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ABSTRACT

In this paper, we investigate whether refinancing pressure leads managers to manipulate earnings. Our tests examine the relation between changes in short-term debt and discretionary accruals. We find that firms have higher discretionary accruals during periods of increasing short-term debt. We also find that this relationship is stronger for firms that ultimately obtain new loan financing. Finally, we show that the presence of investment grade debt attenuates the relationship between discretionary accruals and refinancing pressure.

1. Introduction

Diamond (2004) shows that lenders avoid active enforcement of debt contracts when the costs outweigh the benefits of enforcement. Because lenders are more likely to monitor and enforce debt contracts when repayment or renegotiation is imminent, Diamond (2004) recommends that firms utilize short-term debt. Although increased lender monitoring may provide one benefit to various stakeholders of the firm, having significant debt coming due in the short term comes with inherent risks as well (Flannery 1986 and Diamond 1991). For example, firms may be denied debt renewal, may have to repay the debt before projects mature, may be subject to unfavorable new debt terms, or may have difficulty obtaining new financing. Ultimately, the positive effects of increased lender diligence may not be fully realized if potential refinancing pressure induces negative managerial behavior.

Our purpose in this paper is to explore whether managerial behavior is influenced by potential refinancing pressure. More specifically, we investigate the relation between discretionary accruals and both changes in short-term debt (i.e., debt coming due within one

year) and subsequent loan financing to determine whether potential refinancing pressure is associated with earnings management. In the existing literature, the ex-post influence of capital structure and the tendency to manage earnings prior to covenant violations have been explored. Additionally, there is evidence that firms manage earnings prior to seasoned equity issues and public debt issues. We attempt to bring together these different strands of literature to determine whether refinancing pressures that are more subtle than covenant violations encourage the manipulation of accruals and whether such manipulation varies according to the extent of short-term debt coming due, new financing obtained, and/or credit risk.

2. Background and Hypothesis Development

2.1 Background

Our paper is directly related to two major research areas. The first area involves the debt covenant hypothesis, which focuses on the accounting choices made by firms that are close to their debt covenant limits (Watts and Zimmerman 1990). A second area involves studies that examine earnings management associated with security issuance. We combine these areas and examine whether firms with the *potential* for refinancing pressure are likely to manage earnings. In the spirit of Roberts and Sufi (2009), we also suggest that firms may be tempted to manage earnings when debt is coming due because they perceive that there could be negative consequences associated with appearing unattractive if they need to refinance.

2.2 Hypothesis Development

Kim and Park (2005), Cohen and Zarowin (2010), Teoh et al. (1998), and Liu et al. (2010) identify the existence of earnings management leading up to seasoned equity issues and public debt issues. The design that we employ in this paper allows us to investigate whether such misbehavior exists only in cases where new debt financing actually occurs or whether the

existence of *potential refinancing pressure* – as evidenced by increases in debt in current liabilities – is sufficient to alter managerial behavior. We also define "debt financing" as new bank loan financing rather than public debt issuance, such that our results are generalizable to a much larger cross-section of firms. Overall, our contention is that the potential refinancing pressures associated with increases in short-term debt combined with the negative consequences associated with alienating creditors may be sufficient to cause managers to manipulate earnings.

H1: The change in debt in current liabilities is positively associated with discretionary accruals.

H2: The relationship between changes in debt in current liabilities and discretionary accruals is stronger in advance of new loan financing.

Previous research finds that riskier firms face greater obstacles to financing (e.g., Harris and Raviv 1991, Leland 1998). Although we expect that refinancing pressures will affect discretionary accruals (H1), we expect that the relationship will be attenuated for firms with better credit. That is, less risky firms may feel less compelled to manipulate earnings when they experience refinancing pressure.

H3: The relationship between changes in debt in current liabilities and discretionary accruals is attenuated by the presence of investment-grade debt.

3. Data

3.1 Data Selection

We begin sample construction by selecting all firms with positive total assets from Compustat between 1996 and 2012. For firms to remain in the sample they must have accounting data available on Compustat, returns data available from CRSP, and governance data available from Execucomp, RiskMetrics, and Thomson-Reuters Institutional 13-F filings. After deleting financial firms and firm-year observations with missing data on requisite variables, our final

sample consists of 10,325 firm-year observations. In our baseline analysis, we use the Dechow et al. (1995) modifications to the Jones (1991) accruals model and estimate our models for each of the Fama-French 48-industry groups. Each firm's discretionary accrual is defined as total accruals minus non-discretionary accruals.

