

**Internet Appendix for  
“The Interdependent and Intertemporal Nature of Financial Decisions: An Application to  
Cash Flow Sensitivities”\***

This appendix contains additional tables for the published article. Table IA.I presents the full-model estimates for Table V of the published article, which uses levels of the financial variables. Table IA.II presents the full-model estimates for Table VIII of the published article using first differences of variables. Table IA.III excludes all missing Compustat data and presents the full-model estimates of equation (10) subject to the constraints in equation (11) using levels (Panel A) and first differences (Panel B). Table IA.IV allows for industry fixed effects and presents the model estimates of equation (10) subject to the constraints in equation (11) using levels (Panel A) and first differences (Panel B). Table IA.V uses I/B/E/S forecasts of earnings per share to construct a measure of expected cash flows. The table uses this new variable of expected cash flows to estimate equation (10) subject to the constraints in equation (11) using levels (Panel A) and first differences (Panel B). Table IA.VI examines the effects of financial constraints on the estimates using Cleary’s (1999) discriminant analysis method for categorizing firm-years as financially unconstrained, partially constrained, or constrained. Table IA.VII uses the levels of the financial variables and allows for separate effects of positive and negative cash flow shocks.

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**Table IA.I****Full-model Estimates for Table V of the Paper**

The table presents the full-model coefficient estimates of all models discussed in Table V. The sample has 237,412 firm-year observations between 1952 and 2007. As explanatory variables, model (1) uses cash flow, model (2) uses cash flow and own lagged dependent variable, model (3) uses cash flow and all lagged dependent variables, and model (4) extends model (3) by including the “sources of funds equal uses of funds” identity. Each regression also controls for firm size and market-to-book. The  $p$ -values of the estimates are reported in parentheses and control for firm-level clustering (21,778 clusters) using Rogers’ (1983, 1993) method. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels.

Panel A: Estimates for Model (1) of Table V of the Published Paper

	Capital Expenditures <sub>t</sub>	Acquisitions <sub>t</sub>	Asset Sales <sub>t</sub>	Equity Issues <sub>t</sub>	Share Repurchases <sub>t</sub>	Dividends <sub>t</sub>	Δ Long-term Debt <sub>t</sub>	Δ Short-term Debt <sub>t</sub>	Δ Cash Balances <sub>t</sub>
Cash Flow <sub>t</sub>	0.4712*** (0.0001)	0.0584*** (0.0001)	0.0334*** (0.0006)	0.0320*** (0.0001)	0.1168*** (0.0001)	0.1425*** (0.0001)	0.0020 (0.9761)	-0.0647 (0.1565)	0.0457*** (0.0001)
Size	22.7397*** (0.0001)	4.3396*** (0.0001)	0.6794* (0.0768)	2.0978*** (0.0001)	-0.5873 (0.6627)	1.3068 (0.2319)	11.2600*** (0.0050)	7.2458*** (0.0126)	0.7465 (0.1537)
Market-to-Book	-6.1408*** (0.0001)	-1.3760*** (0.0001)	-1.0413*** (0.0001)	0.6873*** (0.0001)	1.8594*** (0.0001)	-0.5410 (0.1988)	-1.9506*** (0.0002)	-0.1627 (0.6158)	1.0808*** (0.0001)

