THE IMPACT OF POSITIVE OPERATING CASH ON BONDS' PRICING INTERNATIONAL EVIDENCE

Harit Satt*

Abstract

This paper aims to ascertain the relationship existing between the ratings of bonds and the ending cash balance of the operating section in the cash flow statement. In our study, which lasted for 18 years, 600 companies were selected from 26 countries to construct our sample. With purpose of detecting how the positive cash balance of the operating section in the cash flow statement characters the likelihood of rising the bonds ratings, we have applied a Probit regression analysis. Consequently, a robust proof stating that the bonds ratings are significantly impacted by the positive operating cash balance. That is to say, generating enough cash flow from the operating activities increases the company's chances to have greater bonds ratings raises, meanwhile lowering the cost of debt given that higher bond ratings decreases the cost of company for raising funds (in the form of bonds). More confirmation to the creditors' rights shields was added through our outcomes, in addition to its impact on the cost of debt.

Keywords: Credit Ratings, Operating Cash Position, Default Risk

*Master of Science in corporate finance, School of Business Administration, Al Akhawayn University in Ifrane, Morocco

1 Introduction

Information is an essential key for the stock markets to function efficiently. Securities are fairly priced whenever the appropriate information about companies is integrated into the prices. The main role of financial analyst in this process is to come up with new information concerning companies. Normally, analysts' research reports, forecasts, and recommendations are considered by stakeholders, especially creditors, as relevant sources of information, the reason why they use them while taking decisions related to ratings. To illustrate, in Brunnermeier and Pedersen (2009), a large market shock leads to a low liquidity, high margin equilibrium, where markets are illiquid, leading to higher margin requirements. Prior literature explained the significance of cash management mechanisms and their usefulness for the companies while applied correctly. Adequate level of liquidity permits companies to have direct access to debt financing and at the lowest costs (interest), allowing the company to benefit from a competitive advantage over others. This competitive advantage makes it possible for the company to enhance its income because the cost of debt is low.

With the aim of improving the positive image regarding the financial situation of the company, cash management that is defined as one of the important mechanisms of good firm's performance may play a considerable role to achieve this objective. High positive cash balances indicates that the company has enough money to encounter its short term duty without any liquidation costs. Nevertheless, taking into consideration the ending balance of cash for the year, using the comparative balance sheet or the cash flow statement, may be misrepresentative. The three principal activities from which companies can engender cash are the following: investing, financing and operating.

Every activity that is related to changes in tangible assets, especially long term assets including properties, plants and equipment defines investing activities. In other words, questions may be raised due to the positive cash balance ensuing from this section. Generating cash from company's operating activities means that the company is selling its means of production (downsizing). However, this circumstance is not tolerated by stakeholders, especially creditors.

Changes associated with long term debts, including loans, bonds and notes payable, and stockholders' equity refer to financing activities. Generating positive cash balances under this section indicates that the company is acquiring capital using one of the followings: issuing stocks, obtaining loans, or writing-off bonds. The fact that a company benefits from a positive balance does not entail any information, except if how this money was spent and how much it cost is recognized, taking into consideration the financial leverage and the ideal capital structure. However, having a negative cash balance under this section indicates either the company is repurchasing its own common shares outstanding or paying off its debt. Zeidan (2010)

asserts that generally speaking, a negative ending balance of cash under the financing section sends positive signals, indicating that the company is able to meet its liabilities through its cash requirement.

Finally, the operating activities is the main point discussed in this research. A positive net cash balance indicates that the company is capable of generating enough from its operating activities. Hence, we should not torment ourselves regarding the future of the company, Amat (2013). Conversely, a negative ending balance of cash refers to the inability of the company to engender enough cash from its principal operations. Consequently, all stakeholders will agonize regarding the future of the company even in the short run.

In accordance with the three sections discussed above, the valuation of the companies is regularly based on the net cash provided from the operating activities. This statement does not imply that the financing and investing activities of the cash flow statement are unusable, but it only emphasizes on operating activities as they are more informative mostly due to the nature of activities and transactions that it embraces, Ojo and Marianne (2013)

