DO HIGH LEVELS OF ANALYST FOLLOWING IMPROVE COMPANIES' CREDIT RATINGS: EVIDENCE FROM MENA REGION?

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Abstract

All investors and stakeholders in general worry about the accuracy of both the financial information and the corporate governance, yet at different scales. Knowing that inadequacies exist in the financial information, would we be able to find some ways that would help us improve the credit rating of the firms? In order to answer this question, our research's aim is to define the impact of analyst following (analyst quest) on firm's credit rating throughout the period between 2002 and 2014. The research' results exhibit that the level of analyst following has a positive influence on firms' credit rating. However, this constructive influence occurs only when there is a significant degree of analyst following. Indeed, at a low analyst following, our results reveal a negative correlation between this factor and the firm's credit rating. Consequently, we end up concluding that a high degree of analyst following makes it difficult for insiders to miscommunicate the right information related to firm's value which reduces agency problems leading to a positive credit rating, thus a low cost of debt.

Keywords: Analyst Following, Corporate Governance, Credit Rating

1. INTRODUCTION

For the stock market to function efficiently, it needs accurate information. Once the appropriate information concerning the firms is merged with the prices, the securities are fairly priced. In fact, financial analysts work on highlighting new information related to the firm which will help them in this process. The investment decisions are usually taken by the stock market participants using the research reports of analysts, their projections, and recommendations as precise information, Lang et al. (2004). Jensen and Meckling (1976) propose that financial analysts, regarded as information intermediaries, have the ability to lessen the agency problems that firms are facing. The market value of an enterprise is a growing function of the width of investor attentiveness as Merton (1987) claims. In order to raise the responsiveness of an investor concerning a company, conventional wisdom recommends one technique to realize this which is boosting the degree of analyst following. Chang and Jo (1996) assert that the value of a business is a positive function of the number of analysts following a company. Moreover, analyst following can have an impact on the company's valuation by dropping information asymmetries and agency problems. The main objective of those analysts is to find out the information that a company wants to hide so that they guarantee that all the information is accessible to the participants in the stock market. Consequently, they influence the firm's valuation in a positive way and decrease the asymmetry of the information, thus we believe that the influence on the cost of debt will be favorable. Additionally, the higher the performance of analyst following, the

higher the information found out. Hence, the extent of analyst following ought to be a significant factor of relationship between the company's valuation and the analyst following, Farooq and Satt (2014).

Through this paper, we are willing to outspread the elements referred to above by verifying if the analyst following boosts the credit rating of a business, which is an essential representation of the evaluation of the company in MENA context. As far as we know, this is the first trial that aims to bind between the two variable, Farooq and Satt (2014) already demonstrated that analysts following can boost firm performance; therefore, we can say that this paper is an extension to our previous work in order to see what if the analysts' following can go to the extent of not only positive firm performance but also the an improved credit rating. Knowing that analysts are able to expose new information, it is spontaneous to claim that they have the ability to diminish the information asymmetries between foreigners and insiders, Farooq and Satt (2014). Declining the information asymmetries leads to an expensive expropriation skill as well as penalizing managers by decreasing the problems of agency. Thus, analyst following is the most important element that can determine the performance of a company. Moreover, the higher the extent of analyst following, the lower is the information asymmetry as recommended by the conventional wisdom. Consequently, the credit rating should be better when the magnitude of analyst following is higher. According to our fallouts, we can claim that analyst following influences positively the credit rating between the year of 2002 and 2014. Nevertheless, only high quality analyst following results in this positive influence. When lower quality analyst following is involved, we report a negative influence

on firm's credit rating– an unforeseen finding. Our outcomes are partially dependent on previous literature that takes into consideration any technique that helps in resolving information asymmetries between insiders and foreigners as appropriate value for the participants in the stock market. Our results determine that the low level of analyst following affects the firm's credit rating in a negative way. This is astonishing for the reason that, at most, low analyst following should not influence the firm's cost of debt. The association between the two in a negative way is counter intuitive.

The negative association between the cost of debt and the earnings per share is another surprising result of our analysis. Within various sub-samples, this association is vigorous. The low information content of reported earnings is the reason for this negative influence. Because the investors are conscious of the misreport information of the firms in the developing markets, they have little faith on reported information, hence, discounting earnings per share. Furthermore, our paper analyzes the effect of analyst following on the reported information related to earnings in order to determine if the extent of analyst following increases the reported earnings information. Indeed, our analysis' results exhibit that it is true that analyst following increases the reported information concerning earnings, but it does not succeed entirely in strengthening the faith that investors have regarding the reported information. While the size of analyst following goes up, the extent of the negative connection between the performance of the firm and earnings per share decrease pointedly as confirmed by our research's results.

