
Financial structure signalling to auditors' pricing

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Abstract

This paper empirically examines capital structure signalling to auditors. Financial structure has adverse selection that can negatively affect auditors' perception of firm value or risk, which can lead the auditor to charge high price. We expect firms' financial structure to positively relate with auditors' pricing. Using panel data analysis methodology to analyse data of 311 firm-year observations of non-finance firms covering the period 2012-2015, pooled OLS regression results suggest that financial structure is positively related to auditors' price. We find that equity, but not debt, is significantly related to auditors' price. These results hold after controlling for auditor type. The positive relations suggest lower perceptions of firm value (hence high risk) by auditors, thereby making firms to pay higher auditors' price. This suggests that auditors penalise equity financed firms more than debt financed firms, probably because auditors interpret equity financing as firms' inability to raise debt. Based on the findings, we recommend that auditors should monitor the capital structure of their clients to guide them in pricing their services. We also recommend that corporate finance managers should rebalance their firms' capital structure cognisant of the fact that it signals to auditors.

Keywords: capital structure, equity, debt, auditors, price, panel data, audit price

JEL Classification: G32

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Introduction

In this paper, we empirically investigate the link between capital structure and auditors' perceptions of firm value in pricing their services. The paper argues that capital structure emits signals to auditors that influences auditors in their pricing decision. This paper thus proposes that the composition of firms' capital structure is likely to send signals to auditors of firms. There are related business risks¹ involved in using debt or equity to finance an entity. Overall, business risks can endanger the firm's ability to achieve shareholder-value maximisation or endanger the going concern of firms.

The distinguishing features of debt and equity are briefly considered here. Generally, debts are associated with the following properties (1) a commitment to settle future fixed periodic interest payments (this takes away future cash flows from stockholders); (2) the fixed periodic payments are tax deductible for the debt issuer (e.g., Ross, 1977) (this means that interest charges on debt will be deducted from income before the remaining income is taxed); (3) loss of control by the debt issuer in case of its inability to pay periodic interests, or principal or both. Auditors are likely to consider these factors of debt side-by-side with those of equity in their pricing decisions. Some debts are a senior claimant to a firm's earnings. Debt is a "two-edged sword" because it disciplines managers in the use of resources. Some managers who have large amount of unused cash flows can be extravagant if their debt portfolio is low. On the other hand, a debt issuer faces direct costs such as legal and other deadweight costs. A debt issuer also faces indirect costs such as credibility or credit-worthiness, loss sales, bankruptcy and liquidation costs in the event of a default. The debt issuer can also lose financial flexibility and the ability to obtain future favourable terms from suppliers. A downside of equity is that cash flows on equity such as dividends are not tax deductible for a firm. Another downside of equity is that agency problems between equity holders and managers of firm is higher than the case of debt. Relative to debt, the greater the separation between stockholders and managers the higher the agency costs.

It is asserted that increasing quantum of equity and debt increases the market's perception of value or risk.

¹ Client business risk is defined as the risk associated with the client's continued survival and well-being (AICPA, 1992).

Research evidence (e.g., Byoun and Xu, 2013) has shown that a firm might issue more equity after it has established a good reputation about its stock. The firm might also fallback on equity financing if it discovers that it is unable to issue debt at attractive terms. For firms that issue equity, dividends payments are not mandatory as they pay whenever they can afford to do so, which makes equity investors uncertain of returns from their investment. Some of the upsides of equity financing can be captured as follows: 1) firms that use equity do not have to repay equity capital to their stockholders; 2) failure to repay equity capital to stockholders will not result to loss of control of the firm; 3) equity holders have the voting right of the firm, so that they control the firms.

Generally, auditors can be concerned with the firm value or risk associated with capital structure. It is plausible to argue that auditors can be affected by their perceptions of firm values or risks as conveyed by financial structure of firms in the auditors pricing decisions. In other words, financial structure is likely to signal potential values or risks to auditors when pricing their services. This paper, therefore, draws upon financial structure signalling theory (e.g., Ross, 1977; Riley, 2001), which posits that the choice of a financial structure can signal information to the market, including the audit pricing market.

Modigliani and Miller's (1958) theory posits that capital structure is irrelevant under certain conditions including those of no taxes, homogenous investor expectations, no default risk or agency costs, and a perfect capital market. In real life, some of these conditions are not obtainable except the one relating to taxes in which case in the Gulf Cooperation Council countries, and probably a few other countries, there are no taxes. Because these conditions do not hold in reality, auditors may consider firms capital structure in pricing their services.