Positive cash balances send optimistic signals to all stakeholders, indicating that the company is able to meet all obligations, which decreases the external financing costs for companies. This occurs because both creditors and shareholders will be aware of the ability of the company to pay them back at any time, therefore, demanding a lower returns. In fact, they ask for small returns because the company's perspectives and its liquidity levels are clear. In opinion of fact, positive operating cash balance might have other effects on a company. For instance, demonstrating that a positive operating cash balance may have a positive impact on the bonds ratings for companies indicates that a small level of default risk results in lower cost of debt keeping in mind that Kisgen and Strahan (2009) ascertained that higher ratings influence creditors so that they request lower returns. In reality, the risk of creditors that is related to the company's failure to pay back its debts (default risk) is reduced with higher ratings of bonds. Consequently, for companies with high ratings, the creditors' risk perception and the company's cost of debt are reduced because creditors will ask for lower required returns. Overall, a few studies has been conducted regarding the effect of cash management or default risk levels on companies' cost of debt. However, no study were conducted examine the following hypothesis: do rating agencies value the operating cash balance of a company when rating firms' bonds? If our outcomes support this hypothesis, then lowering the costs of debts may be caused by a positive operating cash balance.

Our goal is to empirically find out how operating cash balance of the cashflow statement affects the cost of debt for companies. More precisely, we intend to identify whether the rating agencies decisions to rate

firms' bonds are affected by the company's operating cash position (whether negative or positive). Our study is similar in spirit to Hamdi et al. (2013) who study the value of the auditor choice and how it affects the corporate bond rating.

Our main objective is to discover in which way the companies' cost of debt is influenced by the operating cash balance of the cash flow statement. Indeed, we aim to detect if the company's operating cash position (whether negative or positive) really affects the rating agencies decisions to rate firms' bonds. Our study is the same as the one conducted by Hamdi et al. (2013) in which they explore the value of the auditor choice and its effect on the corporate bond rating.

2 Literature review

The stock markets function efficiently using information and good corporate governance. Securities are fairly priced whenever the appropriate information about companies is integrated into the prices. The main role of financial analyst in this process is to come up with new information concerning companies. Normally, analysts' research reports, forecasts, and recommendations are considered by stock market participants as relevant sources of information, the reason why they use them while taking decisions related to ratings. Jensen and Meckling (1976) propose that financial analysts have the ability to reduce the agency problems existing within firms as information intermediaries. Merton (1987) claims that the market value of a firm is an increasing function of the breadth of investor awareness.

Berger (1995) has found out a positive relationship between the return on equity and the ratios of capital to assets. He clarified that the higher the capital ratio, the lower the cost of funds on account and the quantity of funds required. Consequently, both the firm's net interest income and the profitability will increase. Conversely, the opposite was determined by Navapan and Tripe (2003). In fact, they discovered a negative relationship between profitability and capital. Kontus (2012) gave an explanation stating that a decrease of profitability that is shown in terms of return assets is a consequence of an increase of short-term debt.

Odders-White and Ready (2006) proclaimed that companies characterized by more liquidity have better credit quality that the ones with less liquidity. Indeed, companies with high liquidity have less chance to default. "They have assets that they can use in case of emergency". Moreover, as the authors state further, companies with more liquidity are continuously benefiting from high quality credit terms and they tend to settle on more. Considering creditors, especially banks, good customers benefit from their rights and they are trying their hardest not only to keep them, but they go for more. Furthermore, Butler

et al. (2005) found out that liquidity has an impact on the cost of issuing equity, more precisely the direct cost of issuing debt. That is to say, higher liquidity leads to a small risk, resulting in a lower interest rate. Otherwise, the lower the liquidity, the higher the risk, therefore, the higher the interest rate.

One of the principal components of corporate finance is the working capital management as stated by Deloof as it influences both the companies' profitability and liquidity. As a result, having an efficient management of working capital would be essential to create the highest shareholder value. In reality, a majority of companies work on maintaining a perfect level of working capital that will enhance their value (Deloof, 2003; Afza & Nazir, 2007). Nevertheless, Matuva (2010) explained that some decisions tend to augment the profitability, hence, lessen the chances of appropriate liquidity. Conversely, emphasizing only on liquidity may reduce the potential of companies' profitability. Moreover, Lazaridis and Tryfonidis (2006) discovered that an arithmetical relationship between profitability, which is computed using Gross Operating Profit, and the cash conversion cycle. They perceived that managers are able to create price for shareholders through handling appropriately the cash conversion cycle and preserving each component to an optimal level.

3 Liquidity and the cost of debt

The cost of debt of any company is influenced by various firm's specific characteristics. Jenzazi (2010) pointed out that the cost of debt in affected by the company's cash management. Among his research paper, a score from 0 to 4 was attributed to the cash management according to various factors (refer to table 1 for more information about these factors). Out outcomes revealed that when there is an increase in the score, there is a decrease in the cost of debt.