Our results are essential for creditors. The major difficulty these creditors are facing is their inability to differentiate between good firms and bad ones. Though, according to our results, these creditors may use analyst following to identify which company has the possibility and the ability to be solvent, conversely, which company may not be. Moreover, the analyst following, based on our results, can be used to ameliorate the informativeness of reported earnings. Furthermore, our results confirm that in order to differentiate between real and manipulated accounting information, creditors with analyst following can round off accounting information. It is imperative to indicate here that our paper enhances the debate on the efficiency of alternate/external governance mechanisms. On the other hand, our analysis' results show that analysts have some value regarding the stock market participants because they provide an augmented analysis that aids in decreasing information asymmetries, hence, ameliorating the firm's credit rating.

The remnant of the paper will include the following: Section 2 briefly discusses motivation and background for this study. Section 3 summarizes the data and Section 4 encounters valuation of our hypothesis. Section 5 discusses implications of our findings and the paper concludes with Section 6.

Information is the significant point to efficient functioning of the stock markets. Securities get priced correctly when pertinent information about companies get merged into the prices. Financial analysts play an essential role in this process by carrying out new information about companies.

These analysts are capable to decrease agency problems within the company Jensen and Meckling (1976). Merton (1987) claims that the market value of a firm is an increasing function of the breadth of investor awareness.

Satt (2015) stated that when a company is perceived to be highly performing in "the eyes" of the financial analyst, the risk of default is very low, so the more the company is performing the better will be the its credit quality, hence higher the quality credit terms. It is also found that when the overall market believes in the good performance of a company, this latter will have the pressure to keep its positive performance.

This chapter highlights the idea that analyst following is a value that strengthens emerging markets' mechanisms given that financial analysts play a huge role in resolving some of the corporate governance mechanisms. Providing recent information to the participants of stock market helps analysts decide on the ineffectiveness governance mechanisms. According to Michaely and Womack (1999), analysts are defined as the agents who gather, clarify, and provide stock market participants with both public and private information. Analysts are able to determine information asymmetries by spreading precious information to creditors. Moreover, Amir et al. (1999) proposes that the research of analysts alleviate information insufficiencies that reside in financial statements. This paper discusses the role that analysis play as information providers is very significant (Claessens et al., 2002; Lins, 2003; Dyck and Zingales, 2004; Nenova, 2003). Nenova (2003) claims that firms with information asymmetries described as very high are discounted by creditors. Information asymmetries expose creditors to extreme risk and initiate agency problems within firms. Consequently, any mechanism that will contribute to the lessening of information asymmetries is of major significance to any stock market participant.

In fact, our arguments go in the same flow as the past literature arguments confirming that financial analysts can play the role of an enhancing mechanism for corporate governance in emerging markets, Farooq and Satt (2014). Analysts' substitution effect is portrayed in Lang et al. (2004) documentation. They illustrate the degree of analyst following that mitigates the unpleasant effect of lower creditors' protection on valuation. In the same context, Knyazeva (2007) claims that by substituting for corporate governance, analyst following enhances a firm performance. The major argument that is provided here states that analysts' position as information providers gives creditors the possibility to balance all the misrepresented information by the firm. Conventional wisdom argues that the higher the number of analysts digging for information, the larger are the chances that information is rightly reported and disclosed. As a matter of fact, lower analyst following should influence firm's credit rating less than higher analyst following. Hence, information asymmetries are not resolved to the point that creditors start valuing analyst following. We can come to the conclusion that information asymmetries draw a constructive but a nonlinear relationship between firms' cost of debt and analyst following.

2. ANALYSTS' FOLLOWING AND THE COST OF DEBT

Many characteristics are supposed to influence the company's cost debt, we suspect that analysts' following is one of the important variables that affect the cost of debt. Giving numerous factors (refer to table 1 for more information about these factors), HIGH analysts' following refers to the level of analysts following that is above the average; and LOW analysts following refers to the level of analysts following that is below the average. Results revealed that when there is a rise in the score, there is a decline in the cost of debt.

We have the following hypothesis:

H1: High level of analyst following will lower the company's cost of debt financing.

