Whether Auditor Specialization Matters to Investor? Empirical Evidence from High Profile Industry in Indonesia

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ABSTRACT

This study aims to investigate whether auditor specialization matters to investor. Particularly, this study aims to examine the relation between auditor specialization and cost of debt financing. A number of prior studies have examined the effect of characteristic audit quality to cost of debt financing using auditor size as a proxy for quality (i.e. Blacwell et al., 1998; Pittman dan Fortin, 2004; Mansi et al., 2004). Otherwise, Simunic, (2003) stated that measured audit quality using auditor size must be reviewed. In general, financial reporting credibility reflects a user (investor) – rather than a preparer – views of financial statements and focuses on investor rational perceptions. Hence, we extend this literature by moving beyond the traditional definition of a high quality auditor, and investigating whether auditor specialization and business risk can reduce expectation cost of debt financing of investor from Indonesia bond market, expecially in high profile industry.

Data used in this study are 789 firms of observation years during 2000-2010. From this amount, 291 samples are high profile industry. Hypothesis testing in this research employs regression. Consistent with expectation, the results of this study find that (1) auditor specialization are factored into firm's bond rating by credit rating agencies. (2) auditor specialization is negatively and significantly related to the cost of debt financing (3) the relation between auditor specialization and the cost of debt financing is most pronounced in high profile industry. Overall, our result suggets that auditor specialization matters to bond market investor in Indonesia.

(Keywords: auditor specialization, cost of debt financing, high profile industry).

INTRODUCTION

This study responds the issue that whether the characteristics of audit quality is important for investors. Particularly, this study would examine the effect of characteristics audit quality measured by auditor specialization on cost of debt financing on bond market in Indonesia.

Audit quality is defined as a probability of an auditor to find and report infraction done by auditee (De Angelo, 1981). All this time, aspects of audit quality are not observed clearly. By this condition, then, various attributions of audit quality are developed by some researchers (Carey and Simnet, 2006; Craswell et al., 1995; De

Angelo, 1981; Francis and Yu, 2009; Mansi et al., 2004; Mock and Samet, 1982; Li et al., 2009; Lou and Vasvari, 2009; Schroeder et al., 1986; Sutton, 1993; Sutton and Lampe, 1990) .

Proxy has been used to measure audit quality by comparing big accounting firms (big 8/6/5/4) and small accounting firms (non big 8/6/5/4). DeAngelo (1981) stated that big accounting firms (Big 8) gave qualified audit service compared to small accounting firms (non big 8). Dopuch and Simunic (1982) stated that audit quality is a function of the number and the width of audit procedures conducted by an auditor. Big accounting firms had more resources, and to conduct various testing in order to support audit procedures so that the risk of audit failure is small. Lennox (1999) stated that the auditor of Big Eight accounting firms (CPA) are more accurate compared to Non-big Eight accounting firms.

However, the shown reality recently is showing that cases of accounting manipulation occurring in both other countries and Indonesia involve big accounting firms, such as Arthur Andersen, KPMG, and PWC. In addition, some research results using quality audit with brand name to see its effect on cost of debt financing show various results. Simunic (2003) also stated that the proxy of audit quality based on the size of accounting firms (CPA) needed to be reviewed. He also stated that theory relating to the size of CPA with weak audit quality. Thus, other sizes to measure audit quality are needed.

Based on the statement of Simunic (2003), this research would examine the effect of the characteristic of auditor quality on cost of debt financing by using the proxy of auditor specialization. Since Professional Standards of Public Accounting (SA Section 318) stated that in running his task, an auditor must obtain knowledge about the industry where the client is operating in order to understand anything that might affect significantly on financial report.

Cost of debt financing is measure by credit spread (proxy from rate of return expected by investors). Credit spread is risk premium which is additional risk covered by investors of bond corporate compared when they invest in government bond (proxy from free-risk investment). This research would examine the relation between audit quality and corporate bond pricing, with the understanding that characteristic of auditor quality may affect credit spread through: 1) its effect on bond ratings, and 2) on investor's evaluation.