The above arguments lead us to the following testable hypothesis:

H1: Generating positive cash balance will reduce the company's cost of debt financing.

H2: Generating positive net cash provided from operating activities leads to higher bonds ratings.

Knowing that the existing literature is limited, our research will add some values in many ways. Our first objective is to assess the perception of the corporate bond market of the quality of the company's liquidity. Secondly, our research differs from Jenzazi (2010) and the other studies because it will emphasize on the international context regarding this issue. That is to say that not only we will have a better understanding of the functioning of the different debt markets around the world, but this will enable us to perceive in which way the external governance mechanisms (such as the legal and extra-legal institutions) relate to the internal mechanisms (in our case cash generated from operating activities) in order

to improve the entire governance quality in one country.

4 Methodology and descriptive statistics

4.1 Specifications

Examining the correlation existing between the positive operating cash and the bonds ratings is the aim of our research. We will use the following general specification with the intention of studying the relationship between these two variables.

Bond Rating = f (operating cash position, Issuer Characteristics, Issue Characteristics)

Three major determinants of bonds rating (Operating cash position, Issuer Characteristics, and Issue Characteristics) are included in this model. The issuer characteristics variables consist of the company profitability (computed using the company's return on assets, the company size which measured by the company total assets, the company risk that is measured by the company variability of earnings, and the leverage that is measured by the debt to equity ratio). Regarding the issue characteristics variables, they are composed of the issue size or the size of the bonds, the bonds maturity, and the convertible provision (an option enabling a bondholder to exchange the bonds for shares).

The rating bonds used are from seven diverse ordering categories (exemplified by the S&P ratings). The last statement signifies that since the bond rating is an ordinal variable, we can use the Ordered Probit Model.

4.2 Data sources and variables

600 companies from 26 countries were selected to be included in our sample. A description of the sample and the distribution of the 600 observations that are from 2002 to 2012 were provided in Table 2. The bonds ratings were taken from the S&P credit ratings. These ratings have a range from AAA to D, including 22 potential ratings. These ratings refer to companies' creditworthiness. That is to say, they show whether a company is able to repay back their loans at the due date. Appendix demonstrates that the suggested ratings obtained from S&P have been converted to ordering numbers ranging from 1 to 7, 1 representing the lowest rating and 7 the highest one. The conversion of the ratings was based on the research that was conducted by Ashbaugh, Collins, and LaFond (2006). The data of bonds ratings were obtained from F- Database

The panels below give a description of the sample that was used to derive the outputs. Panel A specifies the countries that companys in the sample operate in. Panel B gives the distribution of the observation on a yearly basis (starting from 1996 to 2006). Panel C gives a description of the observations based on the industry.

Table 2. Sample description

Panel A: Sample Distribution per Country			Panel B: Sample Distribution per Years		
Country	**Number**	**Percent**	**Years**	**Number**	**Percent**
Argentina	8	1.33	1996	2	0.33
Australia	11	1.83	1997	23	3.83
Austria	8	1.33	1998	22	3.67
Brazil	23	3.83	1999	55	9.17
Canada	136	22.67	2000	100	16.67
Chile	7	1.17	2001	120	20.00
Colombia	1	0.17	2002	122	20.33
Denmark	7	1.17	2003	55	9.17
Finland	7	1.17	2004	45	7.50
France	23	3.83	2005	43	7.17
Germany	35	5.83	2006	13	2.17
Hong Kong	12	2.00	**Total**	**600**	**100**
Korea (South)	22	3.67	**Panel C: Sample Distribution per Industries**		
Malaysia	2	0.33	**Industry**	**Number**	**Percent**
Mexico	14	2.33	Manufacturing	230	38.33
Netherlands	13	2.17	Transport	10	1.67
New Zealand	1	0.17	Trades	40	6.67
Norway	6	1.00	Financial Services	243	40.50
Philippines	6	1.00	Utility	77	12.83
Poland	2	0.33	**Total**	**600.00**	**100.00**

The value of 1 is given to the dummy variable that is the operating cash balance if it is positive and 0 otherwise.

With the intention of giving more clarifications regarding the bonds ratings, we add two control variables to the model that are the issue and issuer variables. More details concerning these variables are provided in Table 1. The control variables data were acquired from W.S Database. As was applied in the research papers of Anderson, Mansi and Reeb (2003) and Boubakri and Ghouma (2008), the computation of the bonds ratings, the convertible provision, and the issue size (the issue characteristics) was based on a portfolio approach. We assembled the entire company issues associated to each year, and the size of the issue to the total issues represented the weight used in the computation of the average bonds ratings, the convertible provision, and the issue size related to each company over every year of the duration of our research.

