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Free Cash Flow and Debt Monitoring Hypotheses:

Evidence from Material Internal Control Weakness Disclosure

Sheela Thiruvadi

Hua-Wei Huang

Clark M. Wheatley

Shiyaamsundar Thiruvadi[*]

I.   Introduction

In this study, we investigate whether auditors are more conservative with regard to firms with high free cash flows (FCF) by examining the association between FCF level and reported internal control weakness (ICW).   This study is motivated by the recent concerns of regulators, academicians, and the public regarding internal control issues (PCAOB 2006, PCAOB 2012, Rice and Weber 2012, Rice, Weber, and Wu 2014).   Since the financial scandals of Enron and WorldCom occurred, much attention has been focused on the issue of corporate governance, which can help in enhancing the reporting quality of financial statements.   Specifically, the failure of Enron and WorldCom was the result of a large number of weaknesses in both the companies' internal controls.   The two major weaknesses at Enron were: (1) the CFO was exempted from a conflicts of interest policy, and (2) special purpose entities (SPE) existed in form but not in substance (Cunningham and Harris 2006).   Similarly, at WorldCom, manual adjustments were made into the system due to lack of adequate internal controls.   These adjustments were hard to detect (Beresford, Katzenbach, and Rogers 2003; Ashraf 2011).

The management at both of these companies had failed to ensure the adequacy, integrity, and effectiveness of the companies' internal controls (Cunningham and Harris 2006; Ashraf 2011). Therefore, the companies' financial reports could not be trusted due to the weaknesses in their internal controls.   In order to prevent fraudulent practices, protect investor's, in addition to ensuring the integrity of the firms' financial statements, [(U.S. House of Representatives 2002) available in the Congressional Record, Volume 148], an important policy initiative was implemented in the form of the Sarbanes-Oxley Act (SOX).   SOX was designed to improve the quality and

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[*] The authors are, respectively, Associate Professor of Accounting at Morgan State University, Associate Professor of Accounting at National Cheng Kung University, Associate Professor of Accounting at Florida International University, and PhD accounting student at Morgan State University.

effectiveness of corporate disclosures. The most controversial aspect of SOX was Section 404 which required both management and independent auditors to certify on the efficiency and effectiveness of the companies' internal controls.

Section 404 of SOX was issued in 2004 and received much attention. Section 404 has two parts: Section 404(a) and (b). Section 404(a) requires the management to attest to the efficiency and effectiveness of its internal controls while Section 404(b) requires the auditor of a public company to attest and report on the management's assessment of its internal control. The provisions of SOX Section 404 also reinforced the responsibility of auditors to be conservative in their internal control assessments. It is necessary for the auditor to consider the organization's internal control and the management tone as specified in Statements on Auditing Standards (SAS) No. 109 (AICPA 2006; Kerr 2013). This is important because SAS No. 99 states that, "management is in a unique position to perpetrate fraud because of its ability to directly or indirectly manipulate accounting records and prepare fraudulent financial statements by overriding established controls that otherwise appear to be operating effectively" (AICPA 2002, 1738).

Agency theory suggests that self-interested managers will always try to maximize their personal gains, thus creating a conflict of interest between themselves and their shareholders. In the absence of a significant ownership stake in the firm, managers tend to involve in non-value maximizing activities, such as excessive consumption of perquisites or sub-optimal risk-taking activities (Hubbard and Palia 1995). Managers of firms with high FCFs are especially more likely to opportunistically engage in value-destroying activities such as over-investment and misusing capital (Jensen 1986). Moreover, a weak internal control system may motivate managers to engage in the aforementioned activities more aggressively. High FCFs may therefore be an indicator that prompts auditors to further scrutinize any non-value-maximizing activities. Also, high FCF are likely to be associated with an increase in an auditor's assessment of control risk and disclosures of internal control weakness (ICW). Our findings reveal that the level of FCF is significantly positively associated with ICW in our tests on 3,642 U.S. firms for the 2004-2005 period.