3.2 Empirical Model

Our study focuses on discretionary accruals as they relate to changes in firms' debt in current liabilities. The initial model that we employ is as follows (see Appendix A for variable definitions), with standard errors corrected for heteroskedasticity and within-firm clusters:

$$DACC = ß_0 + ß_1 ROA + ß_2 CFO + ß_3 CFO\_VOL + ß_4 SALES\_VOL + ß_5 SALES\_GROWTH + ß_6 STDEBT + ß_7 LTDEBT + ß_8 M\&A + ß_9 PPE + ß_{10} LogTA + ß_{11} LogTA^2 + ß_{12} Z\text{-}score + ß_{13} LogMTB + ß_{14} RET\_ADJ + ß_{15} RET\_VOL + ß_{16} CEO\_CHAIR + ß_{17} BOARDSIZE + ß_{18} INSTOWN + ß_{19} IND\_DIR + ß_{20} BIGAUD + ß_{21} INVGRADE + ß_{22} Chg\_STDEBT + ß_{23} NEWLOAN + ß_{24} NEWLOAN*Chg\_STDEBT + ß_{25} INVGRADE*Chg\_STDEBT + ß_{26} INVGRADE*NEWLOAN + Year\ and\ Firm\ Fixed\ Effects$$

We include an extensive set of control variables based on a large body of previous research.[1] Regarding our test variables, our first hypothesis requires a measure of short-term debt. The prime factor motivating the management of accruals in our context is the minimization of refinancing pressure resulting from the potential inability to renew debt or to replace debt that is coming due in the very near future. As such, we use *Chg_STDEBT* (percent change in debt in current liabilities from year t-1 to year t) to test H1. If our prediction in H1 is correct, the coefficient for *Chg_STDEBT* should be positive.

In H2, we predict that the relationship between the change in short-term debt and discretionary accruals will be stronger for firms that successfully obtain new loan financing. We use the DealScan database to identify firms that initiate a new bank loan agreement (*NEWLOAN*)

[1] See, for example, Ali and Zhang (2015), Dechow and Dichev (2002), Francis, LaFond, Olsson, and Schipper (2004), Givoly and Hayn (2000).

in the year following the year in which the change in short-term debt is measured. If there is a tendency for firms to manage earnings when they seek new financing regardless of refinancing pressure, the coefficient for *NEWLOAN* should be positive. However, our prediction for H2 is that the coefficient for *NEWLOAN * Chg_STDEBT* will be positive, indicating that when refinancing pressure is higher, firms securing new financing are more likely to manage earnings.

In H3, we suggest that the relationship between refinancing pressure and discretionary accruals will be affected by the credit-worthiness of the firm. We use a binary variable (*INVGRADE*) to identify firms that have S&P ratings of BBB or higher. Firms without S&P debt ratings or with ratings below BBB are classified as non-investment grade. If our prediction in H3 is correct, the coefficient for *INVGRADE*Chg_STDEBT* should be negative.

3.3 Summary Statistics

Table 1 reports summary statistics for the full sample period and also for various partitions, including the years 2007-2009 which are intended to approximate the Global Financial Crisis (GFC). On average, discretionary accruals are -1.1% of firms' assets. Our sample firms have roughly 51% long-term debt and 4% debt in current liabilities, both measured relative to total assets. Approximately 43% of the firms have investment grade debt, and 41% initiate new bank loan agreements in the year following the year in which the change in short-term debt is measured. The average percentage change in short-term debt is 316%, but the median change is 0%. The most noteworthy trends across the sample period are that changes in short-term debt increased significantly beginning with the GFC, at which point there was also a significant decrease in the number of new loans granted. To the extent that this combination of circumstances increased the pressure that firms felt when short-term obligations were coming due, it may be reasonable to expect different relationships across the pre- and post-GFC periods.

4. Results and Discussion

4.1 Initial Multivariate Tests

Table 2 presents our multivariate analysis. The results across our control variables are consistent with previous research (e.g., Ali and Zhang 2015, Becker et al. 1988, and others). With respect to our test variables, Table 2 illustrates that changes in short-term debt (*Chg_STDEBT*) are significantly positively correlated ($p<0.01$) with discretionary accruals. As such, while the negative coefficient for *STDEBT* supports the idea that lender monitoring may help to constrain discretionary accruals, the potential refinancing pressures that are associated with significant *changes* in short-term debt appear to encourage firms to manage earnings (H1).