Myers (1984)'s pecking order theory argues that firms follow a financing hierarchy by first financing themselves through retained earnings, followed by debt and then issuing of new equity.

If auditors follow this theory, it then means that firms that issue securities may not have enough retained earnings. Auditors may perceive these firms to be precarious or value-reducing, and therefore price their services highly. The lower the auditors' perceived value of firms and their capital structure, the higher the pricing. This leads to the main expectation of the

paper, which is that capital structure relates positively to auditors' perceptions about the value of firms through the pricing of auditors' services. In addition, and decomposing the financial structure, auditors' price is likely to relate more to equity financing than to debt financing, so that we expect a significant relationship between auditors' price and equity financing but not for debt financing, given that firms are already financed by equity.

In the study, we collect data of 311 firm-year observations of non-finance firms listed on the Nigerian Stock Exchange (NSE) covering the period 2012-2015. The data were analysed using panel data analysis methodology. Pooled OLS regression results suggest that financial structure is positively related to auditors' price. We find that equity, but not debt, is significantly related to auditors' price. These results hold after controlling for auditor type. The positive relations suggest lower perceptions of firm value (hence high risk) by auditors, thereby making firms to pay higher auditors' price. This suggests that auditors penalise equity financed firms more than debt financed firms, probably because auditors interpret equity financing as firms' inability to raise debt. We, therefore, conclude that firms' financial structure conveys signals to auditors in their pricing decisions. Based on these findings, we recommend that auditors should monitor the capital structure of their client-firms to guide them in charging prices for their services. Further, we recommend that corporate managers should rebalance their firms' capital structure cognisant of the fact that auditors are taking a cue from it.

One contribution of the paper is that it attempts to kindle future research interest on the relation between auditors' perceptions of firm value and financial structure. Another specific contribution of the paper is that it provides a link between corporate finance and auditing. To the best of our knowledge, we are not aware of prior works that studied the relation between capital structure and auditors' pricing, especially in the Nigerian context.

The remainder of the paper goes as follows. The next section is a review of related literature. It also develops the paper's hypotheses. The third section addresses data and empirical method used to test the hypotheses. The fourth section presents the empirical results of the paper while the fifth section concludes, with two recommendations.

1. Related literature and development of hypotheses

Auditor pricing

Research on audit fees started with the seminar work of Simunic in 1980, which was on the determinants of audit fees. Since then several prior papers have found that audit fees are higher for high risk clients (see Bell et al., 1994; Asien, 2015; Fields et al, 2004; Morgan and Stocken, 1997). Most of these prior papers used data from developed countries. Asien (2015) is one recent notable paper from a developing country to study the determinants of auditors' remuneration. Asien (2015)'s finding suggests that firms' financial risk is positively related to auditors' remuneration, and that financial risk has the greatest impact on auditors' remuneration. Morgan and Stocken's (1997) theoretical analysis considers the effect of endogenous information acquisition by incumbent auditors on a firm's business risk on audit fee determination in a two-period setting. They show that there exists a differential auditor turnover between low and high risk firms. Morgan and Stocken show that high risk firms pay higher audit fees on average than low risk firms. Further, Morgan and Stocken (1997) opine that the nature of ownership of a firm is one of the factors that affect business risk. Fields et al. (2004) investigate audit pricing based on data of 277 financial institutions in the U.S. Their results show that audit fees are strongly related to many of the risk factors faced by financial institutions. Fields et al. (2004) further find that audit fees are higher for banks having more capital risk.

Capital structure

In its broad interpretation, capital structure consists mainly of shareholders' equity and long-term debts (see Modigliani and Miller 1958). We shall modify this broad interpretation of capital structure in section 2 of this paper. Prior study (e.g., Byoun and Xu, 2013) find that there is a comparative advantage in issuing equity to issuing debt. It will be interesting to investigate whether this comparative advantage reveals itself in the perception of auditors in pricing their services. It is argued that issuing debt to substitute equity increases the value of the firm (Ross, 1977). It is also argued that firms that use debt finance reallocate some expected future cash flows away from equity claimants in