Since we defined the variables used in our model, we can express the bond rating model as the following:

Prob. (Bonds Ratings=X) = F (b_1. operating cash position + b_2. Company Profitability + b_3. Company Size + b_4. Company Risk + b_5. Bonds Maturity + b_6. Convertible Provisions + b_7. Issue Size + b_8. Leverage + Institutional variables + Year Dummies+ Industry Dummies + ei); Where X belongs to {1, 2, 3, 4, 5, 6, 7}

Table 1. Variables description and sources

Variable	Description	Source
Bonds Ratings	Appendix A gives detailed information about this ordinal variable. The bond ratings that are used by S&P are converted to a range from 1 to 7 where 1 is the lowest rating and 7 the highest rating. The rating of bonds depends on the company bonds portfolio.	F-Database
Company's Cash balance	A dummy variable that is assigned 1 if the company's yearly operating cash balance is positive and 0 otherwise.	W-S Database
Company Profitability	A variable that measures the profitability of the company by dividing its net income to its total assets	W-S Database
Company Size	The company size is determined by its total assets in dollar amounts.	W-S Database
Company risk	The company's risk is measured by the standard deviation of the net income of every company in the sample.	W-S Database
Bonds Maturity	A variable that measures the log maturity in years. The weights are determined by the size of the issuance of the maturity class to the total size of the issuance for a given year. Then, the weights are multiplied to the respective maturity and added to get the bonds weighted average maturity.	W-S Database
Convertible Provisions	A dummy variable that gives 1 to companys with convertible provisions and 0 to companys with no convertible provisions. These provisions allow the bondholder to convert his or her bonds to shares.	W-S Database
Issue Size	A variable that identifies the size of the issuance.	W-S Database
Leverage	A variable that identifies the leverage of the company; measured by dividing the company debts to its equity.	W-S Database
Creditors Rights	This variable is an index that ranges from 0 to 4. When a country imposes restrictions in the favor of creditors, 1 is added to its score. When the secured creditors ensure that they will get their investment back, the score becomes 2. When the secured creditors are the first to receive their money in case of bankruptcy, the score becomes 3. At the end, when the secured creditors don't wait till the problems are solved to get their money back, the score becomes 4.	Djankov et al. (2005)
Public Registry	Public registry is a database that is developed by public authorities. This database includes all the debt positions of borrowers in the economy. The collected information is available to all financial institutions. The variable is assigned 1 if the country has a public registry and 0 otherwise.	Djankov et al. (2005)
Efficiency of Bankruptcy Process	When a company incurs bankruptcy costs, theses costs are deducted from the company terminal value and this value is discounted to get the present value. The higher the value, the better the company.	Djankov et al. (2007)
News Circulation	Daily newspapers sold divided by the number of citizens	Dyck and Zingales(2004)
Manufacturing	Dummy variable that equals 1 if the company operates in the Manufacturing industry; 0 otherwise	
Trades	Dummy variable that equals 1 if the company operates in the Trades industry; 0 otherwise Trades	
Finance	Dummy variable that equals 1 if the company operates in the Finance industry; 0 otherwise Finance	
Utility	Dummy variable that equals 1 if the company operates in the Utility industry; 0 otherwise.	

5 Empirical results

The descriptive statistics related to the variables used in our study is provided in Panel (A) in table 3. The panel begins with the credit rating variable that have a mean of 4.432, an equivalent to an S&P rating of BBB+.

Table 3. Summary statistics. **Panel A.** Descriptive statistics

Variable	Observations	Mean	Standard Deviation
Bonds Ratings	600	4.432	1.321
Cash position	600	0.423	0.342
Company Profitability	600	4.134	23.543
Company Size (in million of U.S Dollars)	600	89.89	1.54
Company risk	600	435,534.7	654,087.3
Bonds Maturity (in years)	600	6.43	0.543
Convertible Provisions	600	0.034	0.457
Issue Size	600	746,923.4	4,687,234
Leverage	600	432.367	1,432.674