The result of this research gives empirical evidence that the size of audit quality based on industry specialization owned by the auditor is better to examine its effect on cost of debt financing. The explanation that industry specialization would have a better understanding of the condition of auditee in a certain industry. This understanding benefits the auditor in running his auditing task, especially to detect

manipulation in financial report that might be done by auditee. The auditor who has knowledge in certain industry would be better in estimating risk brought by client that affects on the determination of auditing procedure. The right audit procedure might help auditor in giving appropriate opinion. If it is responded by bond rating agency and bond investors, then, bond issuer corporate using auditor specialization would get high rating and its spread is low because the rate-of return expected by the investor is low.

This research is expected to give empirical contribution to literature of audit quality characteristics. Different from the previous research, this research uses other terms to measure characteristic of audit quality by arguments that the term of audit quality measured by using only one size is not quite appropriate. By this condition, then, the characteristic of audit quality in this research is proxied by auditor specialization , and gives empirical evidence on the research of Lou and Vasvari (2009) that a firm using auditor specialization would reduce cost of debt financing, especially for high profile industry.

This paper is organized as the followings: Section I contains introduction, Section II explains literature underlying the relation between auditor specialization and cost of debt financing as well as hypothesis development. Section III presents research methodology used to examine hypothesis. Analysis and discussion are explained in Section IV. Finally, Section V covers summary, research limitations, and implication.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Bond Ratings, Bond Risks, and Audit Quality

Bond is one of fund sources for government and company obtained from stock market. Bond is the effect that is debt issued by issuer with certain term (above a year), with written agreement that in certain periods or intervals, interest (coupon) would be paid to bondholders, and at maturity, principal is also paid to involved bondholder.

Bond usually would get ratings periodically by rating agency, and bond risks are reflected in these bond ratings, so they might be used to help potential investors in obligation instrument to measure default risk. Higher obligation rating shows high ability of bond issuer to pay its debt (IBPA, 2010).

Theory and literature of accounting show that factors related to audit quality would affect perception of market participants on financial report information (De Angelo, 1981; Balvers *et al*., 1988; Beaty, 1989; Menon and Williams, 1991; Teoh and Wong, 1993; Michaely and Shaw, 1995; Muzatko et al., 2004). Independency level

shown by auditor directly affects the perception of market participants on audit quality of auditor (De Angelo, 1981; Johnstone et al., 2001).

A bond rating agency, as information intermediary, provides independent evaluation on company's credit quality. Bond ratings should cover information content on audit characteristics because rating agency has the access to insider information and knowledge of audit quality characteristics (Mansi et al., 2003). If the information content of audit characteristics is covered in the bond rating, then, auditor specialization would affect significantly on the bond rating. From the explanation above, then, the first hypothesis that would be examined is as the following:

H1: Auditor specialization affects positively on bond rating.

The Relation between Auditor Specialization and Cost of Debt Financing

The characteristic of audit quality in this research uses proxy of auditor specialization. The research of Solomon et al. (1999) and Hogan and Jeter (1999) showed that the auditor who has specialization in certain industry generally related to a higher audit quality (supports auditor expertise hypothesis). Dunn and Mayhew (2004) found that industry auditor specialization related to a better disclosure of a firm that is measured by quality evaluation of disclosure by analysts. Carcello and Nagy (2009) examining the relation between auditor specialization and financial reporting fraud, gave strong support to negative relation between auditor specialization and financial reporting fraud by client. Lou and Vasvari (2009) examining the relation between auditor specialization and cost of public debt, found that a firm that uses industry audit specialist (IAS) received a better rating and gave lower yield when issuing bond securities. The research result showed the evidence that bond ratings agency and bond investor evaluated the benefit of auditor specialization .

From the literature of previous research above, it can be summarized that auditor specialization related to audit quality. The argument that can be given is that the variable is a proxy from information content of auditor's quality, and the characteristic of auditor quality should be considered by bonds rating agency in conducting evaluation to determine bond rating and should be evaluated by investor who would by the bond. Based on the literature and previous research, then, the second hypothesis that would be examined in this research is as the following:

H2: Auditor specialization affects negatively on cost of debt financing.