Prior research shows that agency costs can be mitigated by debt monitoring (Jensen 1986). The required debt payments decrease the cash flow that manager has available, thereby reducing non-value maximizing behavior (Gul and Tsui1998). Byrd (2010) finds that debt tends to lessen agency conflicts in firms that result in high FCFs. Debt financing is related to lower agency costs due to its mandatory payout of cash. To explore how debt levels alleviate non-value-maximizing activities, we also examine the significance of the interaction of firms' FCF and their debt ratios (FCF*DEBTRATIO).We find a negative and significant association between the interaction variable and ICW ($p \leq .01$). This indicates that auditors are less likely to note ICW for firms when high FCFs are associated with high levels of debt.

Under the self-interested agency theory, managers of high-FCF, low-growth firms are more likely to engage in non-value-maximizing activities than are the managers of high-FCF, high-growth firms.

Growth strengthens managers' power by expanding the resource under managerial control. Therefore, managers of high-FCF, low-growth firms tend to over-invest in order to promote firms' sales, which are likely to benefit managers' compensation (Murphy 1985). To explore the influence of firm growth, we divide our sample into two groups: high-growth and low-growth. Our results show that both FCF level ($p \leq .01$) and the interaction variable: FCF*DEBTRATIO ($p \leq .03$) are significant only for the low-growth group.

Our investigation contributes to the extant literature in several ways. First, our findings provide evidence of a direct association between agency costs (as proxied by FCF) and ICW not shown in any prior studies. Second, our results indicate that ICW problems are mitigated by increased debt monitoring in firms with high FCF. Third, our results support the conjecture that there are increased risk implications for firms with both growth and high FCFs.

We organize the remaining sections as follows. The next section describes the theoretical background and hypotheses. Section III explains the test models and sample selection criteria. Section IV provides the empirical tests and explanations of the results. Section V provides conclusions.

II. Background and Hypotheses Development

Background

SOX 404 requires that the annual report of a public company also include a report, by the company's management on the internal control over financial reporting, and an attestation report by the auditor[1] on the management's assessment of internal control. Managers must ensure that adequate internal controls are in place in order to safeguard the investments of the shareholder and the assets of the company. The auditor's attestation responsibilities are consequently increased in tandem with management's responsibility.

Recent studies have focused on the costs of, and market reactions to, SOX 404 implementation (Ashbaugh-Skaife, Collins, Kinney, and LaFond 2007; Engel, Hayes, and Wang 2007; Iliev 2007;

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[1]The report should contain:

(a) A statement specifying the management's responsibility for establishing and maintaining adequate internal control procedures for financial reporting;

(b) The effectiveness of a company's most recent year internal control assessed by management; and

(c) Material weakness disclosure (Due to a deficiency or a combination of deficiencies of material weakness, there is a likelihood of a misstatement not being prevented or detected).

Ogneva, Subramanyam, and Raghunandan2007; Zhang 2007). Investigations regarding agency costs, FCF, debt monitoring and SOX issues are, however, rare. Prior studies on the FCF issue fall into two categories. The first category is concerned with FCF levels and managers' over-investment (Jensen 1986, Chang et al., 2007). The second category is concerned with how debt monitoring mitigates the agency costs associated with high FCF (Gul an Tsui 1998; Carroll and Griffith 2001; Richardson 2006).

Agency theory, high free cash flows and managers capital expenditures

According to Sloan (2001, 340) *"The basic agency problem resulting from the separation of management and financing is that the managers will have incentives to take actions to increase their own utility, but not to maximize the returns on capital invested by the investors"*. Agency costs are thus incurred by a company when problems, such as divergent management, shareholder objectives and information asymmetry exist. For example, when a firm has excess free cash flow, a conflict of interest may develop between managers and shareholders over the company's payout policies. Moreover, Jensen (1986, 1) states that: *"payouts to shareholders reduce the resources under managers' control, thereby reducing managers' power"*. In order to optimize personal bonuses and compensation, managers are likely to retain and over-invest FCF in order to generate sales growth—a variable likely to be highly associated with management compensation. Since high levels of FCF significantly increase managers' powers, accelerate risky capital expenditure activities and prompt managers to override firms' internal control. When internal controls are weak, managers would be more likely to manipulate cash flows by choosing investment projects that are beneficial to them rather than to shareholders. Under such circumstances, managers incline towards weak controls and use cost benefit principle as the rationale for those poor controls (Caplan1999).

