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Joint Audit and Cost of Equity Capital: Evidence from Saudi Arabia

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Objectives

The purpose of our is to examine whether:

☐ Saudi investors require a lower rate of return for investing in firms with two independent auditors as opposed to firms with a single auditor.

☐ The rate varies by the effect of the mandatory versus voluntary settings, and by audit quality of the two appointed auditors (Big 4 vs Non Big4).

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Regulatory Background, Literature and Motivation

❑Auditing by two independent auditors (joint-audit regulations) has always been the subject of intense debates in Saudi Arabia.

❑The debates focus on whether joint audits have the potential to enhance auditor independence.

❑This issue of joint audit regulations addressed as early as the 1966's in the Saudi Banking Control Law.

Regulatory Background, Literature and Motivation

❑The Saudi banking control law (Article 14, 1966), and the Saudi cooperative insurance companies control law (Article 10, 2003) mandated the joint audit for banks and insurance companies.

❑In accordance with article 130 of the Saudi companies' law, few Saudi listed firms in recent years, other than firms in the banking and insurance industries, have voluntarily appointed two independent auditors.

Regulatory Background, Literature and Motivation

❑Single audit requirements are still the norm in many countries around the world, with the U.S, Canada and Australia being notable examples;

❑Other countries such as Saudi Arabia, France, Denmark, Switzerland, U.K, Germany, India and Kuwait has either mandated or proposed voluntary joint audit regulations.

Regulatory Background, Literature and Motivation

❑ Prior studies investigate on the overall effect of joint audit regulations and provide mixed evidence:

❑ A stream of research documents that joint audit is not able to constrain earnings management practices (Holm and Thinggaard 2010; Lesage, Ratzinger-Sakel, and Kettunen 2012), nor has any effect on earnings quality (Aljabr and Alsadoun 2013), and may result in lower total audit evidence precision (Deng et al. 2012).

❑ Another stream of research, however, document that joint audit firms opting voluntarily for joint audit have a higher degree of earnings conservatism, and lower abnormal accruals (Zerni et al. 2012), and the lower abnormal accruals is even stronger for firms that use two big 4 auditors (Francis, Richard, and Vanstraelen 2009), and achieve higher auditor's report consensus and greater accuracy (Baldauf and Steckel 2012).

Regulatory Background, Literature and Motivation

❑The above studies have devoted much attention towards investigating the impact of joint audit on financial reporting and audit quality.

❑What these studies do not show, however, is the investors' perception of the joint audit regulations.

❑Accordingly, the primary purpose of our study is to examine Saudi investors' pricing of joint audit regulations, as reflected by the cost of equity capital.

❑We conjecture that if joint audit regulations enhance auditor independence, then this in turn decreases the information asymmetry between the firm and investors, all of which to require a lower rate of return for the decreased information risk.

Methodology and Empirical Models

Empirical Models: (1) The Expected Cost of Equity Capital Model

$$r_{CAPM} = \beta_0 + \beta_1\, JA + \beta_2\, ln(Size) + \beta_3\, Irisk + \beta_4\, Loss + \beta_5\, B/P + \beta_6\, Lev + \beta_7\, ln(LTG) + \varepsilon$$

r_{CAPM} = the expected cost of equity estimated using CAPM model

JA = an indicator variable coded 1 for firms with two joint auditors, and 0 for firms with a single auditor

Methodology and Empirical Models

Empirical Models: (1) The Implied Cost of Equity Capital Model

$$r_{AVG} = \beta_0 + \beta_1\, JA + \beta_2\, ln(Size) + \beta_3\, Irisk + \beta_4\, Beta + \beta_5\, Loss + \beta_6\, B/P + \beta_7\, Lev + \beta_8\, IndCOC$$

$$+ \beta_9\, ln(LTG) + \varepsilon$$

r_{GM} the implied cost of equity capital estimated following Gode and Mohanram (2003)

r_{GEB} the implied cost of equity capital estimated following Gebhardt et al. (2001)

r_{EST} the implied cost of equity capital estimated following Easton (2004)

r_{CT} the implied cost of equity capital estimated following Claus and Thomas (2001)

r_{MOJ} the implied cost of equity capital estimated using the modified Ohlson and Juettner-Nauroth (2005) and adapted by Ogneva et al. (2007)

r_{AVG} the average of the above five individual measures of the implied cost of equity capital

JA an indicator variable coded 1 for firms with two joint auditors, and 0 for firms with a single auditor

Sample

❑ Our test indicator variable of JA is hand-collected data and constructed using audit report of all firms listed in Tadawul All Share Index (TASI) during the period 2007 through 2010.