Panel B: Estimates for Model (2) of Table V of the Published Paper

	Capital Expenditures <sub>t</sub>	Acquisitions <sub>t</sub>	Asset Sales <sub>t</sub>	Equity Issues <sub>t</sub>	Share Repurchases <sub>t</sub>	Dividends <sub>t</sub>	Δ Long-term Debt <sub>t</sub>	Δ Short-term Debt <sub>t</sub>	Δ Cash Balances <sub>t</sub>
Cash Flow <sub>t</sub>	0.0835* (0.0686)	0.0486*** (0.0001)	0.0017 (0.6845)	0.0247*** (0.0001)	0.0418*** (0.0001)	0.0482*** (0.0344)	-0.0186 (0.7941)	-0.0623 (0.1853)	0.0495*** (0.0001)
Capital Expenditures <sub>t-1</sub>	0.8739*** (0.0001)								
Acquisitions <sub>t-1</sub>		0.1809*** (0.0089)							
Asset Sales <sub>t-1</sub>			0.8391*** (0.0001)						
Equity Issues <sub>t-1</sub>				0.2632*** (0.0001)					
Share Repurchases <sub>t-1</sub>					0.8475*** (0.0001)				
Dividends <sub>t-1</sub>						0.7501*** (0.0001)			
Δ Long-term Debt <sub>t-1</sub>							0.1632*** (0.0028)		
Δ Short-term Debt <sub>t-1</sub>								-0.0553 (0.3568)	
Δ Cash Balances <sub>t-1</sub>									-0.1122*** (0.0037)
Size	4.4941*** (0.0089)	3.6372*** (0.0001)	0.4291 (0.1496)	1.5488*** (0.0001)	-0.4729 (0.3316)	0.3364 (0.3790)	10.7124** (0.0141)	7.2560** (0.0109)	0.9185* (0.0932)
Market-to-Book	-0.2922 (0.6554)	-1.1046*** (0.0004)	-0.1758*** (0.0001)	0.6828*** (0.0001)	0.7115*** (0.0002)	-0.0888 (0.4785)	-1.4827*** (0.0009)	-0.1909 (0.5662)	1.1544*** (0.0001)

Panel C: Estimates for Model (3) of Table V of the Published Paper

	Capital Expenditures <sub>t</sub>	Acquisitions <sub>t</sub>	Asset Sales <sub>t</sub>	Equity Issues <sub>t</sub>	Share Repurchases <sub>t</sub>	Dividends <sub>t</sub>	Δ Long-term Debt <sub>t</sub>	Δ Short-term Debt <sub>t</sub>	Δ Cash Balances <sub>t</sub>
Cash Flow <sub>t</sub>	0.0636 (0.1275)	-0.0016 (0.9029)	-0.0126 (0.1055)	0.0079 (0.1385)	0.0352*** (0.0025)	0.0328** (0.0205)	-0.2011 (0.1335)	-0.2179*** (0.0161)	0.0639*** (0.0028)
Capital Expenditures <sub>t-1</sub>	0.8707*** (0.0001)	-0.0108 (0.4970)	0.0296*** (0.0020)	0.0123 (0.3744)	-0.0402*** (0.0008)	0.0252 (0.1295)	0.1874* (0.0608)	0.1772** (0.0198)	-0.0074 (0.7346)
Acquisitions <sub>t-1</sub>	0.0206 (0.3330)	0.1492*** (0.0005)	0.0051 (0.3161)	0.0152 (0.1884)	0.0160 (0.1608)	0.0271 (0.1472)	0.0598 (0.3632)	-0.0204 (0.3152)	0.0078 (0.6402)
Asset Sales <sub>t-1</sub>	0.0663 (0.6187)	0.1326 (0.2677)	0.7858*** (0.0001)	-0.0072 (0.7813)	0.0692** (0.0121)	-0.0353 (0.3441)	0.3127 (0.4003)	-0.0249 (0.8972)	0.1075*** (0.0004)
Equity Issues <sub>t-1</sub>	-0.3373 (0.2136)	0.0120 (0.7234)	-0.0174 (0.1247)	0.2274*** (0.0005)	0.0590 (0.1413)	-0.0203 (0.1493)	-0.2035 (0.1488)	-0.1429 (0.2609)	0.0132 (0.8114)
Share Repurchases <sub>t-1</sub>	0.0128 (0.6468)	0.0811* (0.0690)	0.0150 (0.1368)	0.0422 (0.1195)	0.7960*** (0.0001)	0.0686** (0.0435)	0.2780*** (0.0077)	0.2344*** (0.0006)	-0.0293 (0.4670)
Dividends <sub>t-1</sub>	0.1520** (0.0424)	0.3222*** (0.0053)	0.0054 (0.7511)	0.0564** (0.0303)	0.1969*** (0.0013)	0.7198*** (0.0001)	0.5292** (0.0439)	0.3828** (0.0071)	-0.1074** (0.0369)
Δ Long-term Debt <sub>t-1</sub>	0.0266* (0.0602)	0.0074 (0.6161)	0.0096*** (0.0001)	0.0055 (0.2665)	-0.0205* (0.0538)	-0.0060 (0.3353)	0.1039*** (0.0056)	0.1075*** (0.0001)	0.0125* (0.0670)
Δ Short-term Debt <sub>t-1</sub>	0.0348** (0.0112)	0.0117 (0.1195)	0.0121*** (0.0046)	0.0032 (0.5567)	0.0019 (0.8311)	-0.0018 (0.6881)	0.1212* (0.0130)	-0.1229*** (0.0030)	-0.0274* (0.0550)
Δ Cash Balances <sub>t-1</sub>	0.0576** (0.0115)	0.0642** (0.0148)	-0.0124** (0.0457)	0.0023 (0.8313)	0.0494* (0.0850)	0.0925 (0.1570)	0.0308 (0.7715)	0.1042* (0.0829)	-0.1218*** (0.0018)
Size	4.7849** (0.0145)	3.3897*** (0.0001)	-0.1770 (0.3974)	1.2197*** (0.0052)	-0.1079 (0.7762)	-0.3154 (0.3754)	6.3809*** (0.0067)	2.9694** (0.0222)	1.0953** (0.0113)
Market-to-Book	-0.0778 (0.8759)	-1.0182*** (0.0003)	-0.0001 (0.9990)	0.7739*** (0.0001)	0.6351*** (0.0006)	-0.1054 (0.4713)	0.0012 (0.9988)	1.0598* (0.0756)	1.2305*** (0.0001)