Economic Consequences of the Auditor Choice

The previous research related to economic consequence on audit is that whether the effect of auditor choice is higher for more risky firms (highprofile), showed that the risk of the firm affected behavior of firm, auditor, and investor. Christensen et al. (1999) stated that firms with poor performance preferred to make more aggressive report compared to the ones with better performance. Shu (2000) found that probability litigation of auditor increased with firm risks. Study conducted by Barry and Brown (1985) as well as Merton (1987) supported that investor face risk premium when there is asymmetry information between manager and investor. Mansi *et al.* (2004) stated that high value auditor quality, with "deep pockets" increased along with the risks of the firm.

Based on those previous research results, then, the third hypothesis that would be examined in this research is as the following:

H3: The effect of auditor specialization on cost of debt financing is higher for high profile industry compared to non-high profile industry.

RESEARCH METHODOLOGY

Data and Research Samples

Data used in this research are financial data, including: audited financial reports, nominal value of bond, bond closing price, and bond interest rate, as well as non-financial data such as data of auditor choice by the firm, date of bond issuance, maturity date, and bond ratings. The resource of audited financial report and bond price data are obtained from Indonesian Stock Exchange, Indonesian Capital Market Directory, Capital Market Reference Center, as well as Business Data Centre of Economica and Business Faculty, Gadjah Mada University. Data of bond ratings and other data related to firm's bonds are obtained from *PT Pemeringkat Efek Indonesia* (PEFINDO), *PT Kustodian Sentral Efek Indonesia* (KSEI) as well as Indonesia Bond Pricing Agency (IBPA). Data related to government Bonds are obtained from Directorate of Government Securities Managemen, Indonesian Finance Departement. The population of this research is all firms that issue bonds. The period of this research is 2000-2010.

Research Variables

Variables used in this research are as the followings: a) dependent variables, include bond ratings and credit spread; b) independent variable in this research is auditor specialization; c) control variables, are based on variables in the previous research that are known affecting credit rating and credit spread, including: factors of firm risks, which are the firms size, leverage, profitability, coverage, firm age; factors

of securities risks, which are maturity (time to maturity/tenor), bond size, duration and bank debt; factors of macro economy risks; which are Rupiah exchange rates on Dollars and inflation.

Definition of Operational and Measuring Variables

Auditor specialization. Auditor specialization is the auditor who has knowledge and expertise on financial reports in certain industry and is able to provide a better audit quality. According to Lou and Vasvari (2009), industry audit spesialist is the auditor (CPA) who has the highest market share in a firm. Market share auditor in a certain industry is the selling number of client divided by the total sales in an industry (Lou and Vasvari, 2009; Mayhew and Wilkins, 2003).

$$\text{Market share}_{j,k} = \frac{\sum_{i}^{I} \text{Sales}_{ijk}}{\sum_{k}^{K} \sum_{i}^{I} \text{Sales}_{ijk}}$$

Notation:
i = company client index
k = auditor index
j = industry index

From the measurement above, an auditor is called as an industry audit specialist (IAS), if his client has market share of 25% higher in a company. Furthermore, an industry audit specialist (IAS) is measured by dummy variable, 0 if a company uses industry audit specialist, and 1 if does not.

Bond Rating. Bond rating is the main indicator from risk, issued by rating agency. Rating is an objective opinion for evaluating the ability and willingness of an issuer in fulfilling obligations in a timely manner. The higher is bond rating, the smaller probability of the bond to fail in fulfilling its obligation in the future. The writer uses data of bond ratings from PEFINDO, with the measurement as the followings: $_{id}$AAA: 20, $_{id}$AAA-: 19; $_{id}$AA+: 18; $_{id}$AA:17; $_{id}$AA-:16; $_{id}$A+:15; idA: 14; $_{id}$A-:13; $_{id}$BBB+:12; $_{id}$BBB: 11; $_{id}$BBB-: 10; $_{id}$BB+: 9; $_{id}$BB: 8; $_{id}$BB-:7; $_{id}$B+:6; $_{id}$B:5; idB-:4; $_{id}$CCC+: 3; $_{id}$CCC: 2; $_{id}$D: 1.

Credit Spread. Cost of debt financing is measured by credit spread (proxy from expected rate of return of investor). Credit spread is risk premium, which is additional risk covered by corporate bond investor compared when investing in risky free securities. This research calculates credit spread by seeing the difference of yield to maturity and current yield of corporate bonds and current yield of government bonds.