exchange for cash up-front (Frank and Goyal, 2009). Compared to debt financing, there are very few firms that do not employ equity capital in their capital structure; in fact, it is the main component. Prior studies such as Asien (2015), Knechel et al. (2008), Ghosh (2007), Simunic (1980) have examined the effect of debt on aspects of the firm. Knechel et al. (2008) argue that the choice of auditors is positively associated with a firm's leverage. Ghosh (2007) argues that highly levered firms are more intensely exposed to market monitoring, which including monitoring by auditors. Modigliani and Miller (1958) find that total value of firms depends on firms' capital structure. However, for the individual firm, Modigliani and Miller (1958) find that firm value is independent of financial structure. Jensen and Meckling (1976) argue that capital structure has an impact on companies' profitability. Although Modigliani and Miller (1958) assert that the market value of an individual firm is independent of its capital structure, Ross (1977) argues that in a cross-section of firms, value should increase with the substitution of debt for equity financing because of the tax advantage of the former. Our paper is a cross-sectional study, and we want to align with Ross (1977).

In spite of the argument that capital structure matters in the perception of auditors, it appears that extant literature has hitherto failed to investigate the relationship between capital structure and auditors' beliefs about the value of their client-firms. In addition, the literature review undertaken in this paper suggests that there are scanty studies on the signaling effect of capital structure in developing economies. The purpose of our study, therefore, is to fill the gap in existing literature.

Development of hypotheses

Fields et al. (2004) argue that audit fees should be increasing in the client's level of capital risk¹. Changes in the financial structure can change auditors' perceptions of the value of firms. As saw above, Ross (1977) argues that issuing debt to substitute equity increases the value of the firm. Frank and Goyal (2009) argue that when firms use debt finance, they are reallocating some

expected future cash flows away from equity claimants in exchange for cash up-front. Modigliani and Miller (1958) find that total value of firms depends on firms' capital structure. Frank and Goyal (2009) opine that equity has a serious adverse selection whereas debt has a minor adverse selection. The authors argue that from outside investors' point of view, equity is riskier than debt so that a drop in valuation of equities makes them appear undervalued. Between debt and equity, it appears that there is mix argument of which most affects capital structure risk and firm value. We expect higher equity to attract higher prices by auditors. This leads to our first hypothesis that:

Hypothesis 1, H1: Equity has a significant positive relationship with auditors' price.

Ghosh (2007) argues that firms that have high debt are more intensely exposed to market monitoring. According to Ross (1977), by using debt the manager creates an instrument which is priced in the market. From outside investors' point of view, a firm that has more debt faces greater risk than a firm that does not; so that we expect higher debt to attract higher prices by auditors. This leads to our second hypothesis that:

Hypothesis 2, H2: Debt has a significant positive relationship with auditors' price.

2. Data and methodology

Data collection and method

We collect the research data of IFRS-compliant year-end online financial statements of non-finance firms quoted on the Nigerian Stock Exchange for the period 2012-2015. Prior to 2012, most Nigerian companies were using homegrown accounting standards known as Statement of Accounting Standards, SAS. The phased implementation of International Financial Reporting Standards (IFRS) in Nigeria guides us in our efforts to collect data for this study. Phase 1 is the first of the three implementation phases. It required all significant public entities whose securities are listed on the Nigerian Stock Exchange to adopt IFRS from periods ending after 1 January 2012. SAS is not the same as IFRS, so that we find it appropriate to compare likes with likes. Because we wanted all the firms to be IFRS-compliant we took 2012 as the beginning of our data collection period because most significant public entities in Nigeria started complying with IFRS from that year onwards. We ended

¹ Fields et al. (2004) define capital risk as total risk-adjusted capital ratio, defined as the total amount of bank regulatory capital (i.e., common equity, perpetual preferred stock, loan loss reserves, and some types of subordinated debt) divided by risk-weighted assets.

the data collection period in 2015 because by this time most companies that delayed in filling their year-end annual financial statements would have published same. The research data point consist of 311 firm-year observations over the period of 4 year period. The following sample sizes were used in the respective years: 63 firms in 2012, 80 firms in 2013, 90 firms in 2014, and 78 firms in 2015 (see the Appendix at the end of the paper for the distribution of firms by year by auditor type).