Hypothesis 2 predicts that the relationship between changes in short-term debt and discretionary accruals will be stronger for firms that subsequently secure new loans. Table 2 shows that the coefficient for *NEWLOAN * Chg_STDEBT* is positive and significant ($p<0.07$). Thus, consistent with H2, the greater the potential refinancing pressure, the more likely firms are to manage earnings prior to obtaining new financing. Our final hypothesis predicts that the relation between accruals and changes in short-term debt will be influenced by a firm's credit risk. The interaction between *INVGRADE* and *Chg_STDEBT* is negative and statistically significant ($p<0.01$). This finding suggests that managers of firms that are experiencing refinancing pressure are less likely to manage earnings if their credit risk is lower, consistent with the prediction of H3.

Table 2 also presents an expanded model that partitions the original *Chg_STDEBT* variable into a variable that includes positive changes in short-term debt and a variable that includes negative changes in short-term debt. In this expanded specification, the coefficients for *Pos_Chg_STDEBT* and *Neg_Chg_STDEBT* are both positive and significant ($p<0.01$), revealing

that refinancing pressure leads to increases in accruals, while refinancing slack (i.e., the opposite of refinancing pressure) leads to decreases in accruals. The latter finding could be indicative of managers using the flexibility afforded by periods of *decreasing* debt in current liabilities to build "cookie jar" reserves that can be reversed in future periods when higher earnings are desired. Overall, the findings related to directional changes in short-term debt offer additional, more detailed support for H1.

When we interact the directional change variables with *NEWLOAN*, only the *Pos_Chg_STDEBT* interaction is significant (p=0.036). This finding, which is consistent with H2, indicates that the relationship between new financing and earnings management is driven by the subset of firms that have debt coming due (i.e., firms that have refinancing pressure as reflected in positive changes in short-term debt). Finally, the negative and significant (p=0.007) coefficient for *INVGRADE * Pos_Chg_STDEBT* reveals that the presence of investment grade debt decreases earnings management activity when short-term debt is increasing. This finding, which is consistent with the prediction of H3, suggests that firms with investment grade debt feel less compelled to manage earnings when they have debt coming due, presumably because they have built a strong reputation in credit markets.

4.2 Additional Tests

Table 3 presents summary results from several supplementary tests of our baseline model. In our first tests (Panels A and B), we estimate separate models for 1996-2006 and 2007-2012 in order to investigate the impact of the GFC on our analysis. The results across periods are similar, with the most notable difference being that in the 2007-2012 period we do not find support for H3. Thus, in the relatively tight credit era that existed during and after the GFC,

investment grade firms seem to have managed their discretionary accruals similarly to non-investment grade firms when they were faced with potential refinancing pressure.

Our next tests (Panels C and D) partition the sample based on above- and below-median Z-score. In these models, H1 and H3 are supported for high Z-score firms and H2 is supported for low Z-score firms. One interpretation of the latter result is that because distressed firms have less flexibility in their accounting choices, they are likely to manage accruals only when they are certain that they will need new financing. For low distress firms with more flexibility, however, the uncertainty brought about by refinancing pressure is sufficient to encourage earnings management regardless of whether new financing is obtained. The findings associated with H3 in these models suggest that the presence of investment grade debt only attenuates the relationship between changes in short-term debt and discretionary accruals for less distressed firms. More distressed firms are more likely to manage earnings in response to refinancing pressure even if they have high credit ratings.

In Panels E and F we present tests aimed at reducing endogeneity concerns. To eliminate effects potentially related to initial bond ratings (Demirtas and Cornaggia 2013), we remove all observations representing years t-1 and t relative to the first year that a firm has a bond rating on COMPUSTAT. Alternatively, to address potential concerns related to firms' inherent debt maturity structures (Almeida et al. 2011), we replace *NEWLOAN* with a predicted value generated from a first-stage model that employs an instrumental variable defined as the relative amount of long-term debt maturing in year t+1. In both cases we continue to find support for H1, H2, and H3. Finally, in Panel G, we re-estimate our models using performance-adjusted discretionary accruals calculated using the method of Kothari et al. (2005).[2] We find support for

[2] Our measure employs equation (6) from Kothari et al. (2005), with observations matched on current year ROA.

all three hypotheses, although the support for H3 is weaker than in the baseline specification (p=0.081 versus p=0.004).