Auditors, however, incur costs if they fail to disclose an ICW, which managers have overridden. Particularly in the post-SOX era, auditors are expected to increase their assessments of control risk resulting from non-value-maximizing activities and would, therefore, be likely to disclose more ICWs for firms with high FCF. This leads to our first hypothesis (in alternative form):

   H_{A1}: *ICWs are positively associated with FCF.*

Free cash flows and debt monitoring hypothesis

Richardson (2006) finds that over-investment is centered in firms with the highest levels of FCF, which is consistent with agency cost explanations. Issuance of debt without retention of the proceeds is, however, likely to reduce the agency costs associated with FCF (Gul and Tsui 1998). This is because the repayments associated with the issuance of debt leads to a reduction in the FCF available to managers for making investments in non-value maximizing activities. Moreover, managers are monitored by the debt market. In addition, the potential for default may impose

some degree of fiscal responsibility on the firm's management. Simply put, debt reduces the availability of excess cash that managers are able to spend according to their discretion (Jensen 1986) and thus, ICW is expected to decrease at higher levels of debt for firms with high FCF. Hence, we examine the association between the interaction term, FCF*DEBTRATIO and ICW. A negative and significant FCF*DEBTRATIO would suggest the adverse effect of FCF on the dependent variable ICW is dependent on debt level. This leads to our second hypothesis (presented in the alternative form):

H_{A2}: *ICWs are negatively associated with FCF*DEBTRATIO.*

III. Method and Data

Model specification

To test the above hypotheses, we estimate a linear regression model with ICW as the dependent variable and FCF as the independent variable by extending the models from Krishan (2005), and Ogneva, et al., (2007). The OLS regression model is as follows:

$$ICW = \beta_0 + \beta_1 BIG4 + \beta_2 LnASSET + \beta_3 RECASST + \beta_4 LOSS$$
$$+ \beta_5 FRAUD + \beta_6 NASD + \beta_7 NYAM + \beta_8 RESIGN + \beta_9 TENURE \qquad (1)$$
$$+ \beta_{10} PBANK + \beta_{11} GROWTH + \beta_{12} DEBTRATIO + \beta_{13} FCFBA$$
$$+ \beta_{14} FCFBA*DEBTRATIO + \beta_{15} CAPITALEXP + \epsilon$$

Where:

ICW = Number of material Internal Control Weaknesses reported;

FCF is measured (following Gul and Tsui 1998) as:

$$FCFBA = (INC – TAX – INTEXP – PREDIV – ORDIV) / BA \qquad (2)$$

Where:

INC = the operating income before depreciation;

TAX = the total taxes;

NTEXP = the gross interest expenses on short and long term debt;

PREDIV = the total dividend on preferred shares;

ORDIV = the total dividend on ordinary shares;

BA = the total assets in previous year;

FCFBA*DEBTRATIO= the interaction between FCFBA and DEBTRATIO

Where DEBTRATIO = book value of long term debt to total equity;

The following are control variables:

BIG4 = 1 if the auditor is Big 4, and 0 otherwise;

LnASSET = natural logarithm of total assets;

RECASST = ratio of receivables to total assets;

LOSS = 1 if net income is negative (net loss reported), and 0 otherwise;

FRAUD = 1 if the firm is named in a fraud lawsuit in the sample period, else 0;   NASD = 1 if the stock was traded in National Market System of NASDAQ, and 0 otherwise;

NYAM = 1 if the stock was traded in NYSE or AMEX, and 0 otherwise;

RESIGN = 1 if the auditor resigned, and 0 otherwise;

TENURE= number of years the auditor has audited the client;

PBANK = bankruptcy prediction using *Zmijewski's* Z score model;

GROWTH = the percentage of sales growth in the current year;

CAPITALEXP = Capital expenditure divided by total assets.