Method

We specify the general model specification as,

$$\dot{Y} = \alpha + X_i s \quad (1)$$

where \dot{Y} is dependent variable, and $X_i s$ are the components of capital structure consisting mainly of shareholders' equity and long-term debt, following Modigliani and Miller (1958). In its fully specified form according to the paper's research variables, equation (1) becomes,

$$PRICE = \alpha_0 + \beta_1 MODEQ + \beta_2 TLTD + \gamma + \varepsilon \quad (2)$$

where *PRICE* is auditors' price, which is a proxy for auditors' perceptions of, or belief about, the risk of a firm. The higher the auditors' perceived risk, the higher the auditors' pricing. *MODEQ* is modified equity, *TLTD* is total long-term debt. γ is control for auditor type. ε is an error term, i.i.d normally distributed with mean 0. *Ex-ante*, we expect β_1 and $\beta_2 > 0$. As used in this paper, equation (2) does not imply causality but reflects the association between capital structure and auditors' price.

We use modified equity to proxy shareholders' equity. We calculate modified equity in this paper as ordinary share capital plus preference share capital plus share premium plus other reserves plus retained earnings minus share based payment reserves minus foreign exchange translation reserves minus non-controlling interests. That is,

$$\text{Modified equity} = (\text{ordinary share capital} + \text{preference share capital} + \text{share premium} + \text{other reserves} + \text{retained earnings}) - (\text{share based payment reserves} - \text{foreign exchange translation reserves} - \text{non-controlling interests}) \quad (3)$$

Other reserves include capital reserve, revenue reserve, and revaluation reserve. Total Long-term debt (*TLTD*) includes long-term loans and long-term borrowings plus debenture loans plus and finance lease obligations minus deferred tax liabilities minus deferred income minus employee retirement benefit obligations minus provisions for liabilities and contingent liabilities. That is, *Total long-term debt* = (long-term loans + long-term borrowings + debenture loans + finance lease obligations) – (deferred tax liabilities - deferred income - employee retirement benefit obligations - provisions for liabilities - contingent liabilities) (4)

Altogether, we run five OLS panel regressions of equation (2) on the SPSS software. Specifically, we run yearly regressions of 2012 to 2015 (with 63, 80, 90, and 78 firms, respectively). We also run a combined or pooled OLS regression of the 311 firm-year observations. All the regressions are run either with or without auditor type, γ , which is the control variable. In addition to statistical analysis, we interpret the coefficient estimates of modified equity vis-à-vis coefficient estimates of total long-term debt to infer their respective economic impact on auditors' price.

3. Empirical results

The descriptive statistics of the research variables are presented in Table 1. All values relating to modified equity, total long-term debts and auditors' price are in thousands. Some of the 63 firms in 2012 have negative modified equity of ₺3,430,000,000, and maximum (mean) modified equity of ₺414,957,568,000 (₺20,336,064,540). In 2013, modified equity is negative, and increased to ₺4,608,386,000, with maximum (average) of ₺550,282,848,000 (₺21,887,755,310). In 2014, modified equity is negative at ₺192,609,812,000 while the maximum (average) is ₺591,577,690,000 (₺18,256,430,220). The 78 firms examined in 2015 have minimum modified equity of (- ₺228,339,355,000) and maximum (average) of ₺224,942,000,000 (₺10,821,431,220). Respective values of total long-term debt and auditors' price over the period can be found in the remaining part of Table no. 1.

Table no. 1

	N	Minimum (A'000)	Maximum (A'000)	Mean (A'000)	Std. Deviation (A'000)
Modified equity 2012	63	-3430000	414957568	20336064.54	54837852.879
Modified equity 2013	80	-4608386	550282848	21887755.31	66771718.862
Modified equity 2014	90	-192609812	591577690	18256430.22	74967766.934
Modified equity 2015	78	-228339355	224942000	10821431.22	41304005.298
Total long-term debt 2012	63	0	112462464	6955561.86	19227685.461
Total long-term debt 2013	80	0	124850394	5707958.70	17909522.073
Total long-term debt 2014	90	0	614475143	14048742.14	69580673.164
Total long-term debt 2015	78	0	634635175	17409771.47	77785147.861
Auditors' Price 2012	63	100	876198	38781.16	112584.064
Auditors' Price 2013	80	300	204750	25141.23	42435.944
Auditors' Price 2014	90	430	447119	29087.83	62012.136
Auditors' Price 2015	78	300	2844098	70354.69	326976.635

Correlation analysis

Table no. 2 presents the bivariate correlations between the research variables. In the table, there is a significant positive moderate correlation between auditors' price and modified equity ($\rho = .155, \rho < .01$). The correlation

between auditors' price and total long-term debt is small and not significant ($\rho = .091, \rho > .01$). The correlations show almost zero and insignificant correlation ($\rho = .003, \rho > .01$) between total long-term debts and modified equity.