5. Conclusion

Firms face potential refinancing pressure when debt is maturing and when managers perceive that there may be obstacles to obtaining or renewing the debt once it comes due. To enhance the possibility of debt contract renewal or of obtaining new financing, firms have incentives to project an image of strong financial health. Using a sample of firms from 1996–2012, we present evidence that firms are more likely to have high discretionary accruals when they have increases in short-term debt, implying that accruals management may be taking place in anticipation of debt refinancing. We find that this relation is strongest when new financing occurs in the presence of greater refinancing pressure (i.e., positive changes in short-term debt). We also find that the tendency to increase discretionary accruals in response to refinancing pressure is attenuated by the presence of investment grade debt, although in post-Global Financial Crisis years this attenuation for investment grade firms disappears.

The evidence presented in this study adds to a relatively new area in the finance literature involving the effects of debt maturity structure on earnings management. Although the enhanced lender monitoring and enforcement associated with short-term debt has been touted by finance researchers as desirable, our study shows that increases in short-term debt may induce a short-run negative incentive for firms to manage earnings. Future researchers in this area may wish to investigate the long-run ramifications of these managerial actions.

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Appendix A
Variable Definitions

Variable Name	Variable Definition
DACC	Discretionary accruals estimated using the method of Dechow et al. (1995)
ROA	Net income as percentage of total assets (Compustat (NI/AT))
CFO	Operating cash flow as percentage of total assets (Compustat OANCF/AT)
CFO_VOL	Standard deviation of CFO over the prior five years with a minimum of 3 years ((standard deviation of Compustat OANCF)/AT)
SALES_VOL	Standard deviation of sales over the prior five years with a minimum of 3 years ((standard deviation of Compustat SALE)/AT)
SALES_GROWTH	Average sales growth over the prior three years
STDEBT	Percentage of short-term debt, defined as debt in current liabilities relative to total assets at year t-1 (Compustat (DLC/AT))
LTDEBT	Percentage of long-term total debt relative to total assets at year t-1 (Compustat (LT – DLC)/AT)
M&A	=1 if the firm is involved in a merger or acquisition in the prior three years (Compustat SALE_FN); =0 otherwise
PPE	Tangible assets (Property, Plant, and Equipment) as a percentage of total assets (Compustat PPENT/AT)
TA	Total assets (Compustat AT), measured in $millions
LogTA	Log of *TA*
$LogTA^2$	(*LogTA)* squared
Z-Score	Altman Z-Score = Compustat (1.2*((ACT-LCT)/AT)+1.4*(RE/AT) + 3.3*((PI+XINT)/AT) +.6*((PRCC_F*CSHO)/(DLTT+DLC)) +1*(SALE/AT))
MTB	Market-to-Book ratio (Compustat(CSHO*PRCC_F)/(AT - LT))
LogMTB	Log of *MTB*
RET_ADJ	Average monthly market adjusted stock returns in year t-1
RET_VOL	Standard deviation of monthly market adjusted stock returns in year t-1
CEO_CHAIR	=1 if the CEO is also the chairman of the board; = 0 otherwise
BOARDSIZE	Logarithm of the number of directors on the board
INSTOWN	Aggregate percentage of shares held by top five institutional investors of the company
IND_DIR	Percentage of independent directors on the board
BIGAUD	=1 if firm is a Big 4/5/6 audit client (depending on time period); =0 otherwise
INVGRADE	=1 if S&P rating is BBB or above; =0 if S&P rating is below BBB or unavailable (Compustat SPLTICRM)
Chg_STDEBT	Change in *STDEBT* from year t-1 to year t /*STDEBT* in year t-1
NEWLOAN	=1 if firm enters into a new bank loan agreement in year t+1, as identified by the Loan Data Corporation *Dealscan* database; =0 otherwise