H2: High level of analyst following leads to higher bonds ratings.

The study we are conducting is going to bring more value since the existing one is very limited. The first goal is to evaluate the perception of the corporate bond market of the quality of the company's performance and analysts following in the market. The second objective, the study we are making is not the same as Jenzazi (2010) and the other studies because it will stress on the MENA framework when it comes to 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 semi-internal mechanisms (in our case analysts' following) in order to improve the entire governance quality in one country.

3. METHODOLOGY AND DESCRIPTIVE STATISTICS

3.1. Specifications

The purpose of the research is to determine the relationship between analysts' following s and bonds' ratings. The following general specification will be used for this purpose.

Bond Rating = f (Analysts' following, Issuer Characteristics, Issue Characteristics)

The determinants used to make the study are the three following: Analysts' following, Issuer Characteristics, Issue Characteristics. Issue Characteristics variable refers to the profitability of the company 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. This variable is composed of 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 distinct 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.

3.2. Data sources and variables

Our sample is made of 600 companies selected from Mena Region. Table 2 represents the description of this sample between year 2002 and 2014. The ratings bonds used have a range from AAA to D,

taken from S&P credit rating and they represent companies' credit worthiness. This enable to distinct between the companies that can repay back their loans at due dates and those who cannot. Appendix reveals that the proposed 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. To convert the ratings we used the research that was conducted by Ashbaugh, Collins, and LaFond (2006). The data of bonds ratings were obtained from F- Database.

This paper emphasizes in which way the extent of analyst quest impacts the performance of a company in the MENA region. A similar study was conducted by Satt(2015) that opted to clarify the relationship between analysts' recommendations and their impact on credit rating; however, when it comes to analysts' following, this is the very first attempt to test for it and include it in such a context.

3.3. Analyst following

Analyst following can be defined as the highest number of analysts that deliver annual earnings forecasts in a specific year. In fact, when there are a high number of analysts following a company, it leads to a better information environment and a small information asymmetry. We obtain the statistics concerning the analyst following from the I/B/E/S.[6] Table 2 provides the descriptive statistics related to the analyst following throughout our sample period. The three panels provide descriptive statistics: panel A delivers the statistics corresponding to each year, meanwhile the two other panels B and C supply same data corresponding to each country and industry respectively. Based on the data from Table 2, Panel A, we notice that average analyst following went up from 0.32 to 1.54 between 2002 and 2014. Moreover, the data given exhibits a regular enhancement in analyst industry in the MENA region. Furthermore, it reveals that, in 2002, 13 analysts is the maximum of analyst following that a company can produce, but this number went up in 2014 to reach 26 analysts. On the other hand, Table 2, Panel B, determines that Qatar reaches the highest level of analyst following in the region, and firms headquartered in United Arab Emirates, Morocco. United Arab Emirates, Morocco, and Egypt have an average analyst following of 1.6780, 1.6238, and 1.3145 respectively. Besides, Table 2, Panel B, shows that companies that headquartered in Iran and Turkey have the least level of analyst following compared to other firms in the region. On the other hand, telecommunication's firms are characterized by having the highest number of analyst following as shown in Table 2, Panel C. This result is obvious since most of the firms working in the sector of telecommunication have a large size and are very lucrative in the region.

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[6] The Institutional Brokers' Estimate System (I/B/E/S) is a database owned by Thomson Financials and provides data on analyst activities, such as earnings forecasts and stock recommendations issued by them. The I/B/E/S provides a data entry for each forecast and each recommendation announcement by each analyst whose brokerage house contributes to the database. Each observation in the file represents the issuance of a forecast or a recommendation by a particular brokerage house for a specific firm. For instance, one observation would be a forecast or a recommendation by Brokerage House ABC regarding Firm XYZ.