The table is split into three panels. Panel (A) illustrates the descriptive statistics, Panel (B) illustrates the correlation analyses, and panel (C) gives a mean test comparison using the T-test and the Wicoxon-Mann-Whitney tests. The variables that are used are the following: Bond Ratings which is an ordinal number that ranges from 1 to 7 as the later being the highest rating and the former the lowest rating. Auditor's Choice: a dummy variable that assigns 1 to companys that have their auditor from the big five group and 0 otherwise. Company Profitability: the company profitability measured in term of its return on assets. Company Size: the total assets were used to get the size of the companys that are included in the sample. Company Risk: it is measured by the standard deviation of net income. Bonds Maturity: the average maturity for the bonds portfolio issued by a company; weights were assigned on the basis of the size of the issuance to the total issuances. Convertible Provisions: a dummy variable that gives 1 to companys with the convertible option and 0 otherwise. Issue Size: it represents the size of the issuance in term of dollars. Leverage: the company leverage is measured by the debt to equity ratio. The stars that appear in the tables mean the following: *** for a significance that is lower than 1%, ** and * are for a significance that is lower than 5% and 10% respectively.

We refer to the issuer characteristics variables used in our research by the following descriptive statistics. The first variable consists of the operating cash position with a mean of 0.71. The last statement indicates that approximately 71% of the companies from our sample are benefiting from a positive operating cash balance. The average mean for the return on assets regarding the profitability of the company is 4.03. 65 million dollars, which was computed by averaging the total assets of the 600 companies composing the sample, represent the mean of the company size.

With reference to the issuance variables, 5.44 years refer to the mean average for the bonds maturity. The convertible bonds option refers to the second variable used in this category that has a mean of 8.5%. It indicates that 8.5% of the companies gave this option to their bondholders.

The relationship existing between our dependent variable (Bond Rating) and the operating cash position, the issue characteristics variables, and the issuer characteristics variables is described in Panel (B1) from table 3. The outcomes reveal that various independent variables are noticeably connected with the ratings of bonds. The operating cash position, the company performance, the company size, and the convertible option were judged to be related to the ratings of bonds in a positive way at important levels of less than 1 percent. Furthermore, it was shown that the company leverage is interrelated positively at a significant level of 5 percent. However, we found one variable (Bonds maturity) that is negatively connected with the Bond Ratings at an important level of less than 1 %. On the other hand, it was divulged that the two variables, the issue size and the company risk, are not significantly related to the bonds ratings.

We suggest running the mean comparison tests in order to verify the first hypothesis. For that reason, our sample was divided into two sub groups: firstly, we gather companies with a positive operating cash balance. Secondly, this group includes the other ones. Our hypothesis is confirmed through the T-test output knowing that the first group's mean has a higher value (4.7) compared with the second group's mean (4.1). Furthermore, both the T-Test and the Wilcoxon-Mann-Whitney test approve the difference between the two means that is significantly different from zero (5% significance level).

This information signifies that this company has its place among the positive operating cash group that benefits from higher credit ratings

Table 3. Summary statistics. **Panel B1.** Correlation between the operating cash position and Bonds Ratings

Variable	Bonds Ratings	Cash Position	Company Profit	Company Size	Company risk	Bonds Maturity	Convertible Provisions	Issue Size	Leverage
Bonds Ratings	1.000								
Cash position	0.1305 (0.0016)***	1.000							
Company Profitability	0.1156 (0.0006)***	0.0568 (0.02340)**	1.000						
Company Size	0.3688 (0.0005)***	0.0543 (0.0334)*	-0.1433 (0.887)	1.000					
Company risk	0.0209 (0.4534)	-0.0432 (0.3645)	-0.0366 (0.5976)	0.6789 (0.0004)***	1.000				
Bonds Maturity	-0.2345 (0.0003)***	0.321 (0.2342)	-0.0033 (0.8766)	-0.3456 (0.0000)***	-0.0854 (0.4434)	1.000			
Convertible Provisions	0.2345 (0.0000)***	0.0322 (0.6300)	0.0543 (0.5324)	-0.0543 (0.0065)***	0.0654 0.3324	0.0432 (0.0322)**	1.000		
Issue Size	0.0480 (0.1690)	-0.0212 (0.5431)	0.0057 (0.8700)	0.0268 (0.4432)	0.1655 (0.0000)***	-0.0751 (0.0312)**	-0.0174 (0.6175)	1.000	
Leverage	0.0865 (0.0345)**	-0.0643 (0.0778)*	-0.0083 (0.6753)	0.1045 (0.0123)***	0.0001 (0.8654)	-0.1144 (0.0064)***	-0.0539 (0.1345)	0.0045 (0.9753)	1.000

Table 3. Summary statistics. **Panel B2.** Correlation between the bonds ratings and the institutional variables