Table 1
Summary Statistics

	All Years (N=10,325)		1996-2001 (N=3,332)		2002-2006 (N=3,073)		2007-2009 (N=1,954)		2010-2012 (N=1,966)	
Variable	**Mean**	**Median**	**Mean**	**Median**	**Mean**	**Median**	**Mean**	**Median**	**Mean**	**Median**
DACC	-0.011	-0.011	-0.016	-0.014	-0.008	-0.008	-0.014	-0.013	-0.005	-0.007
ROA	0.050	0.053	0.045	0.050	0.050	0.051	0.048	0.053	0.060	0.055
CFO	0.114	0.107	0.111	0.107	0.113	0.105	0.119	0.112	0.112	0.104
CFO_VOL	0.038	0.028	0.042	0.031	0.036	0.027	0.035	0.025	0.034	0.024
SALES_VOL	0.141	0.103	0.146	0.106	0.150	0.108	0.124	0.092	0.138	0.103
SALES_GROWTH	0.134	0.087	0.179	0.113	0.119	0.083	0.144	0.105	0.063	0.039
STDEBT	0.037	0.018	0.043	0.023	0.035	0.017	0.037	0.015	0.029	0.013
LTDEBT	0.507	0.516	0.504	0.517	0.503	0.512	0.511	0.516	0.512	0.518
M&A	0.001	0	0.003	0	0.001	0	0.000	0	0.000	0
PPE	0.318	0.258	0.354	0.308	0.306	0.250	0.303	0.226	0.291	0.207
TA	7433.597	2016.513	4381.979	1207.521	6819.601	1782.373	9657.865	2505.859	11514.75	2993.73
LogTA	7.674	7.529	7.265	7.096	7.640	7.485	7.964	7.826	8.131	8.004
LogTA^2	60.838	56.695	54.744	50.357	60.267	56.035	65.154	61.252	67.673	64.068
Z-Score	15.61	3.71	14.29	3.44	17.43	4.04	14.36	3.56	16.20	3.86
MTB	3.076	2.216	4.057	2.311	5.041	2.321	3.137	2.061	3.077	2.096
LogMTB	0.865	0.796	0.912	0.837	0.905	0.842	0.776	0.723	0.812	0.740
RET_ADJ	0.043	0.024	0.010	-0.020	0.077	0.047	0.040	0.031	0.060	0.021
RET_VOL	0.113	0.102	0.115	0.103	0.121	0.107	0.097	0.090	0.116	0.108
CEO_CHAIR	0.632	1	0.691	1	0.644	1	0.575	1	0.581	1
BOARDSIZE	2.226	2.197	2.220	2.197	2.220	2.197	2.235	2.197	2.223	2.197
INSTOWN (%)	27.853	27.383	24.048	23.664	28.299	27.648	30.983	30.202	29.210	28.631
IND_DIR	0.726	0.750	0.627	0.667	0.726	0.750	0.791	0.818	0.806	0.833
BIGAUD	0.971	1	0.980	1	0.978	1	0.957	1	0.958	1
INVGRADE	0.429	0	0.442	0	0.421	0	0.420	0	0.426	0
Chg_STDEBT	3.158	0	2.610	0.025	3.042	-0.010	3.555	-0.008	3.874	0
NEWLOAN	0.408	0	0.459	0	0.516	0	0.284	0	0.275	0

All continuous variables are Winsorized at the 1st and the 99th percentiles. See Appendix A for variable definitions and units of measurement.