Table 1. Variables description and sources

Variable	Description	Source
Bonds Ratings	Appendix A provides detailed information about this ordinal variable. The bond ratings that are used by S&P are changed to a range from 1 to 7 where 1 represents the lowest rating and 7 the highest rating. Bond rating depends on the company bonds portfolio.	F-Database
High Analysts' Following	Analysts following is the number of analysts following a firm at a given point of time. High Analysts' following is a dummy variable that is given the value 1 if the level of analysts following is above the mean; otherwise, value of 0 is assigned	W-S Database
Company Profitability	A variable that calculates the profitability of the company by dividing its net income by its total assets.	W-S Database
Company Size	The company size is calculated by its total assets in dollars.	W-S Database
Company risk	The company's risk is calculated by the standard deviation of the net income of every company in the sample.	W-S Database
Bonds Maturity	A variable that calculates the log maturity in years. The weights are measured 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 by the respective maturity and added to get the bonds weighted average maturity.	W-S Database
Convertible Provisions	A dummy variable that gives the value 1 to companies with convertible provisions and 0 to companies with no convertible provisions. These provisions let the bondholder change his or her bonds to shares.	W-S Database
Issue Size	A variable that represents the size of the issuance.	W-S Database
Leverage	A variable that represents the influence of the company; calculated by dividing the company debts by its equity.	W-S Database
Creditors Rights	This variable is an index that ranges from 0 to 4. When a country enforces restrictions in favor of creditors, 1 is added to its score. When the secured creditors make sure they get their investment back, the score changes to 2. When the secured creditors are the first to collect their money in case of bankruptcy, the score changes to 3. At the end, when the secured creditors do not wait for the problems to get resolved in order to get their money back, the score changes 4.	Djankov et al. (2005)
Public Registry	Public registry is a database developed by public authorities. This database contains all the debt profiles of borrowers in the economy. The assembled information is available to all financial institutions. The variable is given the value 1 if the country has a public registry and 0 if otherwise.	Djankov et al. (2005)
Efficiency of Bankruptcy Process	When a company exposes itself to bankruptcy costs, theses costs are subtracted from the company's terminal value, which is discounted to find the present value. The greater the value, the better the company.	Djankov et al. (2007)
News Circulation	Daily newspapers sold, which is divided by the population.	Dyck and Zingales (2004)
Manufacturing	Dummy variable that equals 1 if the company functions in the Manufacturing industry and 0 if otherwise.	
Trades	Dummy variable that equals 1 if the company functions in the Trades industry and 0 if otherwise.	
Finance	Dummy variable that equals 1 if the company functions in the Finance industry and 0 if otherwise.	
Utility	Dummy variable that equals 1 if the company functions in the Utility industry and 0 if otherwise.	

Table 2. Sample description

The following table documents the descriptive statistics for analyst following in the MENA region. The sample period is from 2002 to 2014. Panel A document descriptive statistics for each year, while Panel B and Panel C document similar statistics for each country and each industry respectively.

Panel A. Analyst following in different years

Years	Average	Standard deviation	Maximum	Minimum
2002	0.3233	1.1791	13	0
2003	0.6909	1.4454	13	0
2004	0.2621	0.8497	15	0
2005	0.4681	1.1791	14	0
2006	0.3454	1.6577	18	0
2007	1.4344	2.1206	19	0
2008	1.4015	2.8732	22	0
2009	0.2621	0.5444	21	0
2010	0.2456	1.1791	21	0
2011	0.344	1.4454	21	0
2012	1.0439	2.1206	22	0
2013	1.4534	2.8732	23	0
2014	1.5430	2.8732	26	0

Panel B. Analyst following in different countries

Country	Average	Standard deviation	Maximum	Minimum
Algeria	0.3095	0.6220	3	0
Bahrain	1.3145	2.3932	14	0
Egypt	0.3102	0.7532	8	0
Iran	0.2415	0.9515	8	0
Iraq	1.6238	1.1392	6	0
Jordan	0.6487	1.8132	15	0
Kuwait	0.6352	1.6066	23	0
Lebanon	1.6780	3.2715	12	0
Yemen	0.3095	0.6220	3	0
UAE	1.3145	2.3932	33	0
Libya	0.3102	0.7562	4	0
Morocco	0.2415	0.9515	12	0
Oman	1.6268	1.1692	14	0
Azerbaijan	0.6487	1.8162	12	0
Sudan	0.6652	1.6066	2	0
Qatar	1.6780	6.2715	34	0
Saudi Arabia	0.6095	0.6220	23	0
Syria	1.6145	2.6962	3	0
Tunisia	0.6102	0.7562	5	0
Turkey	0.2415	0.9515	12	0
Mauritania	1.6238	1.1392	8	0
Cyprus	0.6487	1.8132	6	0
Georgia	0.6352	1.6066	5	0