METHODS OF HYPOTHESIS TESTING

Methods of The First Hypothesis Testing

To test the first hypothesis, it is done by regressing auditor specialization and other control variables in credit rating. The step of analysis and the model developed based on the research of Mansi et al., (2004) by replacing independent variable of auditor size and tenure with variable of industry audit spesialist (IAS) and control variable maturity (tenor) and bond size is as the following:

Credit Rating = $\alpha_0 + \alpha_1$ Industry Audit Specialist (IAS) + $\beta_{1...n}$Factors of Company's Risks + $\gamma_{1...n}$Factors of Security Risks + $\lambda_{1...n}$Factors of Macro Economic Risks.....(1)

Control variable of company risk factors include: firm size, leverage, profitability, coverage, firm age. Factors of security risks include: maturity (tenor), bond size, duration, and bank debt. Macro economic factors are the exchange rates of Rupiah on Dollars and inflation.

Credit rating agencies, as information intermediaries, provide independent evaluation on firm credit quality. Credit rating should cover information content on characteristic of auditor in bond rating, because rating agencies have access to insider information and knowledge about auditor quality. If the content of auditor quality information is covered in bond rating, then, auditor specialization would affect significantly on bond rating.

Methods of the Second Hypothesis Testing

To test the second hypothesis, it is done by regressing auditor to credit spread, by controlling credit rating and other factors that are known affecting credit spread. The model developed also based on Mansi et al., (2004) as the followings:

Credit spread = $\alpha_0 + \alpha_1$ Industry Audit Specialist (IAS) + $\beta_{1...n}$Factors of firm risks + $\gamma_{1...n}$Factors of security risks + $\lambda_{1...n}$Factors of macro economy risks .....(2)

Control variable used is similar to first model.

Methods of the Third Hypothesis Testing

To test the third hypothesis which the effect of auditor specialization on cost of debt financing is higher for high profile firms compared to non-high profile firms, the step done is separating high profile (as the proxy of risky firms), from non-high profile (as proxy of less risky firms).

RESULT ANALYSIS DAN DISCUSSION

Sample Characteristics

Sample characteristics are shown on Table 1. The total of observed samples is 789. From that total, firms that use auditor specialization are 294, while the ones that do not auditor specialization are 495. Meanwhile, the firms in high profile industry group are 291, while non-high profile industry are 498.

Table 1. Sample Characteristics

Total of observation samples	**789**
Total of observation samples using auditor specialization s	294
Total of observation samples that do not use auditor specialization	495
	789
Total of observation samples including in high profile group	291
Total of observation samples including in non-high profile group	498

Descriptive Statistic of Research Variables

Descriptive statistic of this research variables is shown on table 2 (are not presented in this paper), which shows the average of credit rating of firms for all samples that is 14.16. If it is differed among samples for non-high profile samples, its rating average is 13.59, while high profile sample is 14.83.

The average of credit spread for total samples, measured by the difference of yield to maturity of corporate bond and yield to maturity government bond (spread ytm) is 1.70, while for high profile sub sample is 2.24. The average of spread ytm for non-high profile shows the value of 1.91. The results show that high profile firms have high premium risk compared to the ones with less risk. Meanwhile, the spread average measured by current yield (spread cy) for full sample is 1.55. The average of spread cy is for the group of non highprofile that is lower than highprofile (each is 1.60 and 1.79).

The Result of Classical Assumption Testing

The result of multicollinearity testing shows that in all variables used, tolerance rate (TOL) and VIF, there is none exceeding rule of thumb (for TOL=1, VIF=5). Thus, multicollinearity on both model 1 and model 2 does not occur.

Classical assumption testing is heteroscedasticity testing by White test, model 1 and model 2 shows indication of the presence of heteroscedasticity. To fix the presence of heteroscedasticity, it is done by White method.

The next classical assumption testing is autocorrelation with Lagrange-Multiplier Testing, because samples used are relatively large (above 100 observations). The testing result with LM test shows the presence of positive autocorrelation, it is done by first level of differentiation. After the data of first level differentiation, then, model 1 and 2 are free from three classical assumptions (multicollinearity, heteroscedasticity, and autocorrelation).