Table no. 2

Pearson bivariate correlations (N=311)				
	Modified equity		Total long-term debt	Auditors' price
Modified equity		1	.003 (.959)	.155** (.006)
Total long-term debt		.003 (.959)	1	.091 (.110)
Auditors' price		.155** (.006)	.091 (.110)	1

** Correlation is significant at the 0.01 level (2-tailed).

The partial correlations in **Table no. 3** are similar to the bivariate correlations reported so far. There is a significant positive moderate correlation between auditors' price and modified equity ($\rho = .144, \rho < .05$) but not between auditors' price and total long-term debt ($\rho = .088, \rho > .01$). There is no significant correlation between total long-term debt and modified equity; in fact, the correlation is negative ($\rho = .002$). This implies, as expected, that an increase in either the debt or equity component reduces the other.

The correlations provide *prima facie* supports for the two hypotheses of the paper, which are that equity and debt (or financial structure) has positive relationship with auditors' price. The correlation between auditors' price and equity is significant as hypothesised but it is not significant for debt. Given the low correlations between the predictor variables, and the variable inflation factors which are within acceptable limits of less than 10 (e.g., Hair et al., 2009), multicollinearity between the two research variables is not a problem.

Table no. 3

Partial correlations (N=308)			
Controlling for auditor type	Modified equity	Total long-term debt	Auditors' price
Modified Equity	1.000	-.002 (.969)	.144** (.011)
Total long-term debt	(-.002) (.969)	1.000	.088 (.122)
Auditors' price	.144** (.011)	.088 (.122)	1.000

Panel data regression results

Result of the five OLS panel regressions are conveyed in the tables that follow. **Table no. 4** contains yearly regressions while **Table no. 5** contains the pooled or combined regression. We run the regressions with or without auditor type.

Yearly regression results

Yearly OLS regression results are shown in **Table no. 4**. The table contains two panels: A and B. Panel A does not control for auditor type whereas panel B controls for it. Notice that significant p -values are in bolded prints in the table.

Table no. 4

Yearly regressions of debt-equity mix on auditors' pricing								
$PRICE = \alpha_0 + \beta_1 MODEQ + \beta_2 TLTD + \gamma + \varepsilon$					With control			
$PRICE = \alpha_0 + \beta_1 MODEQ + \beta_2 TLTD + \varepsilon$					Without control			
Panel A, without control					Panel B, with control			
Year	Variable	Predicted sign	β	t	ρ	β	t	ρ
2012 (N=63)	Constant	-	29684.733	1.970	.053	32288.578	1.425	.159
	MODEQ	+	.064	.245	.808	.061	.233	.817
	TLTD	+	.158	.605	.547	.157	.596	.554
	γ	?				-.020	-.155	.877
2013 (N=80)	Constant	-	14388.585	4.485	.000*	20877.734	4.358	.000*
	MODEQ	+	.163	1.086	.281	.148	.999	.321
	TLTD	+	.627	4.170	.000*	.618	4.169	.000*
	γ	?				-.130	-1.803	.075
2014 (N=90)	Constant	-	16601.562	3.035	.003*	26307.119	3.298	.001*
	MODEQ	+	.541	6.409	.000*	.521	6.156	.000*
	TLTD	+	.344	4.076	.000*	.341	4.079	.000*
	γ	?				-.140	-1.658	.101
2015 (N=78)	Constant	-	54178.670	1.330	.188	80431.917	1.341	.184
	MODEQ	+	.121	.971	.335	.110	.868	.388
	TLTD	+	.080	.641	.524	.077	.617	.539
	γ	?				-.070	-.599	.551
*. Significant at the .01 level								
MODEQ = Modified equity. TLTD = Total long-term debt. γ = Auditor type								

Whether in panel A or in panel B, the regression results for 2012 and 2015 are not significant, although the relationships are as signed. In 2013, total long-term debt (TLTD) is positive and significantly related to auditors'

price in both panel A and panel B. Modified equity (MODEQ) is not significant, although it has the predicted sign. In 2014, both MODEQ and TLTD are positive and significantly related to auditors' price in the two panels.