Panel C. Analyst following in different industries

Industry	Average	Standard deviation	Maximum	Minimum
Oil and Gas	0.3647	0.9238	5	0
Basic Materials	0.9000	1.5137	10	0
Industrials	0.7870	1.6066	14	0
Consumer Goods	0.4603	0.9242	5	0
Healthcare	0.6000	0.8329	3	0
Consumer Services	0.4240	1.4241	15	0
Telecom	4.7600	4.6319	14	0
Utilities	1.6285	1.7836	6	0
Financials	0.7851	1.9637	20	0
Technology	1.1428	2.3904	11	0

The panels below provide an account of the sample that was used to obtain the outputs. Panel A identifies the countries that companies in the sample operate in. Panel B provides the distribution of the study on a yearly basis (starting from 2002 to 2014). Panel C provides an account of the observations based on the industry.

Panel D. Sample distribution per country

Country	Number	Percent
Algeria	12	2,00
Bahrain	34	5,67
Egypt	22	3,67
Iran	12	2,00
Iraq	23	3,83
Jordan	76	12,67
Kuwait	56	9,33
Lebanon	4	0,67
Yemen	6	1,00
United Arab Emirates	100	16,67
Libya	6	1,00
Morocco	12	2,00
Oman	60	10,00
Azerbaijan	4	0,67
Sudan	5	0,83
Qatar	87	14,50
Saudi Arabia	34	5,67
Syria	2	0,33
Tunisia	14	2,33
Turkey	18	3,00
Mauritania	1	0,17
Cyprus	6	1,00
Georgia	6	1,00
Total	600	100

Panel E. Sample distribution per years

Years	Number	Percent
2002	22	3,67
2003	21	3,50
2004	34	5,67
2005	56	9,33
2006	34	5,67
2007	32	5,33
2008	23	3,83
2009	43	7,17
2010	34	5,67
2011	44	7,33
2012	81	13,50
2013	78	13,00
2014	98	16,33
Total	600	100,00

Panel F. Sample distribution per industries

Industry	Number	Percent
Manufacturing	233	38,83
Transport	111	18,5
Trades	89	14,83
Financial Services	133	22,16
Utility	34	5,66
Total	600	100,00

The value of 1 is assigned to the dummy variable that is the analyst average recommendations if it is positive (buy or strong buy) and 0 otherwise.

To provide more explanation on the bonds ratings, two control variables were added to the model, which are the issue and issuer variables. More details on these variables are given in Table 1. The control variables data were obtained from W.S Database.

Following the research papers of Satt (2015), Anderson, Mansi and Reeb (2003) and Boukhari and Ghouma (2008), the calculation of the bonds ratings, the convertible provision, and the issue size (the issue characteristics) was done on a portfolio approach. We compiled the whole company issues for each year, and the size of the issue to the entire issues represented the weight used in the calculation of the average bonds ratings, the convertible provision, and the issue size associated with each company over every year of the duration of our study. The formula of the bond rating can be presented as thus:

Prob. (Bonds Ratings=X) = F (b_1. Analysts' Following + 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}

4. EMPIRICAL RESULTS

Panel (A), table 3 stands for the descriptive statistics connected to the variables used in our study, which begins with the credit rating variable with a mean equal to 4.432 and that signifies an S&P rating of BBB+. The first variable in the issuer characteristics variables stands for analysts' recommendations with a mean equal to 0.71. This signifies that about 71% of the companies of the sample are having positive recommendations - a result that confirms what Jegadeesh et al. (2004) presented, claiming that most of analysts' recommendations are close to "buy" recommendations, which is the same phenomenon as discussed by Satt (2015). The average mean for the return on assets regarding the profitability of the company is 5.32. 88 million dollars, which was calculated by averaging the total assets of the 600 companies in the sample, represent the mean of the company size. 4.43 years represents the mean average for the bonds maturity based on the issuance variables. The second variable, represented by the convertible bonds option, has a mean equal to 5.6%, meaning that 5.6% of the companies offered this option to their bondholders.

Panel (B1) from table 3 shows the correlation between the bond rating taken as the dependent variable and the other independent variables that, which the analysts' are following, the issue characteristics variables, and the issuer characteristics. Consequently, there is a strong

relationship between the dependent variable and the various other independent variables.

The analysts' recommendation, the company performance, the company size, and the convertible option are really connected to the dependent variable at important levels of less than 1 percent.

In addition, it was revealed that the company leverage is interconnected positively at a significant level of 5 percent. Nevertheless, only one variable that is replaced by Bonds maturity was found to be negatively related to the Bond Ratings at an important level of less than 1 %. On the other hand, it was discovered that there is no significant association between the two variables, the issue size and the company and the bonds ratings.