RESULTS OF HYPOTHESIS TESTING AND DISCUSSION

Results of the First Hypothesis Testing

Table 3. Results of the First Hypothesis Testing

Independent Variable and Control Variable	Dependent Variable: Credit Rating		
	Full Sampel	High Profile	Non-High Profile
Constants	-0.001 (-0.001)	5.863 (1.634)	0.001 (-0.013)
IAS	0.488** (2.398)	0.629** (2.133)	-0.584*** (-2.664)
Firm Size	0.632*** (7.400)	0.774*** (7.444)	0.635*** (6.110)
Leverage	--0.278* (-1.940)	-1.045*** (-4.813)	0.054 (0.224)
Profit	6.088*** (8.0288)	7.706*** (7.755)	5.158*** (3.383)
Coverage	-0.012 (-0.788)	0.007 (0.343)	-0.028 (-1.398)
Firm Age	--0.552** (-2.505)	-0.294** (-1.010)	-0.926*** (-3.749)
Tenor	-0.122*** (-3.597)	-0.115* (-2.147)	-0.141*** (-3.329)
BondSize	0.240* (1.658)	0.066 (0.421)	0.117 (0.646)
Duration	0.044 (0.097)	-0.395 (-0.607)	-0.036 (-0.033)
Bank Debt	-0.496** (-2.566)	-1.005*** (-3.471)	-0.450** (-2.058)
Kurs $	0.001* (1.920)	0.001 (-0.902)	0.001* (1.894)
Inflation	-0.010 (-0.640)	0.010 (0.337)	-0.001 (-0.139)
N	789	288	501
R^2	20,70	52,94	16,11

***= significant at α 1% **= significant at α 5% *= significant at α 10%

IAS = Auditor specialization, measured by dummy variable 1: auditor with industry specialist; 0: auditor with no industry specialist.
Firm Size = Measured by natural logarithm of total asset.
Leverage = Ratio of leverage company.

Profit	=	Ratio of profitability company.
Coverage	=	Ratio of coverage company.
Firm Age	=	Measured by natural logarithm since the company was established.
Tenor	=	Time to maturity of bond, mesured by issuance/settlement date to maturity date.
Bond Size	=	Measured by natural logarithm of bond nominal value.
Duration	=	Measured by modified duration.
Bank Debt	=	Measured by dummy variable: 1= company with bank debt, 0 = company with no bank debt.
Kurs$	=	Exchange rate of Rupiah on Dollar
Inflation	=	Inflation level at the end of year.

Table 3 shows results of the first hypothesis testing. Variable of industry auditor specialist (IAS) by using market share of 25% shows positive coefficient (0,488) and is significant at α5%, in a row for full samples, 5% for high profile and and 1% for non-high profile sub sample as well as for IAS with cut-off 20%. Therefore, the first hypothesis stating that auditor specialization affects positive on credit rating is supported. That result shows that bond rating agency in Indonesia evaluate the benefit of auditor specialization.

Results of the Second Hypothesis Testing

Table 4 shows the result of the second and third hypothesis testing. The second hypothesis states that auditor specialization affects cost of debt financing, is supported.

Table 4. Results of the Second and Third Hypotheses Testing

Independent and Control Variables	Dependent Variable: Credit Spread					
	Yield To Maturity (YTM)			Current Yield (CY)		
	Full Sample	High Profile	Non-High Profile	Full Sample	High Profile	Non-High Profile
Constants	6.255 (1.868)	8.268 (1.166)	10.795** (2.963)	4.147 (1.552)	4.889 (0.933)	8.435 (2.737)
IAS	-0.820*** -(3.400)	-1.299** (-2.223)	-0.421* (-1.695)	-0.564*** -(2.938)	-0.603 (-1.397)	-0.229 (-1.087)
FirmSize	0.173 (1.635)	0.561** (2.510)	0.114 (0.978)	0.205** (2.436)	0.652*** (3.949)	0.098 (0.996)
Leverage	-0.148 (-0.537)	-0.075 (-0.168)	-0.506 (-1.316)	-0.251 (-1.140)	-0.0366 (-0.111)	-0.584* (-1.798)
Profitability	-1.320 (-0.950)	1.041 (0.484)	-1.414 (-0.656)	-0.435 (-0.392)	1.161 (0.730)	-0.079 (-0.044)
Coverage	0.026 (1.018)	-0.011 (-0.251)	0.055* (1.665)	0.017 (0.839)	-0.010 (-0.338)	0.046* (1.670)
FirmAge	0.570* (2.358)	0.272 (0.473)	0.357 (1.402	0.705* (3.664)	0.122 (0.288)	- 0.256**