❑ Our dependent and control variables sample is based on all data available in Gulf Base database and the Saudi Stock Exchange database (Tadawul) for all firms listed in TASI.

❑ The sample selection procedure show that the initial sample obtained for the test variable of JA is 507 firm-year observations (single audit observations=399, and joint audit observations=108).

❑ The final sample obtained:

- For rCAPM (the expected cost of equity model) after matching with the test control variables is 256 firm-year observations, and

- For rAVG (the implied cost of equity model), after refining 42 firm-year observations, is 187 firm-year observations.

Empirical Results-Model (1)

TABLE 5

Regression of the Expected Cost of Equity Measure (r_{CAPM}) on Joint Audit Attribute (*JA*)

Variables	Predicted Sign	Model (1)
Intercept	?	0.070***
		(6.67)
JA	−	-0.014***
		(-5.22)
ln(Size)	−	0.001
		(0.93)
Irisk	+	0.321***
		(3.11)
Loss	+	0.010***
		(3.1)
B/P	+	0.006
		(1.2)
Lev	+	0.002
		(0.94)
ln(LTG)	+	-0.001
		(-0.95)
N		256
Adj-R²		0.172

Empirical Results-Model (2)

TABLE 6

Regression of the Average Implied Cost of Equity Measure (r_{AVG}) on Joint Audit Attribute (*JA*)

Variables	Predicted Sign	Model (2.1)	Model (2.2)
Intercept	?	0.029	-0.001
		(0.71)	(-0.02)
JA	−	-0.025***	-0.020**
		(-2.64)	(-2.28)
ln(Size)	−	0.001	0.002
		(0.6)	(1.09)
Irisk	+	-0.287	-0.197
		(-0.91)	(-0.67)
Beta	+	0.004	-0.001
		(0.28)	(-0.07)
Loss	+	-0.041***	-0.020*
		(-3.78)	(-1.85)
B/P	+	-0.038***	-0.027**
		(-2.85)	(-2.11)
Lev	+	0.021	-0.008
		(1.09)	(-0.44)
IndCOC	+	0.663***	0.577***
		(7.7)	(6.99)
ln(LTG)	+		0.013***
			(4.98)
N		179	179
Adj-R²		0.433	0.502

Additional Analyses

TABLE 7

Regression of the five Individual Implied Cost of Equity Measures on Joint Audit Attribute (*JA*)

Variables	$r_e = r_{GM}$		$r_e = r_{GEB}$		$r_e = r_{EST}$		$r_e = r_{CT}$		$r_e = r_{MOJ}$	
	Model (2.1)	Model (2.2)	Model (2.1)	Model (2.2)	Model (2.1)	Model (2.2)	Model (2.1)	Model (2.2)	Model (2.1)	Model (2.2)
Intercept	0.037	-0.004	-0.006	-0.034	0.006	0.004	0.025	0.002	0.082	0.029
	(0.91)	(-0.12)	(-0.16)	(-0.98)	(0.07)	(0.05)	(0.61)	(0.05)	(1.63)	(0.65)
JA	-0.026***	-0.019**	-0.022**	-0.017**	-0.035*	-0.035	-0.020**	-0.017**	-0.023*	-0.014
	(-2.69)	(-2.28)	(-2.49)	(-2.1)	(-1.66)	(-1.63)	(-2.15)	(-1.82)	(-1.93)	(-1.39)

Additional Analyses

TABLE 8

Regression of the Expected Cost of Equity Measure (r_{CAPM}) on Joint Audit Attributes Classified based on Audit Quality Analyses, and Voluntary vs. Mandatory Regulations Analyses

Variables	Predicted Sign	Audit Quality Analyses		Voluntary vs. Mandatory Regulations Analyses	
		Model (1)	Model (2)	Model (3)	Model (4)
Intercept	?	0.071***	0.040***	0.049***	0.068***
		(5.58)	(3.04)	(3.26)	(6.43)
JA_{BB}	?	-0.022***			
		(-6.01)			
JA_{BS}	?		-0.007*		
			(-1.72)		
$JA_{Voluntary}$	?			-0.004	
				(-0.93)	
$JA_{Mandatory}$	?				-0.017***
					(-5.79)

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