Table 3. Summary statistics

The table is divided into three panels. Panel (A) shows the descriptive statistics, Panel (B) shows the correlation analyses, and panel (C) provides a mean test comparison using the T-test and the Wicoxon-Mann-Whitney tests. The variables used are as followings: Bond Ratings, which is an ordinal number that ranges from 1 to 7, with the latter being the highest rating and the former the lowest rating. Analysts' average following: a dummy variable that allocates the value 1 to companies with a high level of analysts' following for a given year and 0 if otherwise; the mean of this variable represent the average number of analysts following firms. Company Profitability: the company's profitability is measured in term of its return on assets. Company Size: the total assets were used to calculate the size of the companies included in the sample. Company Risk: it is calculated by the standard deviation of net income. Bonds Maturity: the average maturity for the bonds portfolio released by a company; weights were given on the basis of the size of the issuance to the total issuances. Convertible Provisions: a dummy variable that assigns the value 1 to companies with convertible option and 0 if otherwise. Issue Size: it stands for the size of the issuance in term of dollars. Leverage: the company leverage is calculated by its debt to its equity ratio. The stars that show in the tables signify the following: *** for a significance that is lesser than 1%, ** and * are for a significance that is lesser than 5% and 10% respectively.

Panel A. Descriptive statistics

Variable	Observations	Mean	Standard deviation
Bonds Ratings	600	6.43	0.233
Average Following	600	0.345	0.64
Company Profitability	600	7.545	23.765
Company Size (in million of U.S Dollars)	600	134.54	7.66
Company risk	600	987,334.6	54,54.6
Bonds Maturity (in years)	600	7.64	0.433
Convertible Provisions	600	0.134	0.54
Issue Size	600	675,654.5	5,766,433
Leverage	600	345.76	3,544.654

Panel B1. Correlation between the average analysts recommendation and bonds ratings

Variable	Bonds ratings	Average recommendation	Company profit	Company size	Company risk	Bonds maturity	Convertible provisions	Issue size	Leverage
Bonds ratings	1.000								
Average recommendation	0.0239 (0.0025)***	1.000							
Company profitability	0.252 (0.0044)**	0.0654 (0.0004)***	1.000						
Company size	0.5699 (0.0005)***	0.0545 (0.0554)*	-0.1455 (0.997)	1.000					
Company risk	0.0225 (0.0525)	-0.04554 (0.6551)	0.00255 (0.0052)**	0.5655 (0.0025)**	1.000				
Bonds maturity	-0.6754 (0.0054)**	0.5422 (0.0042)**	-0.0009 (0.4546)	-0.0344 (0.0000)***	-0.0032 (0.0097)*	1.000			
Convertible provisions	0.9799 (0.0004)***	0.0543 (0.9340)	0.0554 (0.0074)**	-0.0133 (0.0004)***	0.0333 (0.3979)	0.0333 (0.059)**	1.000		
Issue size	0.0343 (0.0033)**	-0.0333 (0.9999)	0.0344 (0.9975)	0.0343 (0.9534)	0.4333 (0.0043)**	0.3333 (0.0093)**	0.3433 (0.3433)	1.000	
Leverage	0.0333 (0.0343)**	-0.0333 (0.0099)**	-0.0033 (0.9545)	0.3334 (0.0003)***	0.0454 (0.9043)	0.3333 (0.0554)**	-0.03453 (0.0034)***	0.0333 (0.4554)	1.000

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	0.242 (0.0001)***	1.000			
Public registry	0.4444 (0.0024)**	-0.5444 (0.0001)***	1.000		
Efficiency of Bankruptcy process	0.0042 (0.0124)*	0.7666 (0.0001)***	-0.4554 (0.0011)**	1.000	
News circulation	0.4224 (0.0001)***	0.5445 (0.0032)**	-0.3444 (0.0000)***	0.7567 (0.0000)***	1.000

To verify the first hypothesis, a mean comparison tests was carried out and the sample was separated into sub groups. The first one stands for companies with High level of analysts' following and the second for the remaining. A T-test confirms the hypothesis, knowing that the first group's mean has a higher value (5.2) compared with the second group's mean (3.1). Moreover, both the T-Test and the Wilcoxon-Mann-Whitney test support the difference between the two means that is considerably different from zero (5% significance level).