Variable	Bonds Ratings	Creditors' Rights	Public Registry	Efficiency of Bankruptcy Process	News Circulation
Bonds Ratings	1.000				
Creditors' Rights	0.1567 (0.0000)***	1.000			
Public Registry	0.1556 (0.0003)***	-0.3453 (0.0000)***	1.000		
Efficiency of Bankruptcy Process	0.0554 (0.4325)	0.5643 (0.0000)***	-0.8765 (0.0000)***	1.000	
News Circulation	0.1255 (0.0000)***	0.6543 (0.0000)***	-0.1245 (0.0000)***	0.6543 (0.0000)***	1.000

The outcomes concerning the Ordered Probit estimation for the bonds ratings are given in Panel A from Table 4. Our expected results before running the regression match with most of these outcomes. They reveal that the bonds ratings are highly positively influenced by the positive operating cash balance (+0.4 at a significance level of 5%). In fact, this result confirms our first hypothesis supporting that generating cash from the main operations of the company gives more chance to the firm to have higher bonds ratings. Both the company profitability and size influence positively the bonds ratings. However, regarding the convertible bonds option, it is the only variable that is able to have a significant positive effect on companies' bonds ratings. On the other hand, no important effect on the bonds ratings is caused by the other issue and issuer variables.

As expected, the other control variables have a positive and important impact on bond ratings. The increase in cash provided from all activities has a positive impact (+0.3) on the bonds ratings at a considerable level of 5%. Indeed, our second

hypothesis is confirmed by this result as we discovered that the higher the positive cash balances, the higher the bonds ratings.

The table gives the output for the Ordered Probit Regression of the Bond Ratings as being the dependent variable. The variables that are listed below are: Bond Ratings which is an ordinal number that ranges from 1 to 7 as the later being the highest rating and the former the lowest rating. Company's cash: a dummy variable that assigns 1 to companys that have a positive cash operating balance and 0 otherwise. Company Profitability: the company profitability measured in term of its return on assets. Company Size: the total assets were used to get the size of the companys that are included in the sample. Company Risk: it is measured by the standard deviation of net income. Bonds Maturity: the average maturity for the bonds portfolio issued by a company; weights were assigned on the basis of the size of the issuance to the total issuances. Convertible Provisions: a dummy variable that gives 1 to companys with the convertible option and 0 otherwise. Issue Size: it represents the

size of the issuance in term of dollars. Leverage: the company leverage is measured by the debt to equity ratio. Concerning the other variables, more description is given in table 1. The stars that appear in the tables mean the following: *** for a significance that is lower than 1%, ** and * are for a significance that is lower than 5% and 10% respectively.

Table 4. The effect of company's operating cash on bond ratings

Dependent Variable = Bonds ratings	Expected Sign	Model
Company's operating cash position	+	0.341 (0.044)**
Company Profitability	+	0.0123 (0.005)***
Company Size (in billions of U.S Dollars)	+	55.6 (0.000)***
Company risk (in millions of U.S Dollars)	-	-232 (0.765)
Bonds Maturity	-	-0.543 (0.345)
Convertible Provisions	+	0.600 (0.000)***
Issue Size	-	3.65×10^9 (0.678)
Leverage	-	-0.000 (0.234)
Creditors Rights	+	0.244 (0.056)**
Public Registry	+	1.432 (0.000)***
Bankruptcy Efficiency	+	0.006 (0.003)***
News Circulation	+	0.235 (0.075)*
Manufacturing		0.344 (0.333)
Trades		-0.008 (0.876)
Finance		0.788 (0.003)***
Utility		0.624 (0.054)*
N		600
Pseudo R²		13.67%
LR – Chi²		234.77
Significance		(0.0000)***

The liquidity of the company affects the bond ratings as found by Jenzazi (2010). However, his research has some limitations regarding the overall cash position. Also, it considers only companies operating in the U.S. Our outcomes reveal that operating activities influence considerably the bond ratings on an international scale. The company may enjoy a relative high level of bond ratings as long as it has a positive operating cash balance. For that reason, the costs of debt, in the form of bonds, is reduced because creditors request quite lower premium to lend their money.

6 Limitations

Our sample representativeness faces one major limitation. In point of fact, F-Database and W-Database provided us with the bonds ratings data and auditors' data, respectively. These two databases enabled us to gather 600 observations that follow the distribution presented in Table 2. In fact, our sample representativeness could have been affected by this statement.