Our control variables are intended to control for factors that could be associated with ICW.   We use LnASSET, as a control factor because we expect larger firms to have the potential for more internal control problems due to increased complexity.   It is also likely, however, that large firms also have better internal controls (DeFond and Jiambalvo 1991).   Thus, while we do not predict a sign for LnAsset, we also control for complexity with the ratio of receivables to assets (RECASST) and predict the sign of the coefficient on the variable to be positive.

We include three control variables: Big 4, LOSS and PBANK that are likely to be related to internal control problems.   First, we control for whether or not the auditor was a Big 4 auditor.   A Big 4 audit is considered a high quality audit.   A Big 4 audit may, thus, be more likely to detect internal control problems than a non Big 4 firm (e.g., Crasswell, Francis, and Taylor 1995; Francis, Maydew, and Sparks 1999; Krishnan 2003; Krishnan 2005).   It would thus be likely that ICW is lower in firms audited by Big 4 auditors.   At the same time, however, prior research indicates that there is not a significant difference in error detection between the Big 4 and non-Big 4 (DeFond and Jiambalvo 1991; Petroni and Beasley 1996; Krishnan 2005).   As a consequence, we again make no prediction for the sign of the coefficient on this variable.

Second, we control for the likelihood that internal control weaknesses will be greater for firms in financial distress by including two variables designed to measure financial distress: *Zmijewski's* Z

score (PRBANK) to measure the prediction of bankruptcy and a dummy indicator variable for firms experiencing a net loss in the period (LOSS). We expect the coefficients on these variables to be positive.

We capture growth as the percentage of sales growth in the current year (GROWTH). We also include two indicator variables: NASD and NYAM, for the National Association of Securities Dealers Automated Quotation System (NASDAQ)-National Market System and the New York / American stock exchanges to control for systematic differences in firm characteristics by exchange.

We include a control variable coded 1 for auditor resignation and 0 otherwise (RESIGN) because auditor resignations may be an indicator of a problem in internal control. We thus predict a positive sign for the coefficient on this variable.

In a similar vein, we predict a negative sign for control variable TENURE because there is a likelihood of a negative association between the probability of failure in reporting and auditor tenure (Geiger and Raghunandan 2002).

Finally, we include an indicator variable for FRAUD and predict a positive association between allegation of fraud and the weakness of internal control.

Sample selection

We select our observations with internal control data for fiscal years 2004 and 2005 from the *Audit Analytics* database; furthermore, 930 observations could not be matched to *Compustat* data due to missing ticker symbols. In addition, 165 foreign firms were deleted because of their different (as compared to U.S. firms) regulatory environment, and 2,030 observations were lost due to missing financial data in the *Compustat* database. Our final pooled sample of 3,642 firm-year observations is comprised of 1,470 and 2,172 firms for fiscal years 2004 and 2005, respectively. Table 1 summarizes our sample selection. The criteria for choosing the sample period was the following: (1) there was a strong focus on the issue of internal controls due to management related scandals during the time surrounding the sample period; and (2) to see whether SOX SEC 404 internal control provisions had any immediate effect on the sample. [see Table 1, pg 61]

IV. Results

Descriptive statistics

Table 2 reports the descriptive statistics for our sample[2]. The mean (median) values of FCFBA are 0.06 and 0.08 respectively. The mean value of ICW is 0.31. The mean value of capital expenditure over total assets is 0.06. [see Table 2, pg 62]

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[2]We winsorize (at 5% and 95%) extreme observations to reduce the possible influence of outliers.

Material internal control weakness and capital expenditure analysis

Table 3 reports capital expenditure level and ICW reported.   The results indicate that there is a significant difference (Chi-square test,p≤.001) between the two groups[3].   Eighty of the 339 high capital expenditure firms (24%) disclosed more than one material ICW while only 412 of the 2811 capital expenditure firms (15%) disclosed more than one material ICW.   This result provides indirect evidence to support H_1 that managers who over-invest in capital expenditures induce more internal control concerns from auditors.   [see Table 3, pg 63]