In 2014, *MODEQ* has greater impact on auditors' price than *TLTD*. The coefficient estimate of *MODEQ* (.541) is higher than the coefficient estimate *TLTD* (.344). Similarly, in panel B of 2014, the coefficient estimate of *MODEQ* (.521) is higher than the coefficient estimate of *TLTD* (.341). This indicates that in 2014, an increase in modified equity (*MODEQ*) by one unit increases auditors' price (*PRICE*) by 54.10% and 52.10%, respectively, in panels A and B. A unit increase in total long-term debt (*TLTD*) increases auditors' price (*PRICE*) by 34.40% and 34.10%, in panels A and B respectively in 2014. In sum, while modified equity is not significant in 2013, it is significant in 2014. Meanwhile, total long-term debt is significant in both 2013 and 2014, in panels A and B. Because of the mixed results on debt and equity in 2013 and 2014, we will use the pooled regression

results to interpret the tests of the paper's two hypotheses.

Pooled regression result

Next, we present the OLS pooled regression results that combine all the yearly data into a single regression. We do this to test the paper's hypotheses. The results are shown in **Table no. 5**. It can be seen that modified equity (*MODEQ*) is significantly positively related to auditors' price (*PRICE*) whereas total long-term debt (*TLTD*) is not significant although it has the predicted sign. Both controlling and not controlling for auditor type, γ , modified equity (*MODEQ*) is significant (marginal) at the 1% levels, but clearly at the 5% level. In economic terms, a one unit increase in *MODEQ* increases overall auditors' price by 15.50% in panel A and 14.50% in panel B.

Table no. 5

Pooled (2012-2015) regression of modified equity and total long-term debt on auditor's price (N=311)							
$PRICE = \alpha_0 + \beta_1 MODEQ + \beta_2 TLTD + \gamma + \varepsilon$					With control		
$PRICE = \alpha_0 + \beta_1 MODEQ + \beta_2 TLTD + \varepsilon$					Without control		
Panel A, without control					Panel B, with control		
Variable	Predicted sign	β	t	p	β	t	p
Constant	-	29281.035	2.803	.005*	42475.225	2.757	.006*
<i>MODEQ</i>	+	.155	2.765	.006*	.145	2.564	.011**
<i>TLTD</i>	+	.090	1.612	.108	.088	1.572	.117
γ	?				-.066	-1.165	.245

*. Significant at the .01 level

**. Significant at the .05 level

MODEQ = Modified equity. *TLTD* = Total long-term debts. γ = Auditor type

Notice that the control variable has negative relationship with auditors' price. This result further demonstrates that auditor type (γ) does not moderate auditors' price and financial structure. In effect, in their pricing, it appears that, on average, that auditors are influenced by the composition of debt (*TLTD*) and equity (*MODEQ*) in the capital structure of firms irrespective of the type of auditors. Addressing the tests of hypotheses 1 and 2 (*H1* and *H2*), this result confirms that equity has a significant positive relationship with auditors' price (*H1*). Debt is not significantly related to auditors' price, although the sign is as predicted in (*H2*). These tests on *H1* and *H2* demonstrate that capital structure is positively related to auditors' price, although equity financing incurs significantly higher pricing by auditors than debt financing. These results hold even after controlling for auditor type. This finding is consistent with Asien

(2015), who finds that financial risk is positively related to auditors' remuneration or audit fees. We infer from this finding that auditors penalise equity financing more than debt financing, probably because auditors perceive equity financing as firms' inability to raise debt. This inference is buttressed by the pecking order theory (see Myers, 1984; and Frank and Goyal, 2003, 2005), which views equity financing is a last resort. The values of the firms may have suffered (indicating higher risk) since they have resorted to equity financing. This finding is also consistent with the case of the banking industry where Fields et al. (2004) found a positive and significant relationship between risk-adjust capital ratio and audit fees. They interpret their finding to indicate that auditors charge more to audit banks that are required by regulators to maintain higher levels of regulatory capital. We interpreted these findings to mean that capital structure contains

signals that are priced by the auditor market. The positive relation suggests lower perceptions of firm value (or higher perception of firm risk) by auditors, hence firms pay higher auditors' prices. The paper thus concludes that firms' financial structure conveys signals to auditors in their pricing decisions.