7 Conclusions

The relationship existing between the liquidity of the companies and the ratings of bonds on an

international scale was explored along our research. 600 companies operating in 26 different countries were included in our sample, and the data used last for a period of 10 years (from 2002 to 2012). Our expectations go with the results of the Ordered Probit regression. That is to say, a company with a positive cash flow has a higher possibility to have a high level of bonds ratings. The extent to which a company is able to generate cash from its operating activities has an impact on its cost of debt. In fact, a positive operating cash position makes it possible for a company to benefit from a greater bonds ratings, which results in a lower cost of debt (in the form of bonds). Our research's result will add more value to the existing research given that no prior studies concerning this field were conducted on a national or international scale. A positive operating cash balance sends a positive signal saying that the company is doing well in its main operations, which gives the opportunity to the firm to benefit from a low cost of debt which augment its profitability and earnings.

The change in total cash balance as a proxy for liquidity has been used in prior work. Nevertheless, the expansion of cash position can be done by many firms through the investing and financing activities. When we take only the cash generated from operating activities into consideration, we are rejecting other sources of cash that have the ability to influence the outcome. Besides, even though there is an operating cash, a window of manipulation and misleading is still present. From time to time expenses, as an example, depreciation is considered as a source for operating cash while in actual fact is not. The reason why depreciation is a source of cash is because it is a non-cash expense. Moreover, another source of cash can be the increases in accounts payable under the indirect method. However, these increases in accounts payable mean that the payments of the current expenses are postponed to a future date.

References

1. Alderson, M. and B. Betker. "Liquidation costs and capital structure." Journal of Financial Economics 39 (1995): 45-69
2. Allen, F. and Gale, D. (2000). "Financial Contagion," Journal of Political Economy, Vol. 108 (1), 1-33.
3. Defond, M. and J. Jiambalvo. "Debt covenant violation and manipulation of accruals." Journal of Accounting and Economics 17 (1994): 145-176.
4. Bhojraj, S. and P. Sengupta, (2003), "Effect of Corporate Governance on Bond Ratings and Yields: The Role of Institutional Investors and the Outside Directors." *The Journal of Business*, 76, pp. 455-475.
5. Bhattacharya, N., H. Desai and K. Venkataraman (2008), "Earnings quality and information asymmetry: Evidence from trading costs," Working Paper, Edwin L. Cox School of Business, Southern Methodist University.
6. Bhattacharya, N., F. Ecker, P. Olsson and K. Schipper (2009), "Direct and mediated associations among earnings quality, information asymmetry and the cost of equity," Working Paper, Fuqua School of Business, Duke University.
7. Boubakri, N., and Ghouma, H., (2007), "Creditor Rights Protection, Ultimate Ownership and the Debt Financing Costs and Ratings: International Evidence.
8. Brennan, M., T. Chordia and A. Subrahmanyam (1998), "Alternative factor specifications, security characteristics and the cross-section of expected stock returns," Journal of Financial Economics, 49, 345-373.
9. Gilson, S. C. "Transactions costs and capital structure choice: Evidence from financially distressed firms." Journal of Finance 52 (1997): 161-196.
10. Hamdi B. Hatem G. and El-Mehdi A. (2014) "Auditor Choice and Corporate Bond Ratings: International Evidence" International Journal of Economics and Finance; Vol. 6, No. 1; 2014
11. Holmström, B. and Tirole, J. (2001). "LAPM: A Liquidity-Based Asset Pricing Model", The Journal of Finance, Vol. 56 (5), 1837-1867.
12. Kasznik, R. (1999), "On the association between voluntary disclosure and earnings management," Journal of Accounting Research, 37 (1999), 57–81.
13. Kim, O. and R. E. Verrecchia (1991), "Market reaction to anticipated announcements," Journal of Financial Economics, 30, 273-309.
14. Kim, O. and R. E. Verrecchia (1994), "Market liquidity and volume around earnings announcements," Journal of Accounting and Economics, 17, 41-67.
15. Klock, M., S. Mansi and W. Maxwell, (2005), "Does corporate governance matter to bondholders." *Journal of Financial and Quantitative Analysis*, 40, 4, pp. 693-720.
16. Kubota, K. and H. Takehara (2009), "Information based trade, the PIN variable, and portfolio style differences: Evidence from Tokyo stock exchange firms," Pacific-Basin Finance Journal, 17, 319-337.
17. Sengupta, P., (1998), "Corporate Disclosure Quality and the Cost of Debt." The Accounting Review, 73, pp. 459-474.
18. Shleifer, A. and Vishny, R., (1997), "A Survey of Corporate Governance". Journal of Finance, vol. 52, issue 2
19. Watts, R. L. and J. L. Zimmerman. Positive Accounting Theory. Englewood Cliffs, N. J.: Prentice Hall, 1986.
20. White, H. "A heteroscedasticity-consistent covariance matrix and a direct test heteroscedasticity." Econometrica 48 (1980): 817-838.
21. Willenborg, M. "Empirical Analysis of the Economic Demand for Auditing in the Initial Public Offering Market." Journal of Accounting Research 37 (1999): 225-238