OLS regression result

Primary Analysis

Table 4 reports the OLS regression results for our pooled sample[4].   The association between FCF and ICW is positive and significant ($\square$= 0.42, p ≤0.06).   The interaction between FCFBA and DEBTRATIO is also significant and in the predicted direction ($\square$ = -0.40, p ≤0.01).   The coefficients on our controls for complexity, auditor resignation, and financial distress are also significant, and are consistent with the results of prior studies (e.g., Krishnan, 2005).   The ratio of receivables to total assets is significant and in the predicted direction.   Similarly, the variables: LOSS, RESIGN, DEBTRATIO are all positive, significant and in the predicted direction.   The remaining control variables are not significantly associated with ICW.   Our empirical results, thus, support both hypotheses $H_1$and H_2.   [see Table 4, pg 64]

High/Low-Growth Group Analysis

Table 5 reports additional analysis of the association between FCFBA and ICW.   When we partition our sample into high-growth and low-growth groups,[5] we find that the association between FCF and ICW is positively significant only for the low-growth firms ($\square$= 0.98, p ≤0.01).   The interaction between FCFBA and DEBTRATIO is also negatively significant only for the low-growth firms ($\square$= -0.48, p ≤0.03).   Our results thus suggest that the managers of high FCF/low growth firms are more likely to engage in non-value-maximizing activities than are managers of high FCF/high growth firms.   [see Table 5, pg 65]

Sensitivity Test

As a sensitivity test, we re-ran our regressions on the 2004 and 2005 year samples separately.   The findings are less strong, but similar to the results presented above.   We also partitioned our sample into the upper and lower 25% of the GROWTH sub-samples.   Again, the association between FCF

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[3]High (low) capital expenditure firms are defined as capital expenditures divided by total assets is greater (less) than 10%.

[4]Multi-collinearity should not be a serious problem since all VIFs are less than two.

[5]The high (low) growth firms are defined as Growth above (below) the median value of the sample.

and ICW remains positively significant only for the low-growth firms ($\square$= 1.67, $p \leq 0.01$). The interaction between FCFBA and DEBTRATIO is also negatively significant only in the low-growth group ($\square$= -0.99, $p \leq 0.01$). These results are, thus, consistent with our prior high/low-growth analysis. [see Table 6, pg 66]

V. Conclusion

This study investigates whether auditors are more conservative when assessing the internal control systems of low-growth firms that have high free cash flows (FCF) by examining the association between FCF level and internal control weakness (ICW). This is in comparison to high-growth firms having high free cash flows. Motivation for this study stems from the recent concerns of regulators, academicians and the public regarding internal control issues (PCAOB 2006, PCAOB 2012, Rice and Weber 2012, Rice, Weber, and Wu 2014). The financial accounting scandals that occurred at Enron and WorldCom were the result of a large number of weaknesses in both the companies' internal control. The management had failed to ensure the adequacy, integrity and effectiveness of its internal controls (Cunningham and Harris 2006; Ashraf 2011).

Enron violated GAAP by not providing: (1) complete disclosure; (2) involving in the use of unfair financial reporting; (3) using incorrect accounting for special purpose entity; (4) using selective equity method of accounting; and (5) failing to exclude the effect of transactions among entities (Cunningham and Harris 2006). Similarly, at WorldCom, manual adjustments were made into the system due to lack of adequate internal control (Beresford, Katzenbach, and Rogers 2003; Ashraf, 2011). Therefore, the company's financial report could not be trusted due to weakness in the companies' internal controls.

The enactment of the Sarbanes-Oxley Act in 2002 and the associated Securities and Exchange Commission (SEC) rules for monitoring SOX compliance was an important policy initiative designed to improve the quality and effectiveness of corporate disclosures, and thus prevent fraudulent practices and protect investors investment [(U.S. House of Representatives 2002) available in the Congressional record, Vol. 148].

Section 404, was the most controversial facet of the Sarbanes-Oxley Act of 2002. Sec 404 of SOX required both, the management and the independent auditor of public companies to certify on the efficiency and effectiveness of the company's internal controls. Furthermore, the provisions of SOX Sec 404 also reinforced the responsibility of auditors to be conservative in their internal control assessments.

Agency theory suggests that a conflict of interest is created between the managers and shareholders because managers are more interested in safe-guarding their interest rather than the interest of the shareholders. Self-interested managers always try to maximize their personal gains (Jensen 1986). In the absence of significant ownership stake in the firm, managers tend to involve in non-value

maximizing activities, such as excessive consumption of perquisites or sub-optimal risk-taking activities (Hubbard and Palia 1995).

