a credible trading market. Lopatta et al. (2019) present that rating agencies promote their services by promising objectivity and comparability of ratings on a single scale and in practice, however, credit ratings lack credibility across asset classes and issuers, forcing authorities to adjust their objectivity and for rating agencies to reconsider their credit risk rating models after the global financial crisis. It analyses the credit rating that an issuer belongs to a market segment and the degree to which it can be described by the credit rating of a specific rating agency, and shows how belonging to a particular market segment and rating agency affects the credit rating of the issuer.

Josephson & Shapiro (2020) present that a reputable credit rating agencies (CRA) is a simple security design model for both the design and grade of security and show that the observed equilibrium outcomes and rating inflation depend on rating quality constraints and the relative demand of limited and unrestricted investors. Interestingly, the most effective results (without rating inflation) for some parameters are observed with weak rating constraints and the non-monotonicity of rating inflation for rating constraints can be a serious problem for regulators, it would also be interesting to further explore the possible systemic effects of rating inflation.
Jiang & Packer (2019) present that although potential ownership disputes and business growth are not always associated with higher ratings, competition in the ratings industry is associated with higher ratings and there is also weak evidence that foreign rating agencies' downgrades to China's national credit ratings have particularly affected the global credit ratings of state-owned enterprises. Further, Jiang & Packer (2019) state that factors related to the structure of the credit industry do not significantly affect bond yields, but both domestic and global credit ratings are important factors in multivariate yield spread regression, so they do affect more than financial variables.

Guo & Wu (2019) investigate the role of credit risk in the relationship between short selling and future stock returns and found that the predictive power of short interest rates on future returns is concentrated in undervalued stocks. Low-quality stocks with short maturities that fell the most outperformed short-term stocks that increased the most by 1.09% in the following month and this profit spread is well-suited to controlling for cross-effects and corporate characteristics, and is much more evident during times of high investor sentiment and low liquidity, finally struggling businesses with large short-term profits rising will perform worse afterwar. Chen et al., (2019) discover that the division of obligation utilized to fund share repurchases is contrarily related with credit appraisals and in specific, this affiliation is more articulated for firms with a tall level of free cash stream. Chen et al., (2019) encourage separate the test by the repurchase reason and discover that the associations between debt-financed repurchases, free cash stream, and credit appraisals hold when the repurchase is made for the reason of exchanging offers to workers or for the reason of value conversion of convertible securities, but not when it is made for keeping up the company’s credit.

Cash (2020) shows that whereas the anti-money laundering (AML) administration has looked for to both compel and entice the banks to participate, the main concept of a private company is trumping the complete incorporation of the banks into the AML framework and seemingly, this can be to be anticipated, and whereas a few may argue that there’s a critical social require for the banks to function in an agreeable way, there will be fair as numerous arguing that as a private company a bank must see after itself. Cash (2020) present that the reality is that when such a halt happens there may got to be little operations that offer assistance to ease the method for all concerned, and in Sigma Appraisals there exists this potential, whereas Sigma Evaluations is brand new and more inquire about will be required once it creates, the market-based arrangement to the main issue inside the AML circle may fair work.

Method

We presented systematic literature review as methodology of the research as used by previous researchers (Artha & Jufri, 2021; Khairi et al., 2021; Räisänen et al., 2021;
Snyder, 2019). We use research articles that collected from sciencedirect.com and emerald.com. This research uses 21 articles as objects. After this process, we reviewed the bibliographic references to check the validity of the survey and avoid possible omissions (Conz & Magnani, 2019).

Result and Discussion

The results below show the variables that associates with credit ratings. Some variables affect credit ratings, and others are affected by credit ratings. Macroeconomic, for example economic growth, and microeconomic variables, for example debt to equity ratio and firm capital structure identified in the table. There are variables that associated with auditing, namely audit opinion and audit effort. The results show there are no variables that associates with policy, either at national level or global. The results of this research presented in table 1 below:

Table 1. Variables that affiliated with credit ratings

<table>
<thead>
<tr>
<th>Author(s) and Year</th>
<th>Variable(s)</th>
<th>Result(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bhattacharya &amp; Sharma (2019)</td>
<td>market capitalization,</td>
<td>market capitalization and debt to</td>
</tr>
<tr>
<td></td>
<td>debt to equity ratio</td>
<td>equity ratio affect credit ratings</td>
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<tr>
<td>Hu et al. (2019)</td>
<td>information asymmetry</td>
<td>credit ratings affect information</td>
</tr>
<tr>
<td>Kisgen (2019)</td>
<td>firm capital structure,</td>
<td>credit ratings affect firm capital structure and investment decision</td>
</tr>
<tr>
<td></td>
<td>investment decision</td>
<td></td>
</tr>
<tr>
<td>(Moalla &amp; Baili, 2019)</td>
<td>audit opinion</td>
<td>credit ratings affect audit opinion</td>
</tr>
<tr>
<td>Ng &amp; Ariff (2019)</td>
<td>stock prices</td>
<td>credit ratings affect stock prices</td>
</tr>
<tr>
<td>(Ryu et al., 2019)</td>
<td>investor sentiment</td>
<td>credit ratings affect investor sentiment</td>
</tr>
<tr>
<td>Shi et al. (2020)</td>
<td>loss given default</td>
<td>credit ratings affect loss given default</td>
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<tr>
<td>Bales &amp; Malikane (2020)</td>
<td>stock volatility,</td>
<td>credit ratings affect stock and bond volatility</td>
</tr>
<tr>
<td>Botha &amp; Pretorius (2020)</td>
<td>bond volatility</td>
<td>fiscal balance, foreign reserves, per capita income, regulatory quality,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>income, internet users</td>
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<tr>
<td>Ivanov &amp; Faulkner (2020)</td>
<td>corporate real estate ownership</td>
<td>corporate real estate ownership affects credit ratings</td>
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<tr>
<td>Kemper (2020)</td>
<td>financial adjustments</td>
<td>credit ratings affect financial adjustments</td>
</tr>
<tr>
<td>Author(s) and Year</td>
<td>Variable(s)</td>
<td>Result(s)</td>
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<tr>
<td>Meriläinen &amp; Junttila (2020)</td>
<td>asset liquidity</td>
<td>asset liquidity affects credit ratings</td>
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<tr>
<td>Mutize &amp; Nkhalamba (2020)</td>
<td>economic growth</td>
<td>economic growth affects credit ratings</td>
</tr>
<tr>
<td>Papadimitri et al. (2020)</td>
<td>board directors’ education</td>
<td>board directors’ education affect credit ratings</td>
</tr>
<tr>
<td>Shi et al. (2019)</td>
<td>loss given default</td>
<td>credit ratings negatively related with loss given default</td>
</tr>
<tr>
<td>(Wojewodzki et al., 2020)</td>
<td>capital structure</td>
<td>credit ratings affect capital structure</td>
</tr>
<tr>
<td>(Gottesman &amp; Ismailescu, 2021)</td>
<td>student selectivity</td>
<td>student selectivity affects credit ratings</td>
</tr>
<tr>
<td>H. J. Lim &amp; Mali (2021)</td>
<td>audit effort</td>
<td>credit ratings positively related with audit effort</td>
</tr>
<tr>
<td>Koul et al. (2021)</td>
<td>promoters' credibility</td>
<td>promoters' credibility affects credit ratings</td>
</tr>
<tr>
<td>Liu &amp; Park (2021)</td>
<td>firm’s dependence on major customers, firm’s dependence on major suppliers</td>
<td>firm’s dependence on major customers and firm’s dependence on major suppliers negatively related to credit ratings</td>
</tr>
<tr>
<td>Xu et al. (2021)</td>
<td>corporate financial behaviour</td>
<td>credit ratings affect corporate financial behaviour</td>
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</tbody>
</table>

**Conclusion**

The comes about of the investigate appear the factors that related with credit ratings. A few factors influence credit ratings, and others are influenced by credit ratings. Microeconomic and macroeconomic factors recognized within the table. The implication of this research is to provide input to economic actors on matters that affect credit ratings, so that they can be taken into consideration in making decisions. Limitation of this research is there’s no research that use credit ratings as moderating variable, either at national level or worldwide. Future research should investigate about this. Another limitation of this research is the time span, which is 3 years. Future research ought to utilize a longer time span.

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**References**