Appendices

Appendix A. S&P Credit Ratings Conversion

S&P Bonds Ratings	From D to CCC+	From B- to B+	From BB- to BB+	From BBB- to BBB+	From A- to A+	From AA- to AA+	AAA
New Ratings	1	2	3	4	5	6	7

THE VALUE RELEVANCE OF FIRMS' ANTI-BRIBERY AND CORRUPTION EFFORTS THE ITALIAN EVIDENCE

Marco Fazzini*, Lorenzo Dal Maso

Abstract

In this paper, we utilized a sample of Italian companies to explore the influence of firms' Anti-Bribery and Corruption efforts on firm value. On a sample of 47 Italian listed companies followed by Asset4 (Thomson Reuters business collecting corporate social responsibility data) during period 2002 to 2013, we investigate the relevance of information related to firms' Anti-Bribery and Corruption efforts in explaining stock price through the accounting-based valuation model developed by Ohlson (1995). Results corroborate empirical evidence of a positive correlation between efforts made by firms in avoiding bribery and corruption during operations (i.e., whether a company describes, claims to have or mentions processes in place to avoid Bribery and Corruption practices at all its operations) and stock price.

Note from the Authors: Although this paper is the result of an analysis discussed and shared by the authors in all of its parts, in order to highlight the contribution, this is referred as follows: Paragraphs 1 and 2 are attributed to Marco Fazzini, Paragraphs 3 and 4 are attributed to Lorenzo Dal Maso, while Paragraph 5 is a common part shared between the two authors

Keywords: Asset, Market, Value Relevance, Bribery, Corruption, Employee Training

*European University of Rome, Via degli Aldobrandeschi, 190 - 00163 Rome (Italy)

1 Introduction

In recent years, corporate financial disclosure has become one of the topics in accounting theory which is most often and most widely investigated. Corporate disclosure, defined as "any deliberate release of financial and non-financial information, whether numerical or qualitative, required or voluntary, through formal or informal channels" (Gibbins et al., 1990, p. 122), is considered to be an important activity, as it facilitates communication between management and capital providers and is thought to mitigate information asymmetry problems and agency conflicts (Akerlof, 1970; Rothschild and Stiglitz, 1976).

Recently, there has been a growing interest in corporate non-financial disclosure; that is, Corporate Social Responsibility (CSR) reporting, which represents additional disclosures provided mainly on a voluntary base (see Dhaliwal et al., 2014 for an overview of different countries' rules on CSR reporting). CSR reporting has attracted a large amount of academic interest with a special concern on the role that such disclosures play in firm valuation (Moser and Martin, 2012). During recent years, firms have demonstrated strong commitment in providing information regarding firms' environmental and social impact on society thus resulting in a higher level of social disclosures (see Ioannou and Serafeim, 2012). In other words, an increasing number of companies have started to disclose non-financial information related to their commitment to environmental preservation, human rights protection, as well as employees and social welfare because it is well-recognized that investors and intermediaries (i.e., buy and sell-side analysts) in capital markets increasingly integrate environmental, social and governance (ESG) data in their valuation models, creating demand for sustainability reporting (Eccles et al., 2011). As a result, firms establish a positive corporate image throughout society, and this creates reputation capital which can reduce the threat of regulation (Maxwell et al., 2000). However, there is social information that has been less investigated on a micro level which is strictly related to Bribery and Corruption.

With this term, even if it is not easy to define, we refer to "the act by which 'insiders' profit at the expense of 'outsiders' " (Evans, *The cost of corruption*[1]), or commonly, the abuse of public power for private gain (e.g., Lapalombara, 1994; Habib and Zurawicki, 2002; Aguilera and Vadera, 2008; Alon and Hageman, 2013). However, this does not mean that corruption exists only within public sector but in fact it is a practice that is well-embedded into the private business. That is the reason why during recent years, firms demonstrated a strong commitment in

---

[1] Accessible at: http://www.tearfund.org/webdocs/Website/Campaigning/Policy%20and%20research/The%20cost%20of%20corruption.pdf