Managers of low-growth firms with high free cash flows (FCF) are especially more likely to opportunistically engage in value destroying activities, such as over-investments and misusing capitals (Jensen 1986). Moreover, a weak internal control system may motivate managers to engage in such activities more aggressively. High FCF may therefore, be an indicator, prompting auditors to further scrutinize any non-value-maximizing activities and are likely to be associated with an increase in the auditors' assessment of control risk and disclosures of ICW.

However, prior research shows that agency costs can be mitigated by debt monitoring (Jensen 1986). To explore how debt levels alleviate non-value-maximizing activities, we also examined the significance of the interaction of firms' FCF and debt ratios (FCF*DEBTRATIO).

We find that auditors are likely to report more ICWs for low-growth firms with high FCF when compared to high-growth firms having free cash flows. In addition, our results indicate that ICW problems are mitigated by increased debt monitoring in firms with high FCF. This indicates that auditors are less likely to note ICW for firms when high FCF are associated with high levels of debt.

Furthermore, our results provide evidence that there are increased risk implications for low-growth firms when high FCF is available.

Limitations

Any research of this type is subject to limitations on the generalizability of its results, and ours is no exception. Recent research shows plentiful evidence of the heavy cost of SOX 404 compliance (Ogneva, Subramanyam, and Raghunandan2007; Iliev2007). SOX compliance may result in improved internal control systems and, thus, decrease reported ICWs. On the other hand, the cost of high litigation risk (post-SOX) may prompt auditors to become even more conservative in ICW reporting (increasing reported ICWs). These possibilities suggest avenues for future research in the area.

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Table 1:   Sample Selection Process

Year	Pool	2004	2005
Initial ICW sample from *AuditAnalytics*	6,767	2,864	3,903
Less:Missing from matching *Compustat*	-930	-496	-434
ICW sample after matching *Compustat&AuditAnalytics*	5,837	2,368	3,469
Less: Foreign firms	-165	-67	-98
Less: Missing data	-2,030	-831	-1,199
Final Sample	3,642	1,470	2,172

Table 2: Descriptive Statistics

N = 3,642	ICW	Big4	LnAsset	Recasst	Loss	Fraud	NASD	Nyam	Resign	Tenure	PBank	Growth	DebtRatio	FCFBA	FCFBA* DebtRatio	Capital Expenditure
Mean	0.31	0.90	20.47	0.13	0.24	0.01	0.45	0.50	0.06	0.90	-1.54	0.19	1.30	0.06	0.09	0.04
Median	0.00	1.00	20.35	0.12	0.00	0.00	0.00	0.00	0.00	1.00	-1.57	0.13	0.93	0.08	0.07	0.00
Std. Deviation	1.18	0.30	1.60	0.09	0.43	0.09	0.50	0.50	0.24	0.30	1.45	0.24	1.20	0.12	0.15	0.06
Percentiles: 25	0.00	1.00	19.26	0.06	0.00	0.00	0.00	0.00	0.00	1.00	-2.61	0.04	0.41	0.03	0.02	0.00
Percentiles: 75	0.00	1.00	21.58	0.19	0.00	0.00	1.00	1.00	0.00	1.00	-0.59	0.27	1.73	0.13	0.15	0.10

The variables are defined as follows:

    ICW = Number of material ICW reported;

    BIG4 = 1 if the auditor is Big 4, and 0 otherwise;

    Ln ASSET = natural logarithm of total assets;

    RECASST = ratio of receivables to total assets;

    LOSS = 1 if net income is negative (net loss reported), and 0 otherwise;

    FRAUD = 1 if the firm is named in a fraud lawsuit in the sample period, else 0;

    NASD = 1 if the stock was traded in National Market System of NASDAQ, and 0 otherwise;

    NYAM = 1 if the stock was traded in NYSE or AMEX, and 0 otherwise;

    RESIGN = 1 if the auditor resigned, and 0 otherwise;

    TENURE = number of years the auditor has audited the client;

    PBANK = bankruptcy prediction using Zmuijewski's Z score model;

    GROWTH = the percentage of sales growth in the current year;

DEBTRATIO = book value of long term debt to total equity;

CAPITALEXP = Capital expenditure divided by total assets.