Conclusion and recommendations

In this paper, we empirically investigate the link between financial structure and auditors' perceptions of firm value (or risk) through the pricing of auditors' services. The paper draws upon capital structure signalling theory (Ross, 1977; Riley, 2001). We expect firms' capital structure to relate positively with auditors' price as a sign of low auditors' perceptions of firm value, or high perception of firm risk. We use panel data analysis methodology to analyse data of 311 firm-year observations of IFRS-compliant firms listed on the Nigerian Stock Exchange from 2012-2015. Consistent with our expectations, we find that equity has a significant positive relationship with auditors' price. We also find that although debt is positively related to auditors' price, the relationship is not significant. The positive relations suggest lower perceptions of firm value (or higher perceptions of firms' risk) by auditors, hence, generally, auditors' charge higher prices. This result holds even after controlling for auditor type so that it does not moderate the relationship between

auditors' price and capital structure. The pooled regression results demonstrate that equity and debt affect auditors' pricing decisions differentially. Our finding indicates that auditors penalise equity financed firms more than debt financed firms, probably because the auditors perceive equity financing as inability to raise debt since equity is supposed to be a last resort in accordance with pecking order theory. It appears that the values of the firms may have suffered (indicating higher risk) since they have resorted to equity financing. We interpreted these findings to mean that financial structure conveys signals that auditors use to price their services. On the basis of our findings, we conclude that firms' financial structure conveys signals to auditors in their pricing decisions. We, therefore, recommend that auditors should monitor the capital structure of their clients to guide the auditors when charging for their services. For corporate finance managers, we recommend that they should rebalance their firms' capital structure cognisance of the fact that auditors are taking a signal from it.

This paper contributes to capital structure signaling theory (Ross, 1977; Riley, 2001) by examining the relation between capital structure and auditors' perceptions of firms' value (or risk) through the pricing of auditors' services. The paper is an attempt to kindle research interests on the relation between auditors' perceptions of firm value (or risk) and capital structure. The paper also contributes by providing a link between corporate finance and auditing literatures.

Appendix

Distribution of firms by year by auditor type (2012–2015)

	Code	2012	2013	2014	2015	Total
Joint auditors	0	1	3	3	2	9
PKF Professional Services	1	9	7	9	9	34
Ernst & Young	2	6	7	14	19	46
HLB Z.O. Ososanya	3	1	2	2	2	7
KPMG Professional Services	4	7	9	9	8	33
Akintola Williams Deloitte	5	11	13	14	11	49
Madu, Onyekwena & Co.	6	-	-	1	1	2
Victor Olatunji & Co.	7	1	1	1	1	4
PricewaterhouseCoopers	8	9	10	9	3	31
BDO Professional Services	9	3	7	9	7	26
Baker Tilly Nigeria	12	2	3	3	2	10
BBC Professionals	13	3	2	-	1	6
Nexia Agbo Abel	14	1	1	1	1	4

Distribution of firms by year by auditor type (2012–2015)

	Code	2012	2013	2014	2015	Total
Sola Oyetayo & Co.	16	1	1	1	1	4
Horwath Dafinone	17	1	1	2	2	6
SIAO (Chartered Accountants)	18	1	2	2	1	6
Grant Thornton Nigeria	23	1	1	1	-	3
OOO	24	1	1	-	-	2
Abraham Shalom & Co.	15	-	-	-	1	1
Chuks Azogu	11	-	-	1	1	2
Gbenga Badejo & Co.	19	-	-	1	1	2
Farinde Olateju	20	-	-	1	1	2
Olaolu Olabimtan & Co	25	1	1	1	-	3
Olusola Olojede & Co.	21	-	-	-	1	1
Babayemi Osho	26	1	1	1	-	3
Thompson Aiyegunle	10	-	2	1	1	4
Ejigeme Andrew & Co.	22	-	1	1	1	3
Egunjobi, Adegbite & Co.	29	-	1	1	-	2
Omogoroye Okin Popoola & Co.	30	-	1	1	-	2
AO&A Audit	27	1	1	-	-	2
Remi Oyekola & Co	28	1	1	-	-	2
Total number of firms in each year		63	80	90	78	311
Mean		7.84	8.46	7.40	6.12	10.03
Median		5.00	5.00	5.00	4.00	4

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