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Article

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Online-Appendix

„The Effect of Changes in Internal Control Systems on Audit Risk“

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Appendix

Table 10: Variable Definitions

Variable	Expected Sign	Definition
ΔICW	-	Indicator variable that takes the value of 1 if a firm remediates its internal control weaknesses, and 0 otherwise
$\Delta SALE$	\pm	Amount of sales in $t=1$ less amount of sales in $t=0$ divided by total assets
ABAFEE	+	Abnormal audit fees estimated as residuals from the Audit Fee Model
BIG4	+	Indicator variable that takes the value of 1 if the auditor is one of the big four audit firms (KPMG, EY, Deloitte and PWC), and 0 otherwise
BUSY	+	Indicator variable that takes the value of 1 if the fiscal year ends in December, and 0 otherwise
CA	+	Current-assets ratio (total current assets divided by total assets)
CR	-	Current ratio (total current assets divided by total current liabilities)
DAC	\pm	Discretionary Accruals estimated as the residuals from the Total Accruals Model
DCF	\pm	Indicator variable that takes the value of 1 if the firm reports negative operating cash flows, 0 otherwise
EARN- INGS- GROW	+	Indicator variable that takes the value of 1 if the net income increases , 0 otherwise
FREEC	+	Demand for external financing (net cash inflow from operating activities less capital expenditures divided by lagged total assets)

¹⁶⁷ Definitions retrieved from Blankely, Hurtt and MacGregor (2012), pp. 83, 84; Eshleman and Guo (2014), p. 126; Krauß, Pronobis and Zülch (2015), pp. 80-81; Viciwati (2020), p. 797.

continued

Variable	Expected Sign	Description
INDCON	\pm	Indicator variable that takes the value of 1 if the company belongs in a specific industry, 0 otherwise
INTANG	+	Intangibles ratio (intangibles divided by total assets)
INVREC	+	Sum of inventories and receivables divided by total assets
LOSS	+	Indicator variable that takes the value of 1 if the current year's net income is negative, 0 otherwise
LEV	+	Leverage ratio (total long-term debt divided by total assets)
LNAFEE	\pm	Natural log of audit fees
LNSALES	+	Natural log of total sales
LNTA	+	Natural log of total assets
MERGER	+	Indicator variable that takes the value of 1 if the acquisition value is not equal to zero, 0 otherwise
OCF	\pm	Operating cash flow divided by total assets
OPINION	+	Indicator variable that takes the value 1 if the auditor issues a going concern audit opinion, 0 otherwise
PPE	\pm	Gross property, plant, and equipment amount divided by total asse
REMY1	\pm	Indicator variables that takes the value of 1 if a firm remediated its internal control weaknesses and it is the first year after the disclosure of the internal control weaknesses

¹⁶⁸ Definitions retrieved from Blankely, Hurtt and MacGregor (2012), pp. 83, 84; Eshleman and Guo (2014), p. 126; Krauß, Pronobis and Zülch (2015), pp. 80-81; Viciwati (2020), p. 797.

continued

Variable	Expected Sign	Description
REMY2	+	Indicator variables that takes the value of 1 if a firm remediated its internal control weaknesses and it is the second year after the disclosure of the internal control weaknesses
REMY3	+	Indicator variables that takes the value of 1 if a firm remediated its internal control weaknesses and it is the third year after the disclosure of the internal control weaknesses
REST	±	Indicator variable that takes the value of 1 if the firm has issued a financial statement restatement for the respective fiscal year, and 0 otherwise
ROA	-	Return on assets (EBIT divided by total assets)
TACC	±	Total accruals (net income less operating cash flows)
XSCORE	+	Zmijewski's (1984) financial condition index $(-4.3-4.5*(\text{net income}/\text{total assets})+5.7*(\text{total liabilities}/\text{total assets})-0.004*(\text{total current assets}/\text{total current liabilities}))$
YEAR	±	Indicator variable that takes the value of 1 depending on the year of the firm observation

¹⁶⁹ Definitions retrieved from Blankely, Hurtt and MacGregor (2012), pp. 83, 84; Eshleman and Guo (2014), p. 126; Krauß, Pronobis and Zülch (2015), pp. 80-81; Viciwati (2020), p. 797.