Experimental variable FCF is the measured by the following variable

    FCFBA = (INC – TAX – INTEXP – PREDIV – ORDIV) / BA

Where

    INC = the operating income before depreciation;

    TAX = the total taxes;

    INTEXP = the gross interest expenses on short and long term debt;

    PREDIV = the total dividend on preferred shares;

    ORDIV = the total dividend on ordinary shares;

    BA = the total assets in previous year;

    FCFBA* DEBTRATIO = the interaction between FCFBA and DEBTRATIO.

Table 3:   ICW and Capital Expenditure

Year	Pool		2004		2005	
ICW & Capital Expenditure	N	%	N	%	N	%
Capital Expenditure / Total Asset > 10%						
Report ICW	80	19%	40	24%	40	16%
Report No ICW	339	81%	128	76%	211	84%
Capital Expenditure / Total Asset < 10%						
Report ICW	412	13%	186	14%	226	12%
Report No ICW	2,811	87%	1,116	86%	1,695	88%
Total Sample	3,642		1,470		2,172	
Chi-Square test p-value	*0.001*		*0.002*		*0.065*	

Table 4:   Base Model

$ICW = \beta_0 + \beta_1 Big4 + \beta_2 LnASSET + \beta_3 RECASST + \beta_4 LOSS + \beta_5 FRAUD + \beta_6 NASD + \beta_7 NYAM$

$+ \beta_8 RESIGN + \beta_9 TENURE + \beta_{10} PBANK + \beta_{11} GROWTH + \beta_{12} DEBTRATIO + \beta_{13} FCFBA$

$+ \beta_{14} FCFBA*DEBTRATIO + \beta_{15} CAPITALEXP + \epsilon$

Dependent Variable: ICW	Predicted Sign	Coefficients	t	Sig.
(Constant)	?	0.78	2.23	*0.03*
Big4	?	-0.20	-2.55	*0.01*
LnAsset	?	-0.02	-1.47	*0.14*
Recasst	+	0.74	3.35	*0.00*
Loss	+	0.40	6.35	*0.00*
Fraud	+	0.08	0.37	*0.71*
NASD	?	0.00	-0.01	*0.99*
Nyam	?	0.03	0.31	*0.76*
Resign	+	0.58	6.79	*0.00*
Tenure	-	-0.07	-0.89	*0.37*
PBank	+	0.04	1.64	*0.10*
Growth	?	0.09	1.08	*0.28*
DebtRatio	+	0.05	2.00	*0.05*
FCFBA	+	0.42	1.90	*0.06*
FCFBA * DebtRatio	-	-0.40	-2.43	*0.01*
Capital Exp	+	0.38	1.12	*0.26*
Adj R^2		5.4%		
F		14.9		
N		3,642		

The variables are defined as in Table 2.

Table 5   Base Model Partitioned on Growth

ICW = β_0 + β_1Big4 + β_2 LnASSET + β_3 RECASST + β_4LOSS + β_5 FRAUD + β_6 NASD + β_7 NYAM