This information indicates that this company is one of those with high level of analysts' following that profits from higher credit ratings.

Panel A from Table 4 stands for the results of the ordered Probit estimation on bonds rating. These results are the same as those we expected from the study. The results clearly show that there is a positive connection between bonds ratings and analysts' following with +0.7 at a significance level of 5%. Thus, this corroborates the first hypothesis made about the study saying that there is a positive correlation between analysts' following and bonds ratings. Both the company's profitability and size have positive impact on the bonds ratings. Nevertheless, regarding the convertible bonds option, it is the only variable that is capable of having a meaningful impact on companies' bonds ratings. On the other hand, no major effect on the bonds ratings is caused by the other issue and issuer variables.

Table 4. The effect of high levels of analysts' following on bond ratings

The table provides 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, with the latter being the highest rating and the former, the lowest rating. Analysts' average following: a dummy variable that allocates the value 1 to companies with a high level of analysts' following for a given year and 0 if otherwise; the mean of this variable represent the average number of analysts following firms. Company Profitability: the company profitability calculated in terms of its return on assets. Company Size: the total assets were used to calculate the size of the companies included in the sample. Company Risk: it is calculated by the standard deviation of net income. Bonds Maturity: the average maturity for the bonds portfolio released by a company; weights were given on the basis of the size of the issuance to the total issuances. Convertible Provisions: a dummy variable that assigns the value 1 to companies with convertible option and 0 if otherwise. Issue Size: it stands for the size of the issuance in term of dollars. Leverage: the company leverage is calculated by its debt to its equity ratio. The stars that show in the tables signify the following: *** for a significance that is lesser than 1%, ** and * are for a significance that is lesser than 5% and 10% respectively.

Dependent variable = Bonds ratings	*Expected sign*	*Model*
Average analysts' following	+	0.0231 (0.0033)**
Company profitability	+	0.0233 (0.0000)***
Company size (in billions of U.S Dollars)	+	98.6 (0.0001)***
Company risk (in millions of U.S Dollars)	-	-335 (0.678)
Bonds maturity	-	-0.577 (0.063)*
Convertible provisions	+	0.787 (0.0001)***
Issue size	-	3.23×10 (0.0223)
Leverage	-	-0.0001 (0.323)
Creditors rights	+	0.533 (0.0000)***
Public registry	+	1.222 (0.0000)***
Bankruptcy efficiency	+	0.0353 (0.0000)***
News circulation	+	0.2333 (0.0000)***
Manufacturing		0.775 (0.569)
Trades		-0.0232 (0.998)
Finance		0.122 (0.0000)***
Utility		0.233 (0.0001)***
N		600
Pseudo R²		19.37%
LR – Chi²		322.35
Significance		(0.0000)***

The study confirmed that there is a significant positive link between analysts' following and bonds ratings in MENA region. A company that could generate a high level of analysts following will directly experience higher rating bonds. This further explains that the costs of debt, in the form of bonds, are decreased as a result of creditors asking for lower premium to lend their money.

5. LIMITATIONS

One major drawback was noticed about the sample selected. In point of fact, F-Database and W-Database gave us the bonds ratings data and recommendations' data, respectively. These two databases allowed us to assemble 600 observations that followed the distribution presented in Table 2. In fact, this statement could have influenced our sample representativeness.

6. CONCLUSION

The study carried out in this paper seeks to show that there is a positive connection between analysts' following and the bonds rating. For this reason, a sample of 600 companies selected from MENA region was used. The sample data is from 2002 to 2014, a period of 12 years. Our expectations agree

with the results of the Ordered Probit regression. Consequently, a company that's able to produce a high level of analysts' following is able to have higher bonds rating. In other words, a company with good performance is one with high level of bonds ratings and this has an effect on the debt cost by reducing it. Bearing in mind that there are no previous studies carried out to explain the purpose discussed in our paper, this research done will bring more value on this, even in the developing markets context. When the firm is being followed by a high number of analysts, it gives a favorable signal about the company's corporate governance, because high level of analysts' following can be translated to a large number of specialists that are zooming on the company and every single action conducted by its management will be communicated widely to the market, even in less efficient markets, Satt (2015). Therefore, high levels of analysts following, reduces the fear of creditors and assures them that if there is any piece information that they should now about certain company, it will be already known to them; thus, they will boost their credit ratings and lower the interest rates.

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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