Table 2
Multivariate Refinancing Pressure Models

Dependent Variable: Discretionary Accruals

Variable	Exp. Sign	Coefficient	p-value	Coefficient	p-value
Intercept	+	0.2630***	0.001	0.2693***	0.001
ROA	+	0.2052***	0.001	0.2043***	0.001
CFO	-	-0.4259***	0.001	-0.4237***	0.001
CFO_VOL	?	-0.0109	0.769	-0.0115	0.756
SALES_VOL	?	-0.0057	0.527	-0.0045	0.613
SALES_GROWTH	+	0.0027	0.475	0.0027	0.489
STDEBT	-	-0.1234***	0.001	-0.0939***	0.001
LTDEBT	-	-0.0601***	0.001	-0.0596***	0.001
M&A	?	0.0003	0.853	0.0002	0.900
PPE	?	-0.0047	0.770	-0.0041	0.795
LogTA	-	-0.0311***	0.001	-0.0322***	0.001
$LogTA^2$	?	0.0007	0.215	0.0008	0.174
Z-Score	?	-0.0003	0.341	-0.0002	0.626
LogMTB	+	0.0073***	0.003	0.0070***	0.004
RET_ADJ	+	0.0112***	0.001	0.0109***	0.001
RET_VOL	?	-0.1305***	0.001	-0.1260***	0.001
CEO_CHAIR	+	0.0049**	0.012	0.0048**	0.014
BOARDSIZE	+	0.0018***	0.001	0.0018***	0.001
INSTOWN	-	-0.0002*	0.082	-0.0002*	0.079
IND_DIR	-	-0.0025	0.746	-0.0025	0.748
BIGAUD	+	0.0096	0.218	0.0096	0.213
INVGRADE	?	0.0027	0.467	0.0023	0.529
Test Variables:					
Chg_STDEBT **(H1)**	+	0.0003***	0.001		
Pos_Chg_STDEBT **(H1)**	+			0.0002***	0.008
Neg_Chg_STDEBT **(H1)**	+			0.0087***	0.003
NEWLOAN	+	-0.0010	0.621	0.0009	0.677
*NEWLOAN*Chg_STDEBT* **(H2)**	+	0.0002*	0.071		
*NEWLOAN*Pos_Chg_STDEBT* **(H2)**	+			0.0083***	0.036
*NEWLOAN*Neg_Chg_STDEBT* **(H2)**	?			0.0002	0.151
*INVGRADE*Chg_STDEBT* **(H3)**	-	-0.0003***	0.004		
*INVGRADE*Pos_Chg_STDEBT* **(H3)**	-			-0.0003***	0.007
*INVGRADE*Neg_Chg_STDEBT* **(H3)**	?			-0.0019	0.624
*INVGRADE*NEWLOAN*	-	0.0013	0.618	0.0013	0.608
Adjusted R^2		0.1622		0.1654	

***, **, and * indicate p<0.01, 0.05, and 0.10, respectively (two-tailed).

The total number of observations included in these models is 10,325. All continuous variables are Winsorized at the 1st and the 99th percentiles. All models include firm and year fixed-effects. All p-values are adjusted for heteroscedasticity and within-firm clustering.

Table 3
Multivariate Refinancing Pressure Models: Sensitivity Tests

Panel A: Models estimated for 1996-2006

Variable	Expected Sign	Coefficient	p-value
Chg_STDEBT **(H1)**	+	0.0004***	0.004
*NEWLOAN*Chg_STDEBT* **(H2)**	+	0.0001	0.652
*INVGRADE*Chg_STDEBT* **(H3)**	-	-0.0003**	0.025

Panel B: Models estimated for 2007-2012

Chg_STDEBT **(H1)**	+	0.0002*	0.071
*NEWLOAN*Chg_STDEBT* **(H2)**	+	0.0003**	0.036
*INVGRADE*Chg_STDEBT* **(H3)**	-	-0.0001	0.492

Panel C: Below-median Z-score firms

Chg_STDEBT **(H1)**	+	0.0001	0.734
*NEWLOAN*Chg_STDEBT* **(H2)**	+	0.0003**	0.046
*INVGRADE*Chg_STDEBT* **(H3)**	-	0.0001	0.911

Panel D: Above-median Z-score firms

Chg_STDEBT **(H1)**	+	0.0002***	0.005
*NEWLOAN*Chg_STDEBT* **(H2)**	+	0.0001	0.893
*INVGRADE*Chg_STDEBT* **(H3)**	-	-0.0003***	0.002

Panel E: Years t-1 and t relative to initial bond ratings removed

Chg_STDEBT **(H1)**	+	0.0003***	0.001
*NEWLOAN*Chg_STDEBT* **(H2)**	+	0.0002**	0.041
*INVGRADE*Chg_STDEBT* **(H3)**	-	-0.0003***	0.003

Panel F: Instrumental variable approach based on Almeida et al. (2012)

Chg_STDEBT **(H1)**	+	0.0003**	0.030
*NEWLOAN*Chg_STDEBT* **(H2)**	+	0.0056**	0.036
*INVGRADE*Chg_STDEBT* **(H3)**	-	-0.0002**	0.044

Panel G: Performance-matched discretionary accruals - Kothari et al. (2015)

Chg_STDEBT **(H1)**	+	0.0002***	0.004
*NEWLOAN*Chg_STDEBT* **(H2)**	+	0.0001*	0.093
*INVGRADE*Chg_STDEBT* **(H3)**	-	-0.0001*	0.081

***, **, and * indicate p<0.01, 0.05, and 0.10, respectively (two-tailed).