						* (2.893)
Tenor	0.056 (-8.626)	0.002 (-6.120)	0.076 (1.434)	0.100 (2.462)	0.040 (0.507)	0.124*** (2.790)
Bond Size	0.077 (1.106)	-0.177 (0.015)	0.018 (0.110)	-0.094 (-0.777)	-0.370 (-1.608)	-0.143 (-1.009)
Duration	-2.985*** (0.503)	-3.035** (-0.569)	-4.610** (-2.481)	-0.982 (-1.295)	-1.107 (-1.169)	-2.400 (-1.527)
Bank Debt	0.516* (-3.139	0.155 (-2.368)	0.740** (2.305)	0.351 (1.507)	-0.108 (-0.251)	0.560 (2.063)
Kur$	-0.001*** (1.767)	-0.001*** (0.266)	-0.001*** (-6.020)	-0.001** (-3.708)	-0.001* (-2.317)	-0.001* (-3.209)
Inflation	0.198*** (-5.712)	0.272*** (-2.913)	0.154*** (4.282)	0.079*** (2.919)	0.170*** (3.623)	0.009 (0.313)
N	789	288	501	789	288	501
R^2	20,51	21,71	25,52	17,71	20,80	21,78

***= significant at α 1% **= significant at α 5% *= significant at pada α 10%

Result analysis shows that variable coefficient of auditor specialization (IAS) is negative (-0,820) and significant, as well as IAS with cut off 10 %, 15% and 20%, meaning that investors evaluate characteristic of audit quality covered in auditor specialization. The result can be shown that the firm that uses auditor specialization, its spread (its risk premium) is smaller. This is consistent with the prediction of the theory, a firm using auditor specialization, then, its spread would be decreasing. The results of this research give empirical evidence that bond investors evaluate the benefit of auditor specialization and support the research result of Lou and Vasvari (2009) finding that the firm that uses industry audit specialist IAS pays lower yield (reducing cost of debt financing) when issuing bond securities.

Looking at the results above, it means investor evaluate that auditor specialization gives guarantee of a better audit quality, so rate-of return they expect is low, then, its spread is small. It means that investors in Indonesia evaluate the expertise owned by auditor specialization.

The result of third hypothesis, stating that the effect of auditor specialization on higher cost of debt financing for high profile industry is supported. This can be seen that IAS coefficient for high profile is more higher (-1.299), compared to non-high profile industry (-0.421).

Results of Robustness Test

To strengthen the research result, Robustness test is done by examining the effect of auditor quality change measured by IAS on rate of return expected by investor (credit spread). If auditor specialization has relevant information value for investor, then, it is expected that rate of return expected by auditor would decrease if the firm change its auditor from auditor having no specialization in certain industry to

the auditor having specialization in certain industry (upgrade) and otherwise (downgrade). The testing result supports hypothesis two and three on main analysis.

Summary, Limitation, and Implication

This research result gives empirical evidence that bond investor evaluate the benefit of auditor specialization and supports the research result of Lou and Vasvari (2009). Lou and Vasvari (2009) find that a firm using industry audit specialist (IAS) pays lower yield (reducing cost of debt financing) when issuing bond security.

Looking the results above, means that investors evaluate that auditor specialization might give guarantee of a better audit quality, so rate-of return they expect is low, then, its spread is small. It means that investors in Indonesia evaluate the expertise owned by auditor specialization, especially for high profile industri, which industry that has consumer visibility, high political risks, or high competition.

This research has a number of limitations that might affect the interpretation on results, which: it does not separate non-finance industry with finance and banking industry that has different regulation. The next research should overcome the limitations of this research.

This research results are expected to be input for bond issuer corporate, that hiring auditor specialization would reduce cost of debt financing issued by the firms, because both rating agency and investors evaluate the benefit of auditor specialization. This empirical evidence is also expected to be consideration for auditor in improving the quality of service supply for users.

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