+ β_8 RESIGN + β_9TENURE + β_{10} PBANK + β_{11} GROWTH + β_{12} DEBTRATIO + β_{13} FCFBA

   + β_{14} FCFBA*DEBTRATIO + β_{15} CAPITALEXP + ϵ

Dependent Variable: ICW	Predicted Sign	Low-Growth Group Coefficients	t	Sig.	High-Growth Group Coefficients	t	Sig.
(Constant)	?	1.24	2.6	*0.01*	0.23	0.44	*0.66*
Big4	?	-0.24	-2.5	*0.01*	-0.14	-1.16	*0.25*
LnAsset	?	-0.05	-2.3	*0.02*	0.00	0.09	*0.93*
Recasst	+	0.18	0.6	*0.54*	1.37	4.13	*0.00*
Loss	+	0.51	5.6	*0.00*	0.30	3.31	*0.00*
Fraud	+	-0.06	-0.1	*0.88*	0.10	0.40	*0.69*
NASD	?	-0.04	-0.3	*0.76*	0.05	0.41	*0.68*
Nyam	?	0.02	0.1	*0.89*	0.06	0.42	*0.67*
Resign	+	0.49	4.3	*0.00*	0.68	5.23	*0.00*
Tenure	-	0.03	0.3	*0.75*	-0.17	-1.49	*0.14*
PBank	+	0.04	1.2	*0.22*	0.03	1.13	*0.26*
Growth	?	0.17	1.5	*0.13*	-0.01	-0.04	*0.97*
DebtRatio	+	0.07	1.9	*0.05*	0.03	0.98	*0.33*
FCFBA	+	0.98	3.3	*0.00*	-0.08	-0.24	*0.81*
FCFBA * DebtRatio	-	-0.48	-2.2	*0.03*	-0.34	-1.40	*0.16*
Capital Exp		0.17	0.4	*0.67*	0.69	1.20	*0.23*
Adj R^2		7%			6%		
F		9.24			7.26		
N		1,821			1,821		

The variables are defined as in Table 2.

Table 6:   Base Model Partitioned by Growth: Upper and Lower Quartiles

$ICW = \beta_0 + \beta_1 Big4 + \beta_2 LnASSET + \beta_3 RECASST + \beta_4 LOSS + \beta_5 FRAUD + \beta_6 NASD + \beta_7 NYAM$

$+ \beta_8 RESIGN + \beta_9 TENURE + \beta_{10} PBANK + \beta_{11} GROWTH + \beta_{12} DEBTRATIO + \beta_{13} FCFBA$

$+ \beta_{14} FCFBA*DEBTRATIO + \beta_{15} CAPITALEXP + \epsilon$

Panel A

Growth   Group: Lower   Growth Quartile

Dependent Variable: ICW	Predicted Sign	Coefficients	t	Sig.
(Constant)	?	1.05	1.34	*0.18*
Big4	?	-0.32	-2.03	***0.04***
LnAsset	?	-0.03	-0.76	*0.45*
Recasst	+	-0.08	-0.15	*0.88*
Loss	+	0.48	3.30	***0.00***
Fraud	+	0.10	0.19	*0.85*
NASD	?	0.00	0.02	*0.98*
Nyam	?	0.02	0.13	*0.90*
Resign	+	0.50	2.66	***0.01***
Tenure	-	0.11	0.72	*0.47*
PBank	+	0.10	1.82	***0.07***
Growth	?	-0.01	-0.03	*0.97*
DebtRatio	+	0.04	0.72	*0.47*
FCFBA	+	1.67	3.36	***0.00***
FCFBA * DebtRatio	-	-0.99	-2.78	***0.01***
CapitalExp	?	-0.20	-0.30	*0.76*
Adj R^2		5%		
F		3.93		
N		911		

Table 6:   Pooled Sample (continued)

Panel B

Growth   Group: Upper   Growth   Quartile

Dependent Variable: ICW	Predicted Sign	Coefficients	t	Sig.
(Constant)	?	0.64	0.86	*0.39*
Big4	?	-0.04	-0.22	*0.83*
LnAsset	?	-0.02	-0.57	*0.57*
Recasst	+	1.84	3.96	***0.00***
Loss	+	0.32	2.63	***0.01***
Fraud	+	-0.23	-0.62	*0.53*
NASD	?	-0.01	-0.03	*0.97*
Nyam	?	0.01	0.06	*0.95*
Resign	+	0.76	4.00	***0.00***
Tenure	-	-0.20	-1.22	*0.22*
PBank	+	0.05	1.12	*0.26*
Growth	?	-0.02	-0.08	*0.93*
DebtRatio	+	0.05	1.14	*0.26*
FCFBA	+	0.27	0.59	*0.55*
FCFBA * DebtRatio	-	-0.38	-1.25	*0.21*
CapitalExp	?	0.36	0.44	*0.66*
Adj R^2		6%		
F		4.67		
N		911		

The variables are defined as in Table 2.