Panel D: Estimates for Model (4) of Table V of the Published Paper

	Capital Expenditures <sub>t</sub>	Acquisitions <sub>t</sub>	Asset Sales <sub>t</sub>	Equity Issues <sub>t</sub>	Share Repurchases <sub>t</sub>	Dividends <sub>t</sub>	Δ Long-term Debt <sub>t</sub>	Δ Short-term Debt <sub>t</sub>	Δ Cash Balances <sub>t</sub>
Cash Flow <sub>t</sub>	0.0893** (0.0396)	0.0523 (0.1007)	-0.0151* (0.0531)	0.0015 (0.8041)	0.0458*** (0.0014)	0.0390** (0.0110)	-0.3693*** (0.0001)	-0.2988*** (0.0001)	0.0919*** (0.0013)
Capital Expenditures <sub>t-1</sub>	0.8418*** (0.0001)	-0.0716** (0.0169)	0.0325*** (0.0008)	0.0196 (0.1663)	-0.0522*** (0.0003)	0.0182 (0.2782)	0.3769*** (0.0001)	0.2684*** (0.0001)	-0.0389 (0.1636)
Acquisitions <sub>t-1</sub>	0.0098 (0.6222)	0.1265*** (0.0005)	0.0061 (0.2554)	0.0179 (0.1378)	0.0115 (0.2836)	0.0245 (0.1725)	0.1307** (0.0129)	0.0137 (0.6688)	-0.0040 (0.8013)
Asset Sales <sub>t-1</sub>	0.1151 (0.3702)	0.2349* (0.0570)	0.7810*** (0.0001)	-0.0195 (0.4776)	0.0894*** (0.0029)	-0.0235 (0.5337)	-0.0065 (0.9792)	-0.1786 (0.3088)	0.1606*** (0.0005)
Equity Issues <sub>t-1</sub>	-0.3281 (0.1827)	0.0313 (0.6045)	-0.0183 (0.1284)	0.2251*** (0.0006)	0.0628 (0.1208)	-0.0181 (0.2363)	-0.2638 (0.1154)	-0.1719 (0.1945)	0.0232 (0.6964)
Share Repurchases <sub>t-1</sub>	-0.0113 (0.7126)	0.0304 (0.5066)	0.0174* (0.0811)	0.0483 (0.0731)	0.7860*** (0.0001)	0.0627* (0.0626)	0.4361*** (0.0001)	0.3105*** (0.0001)	-0.0556 (0.1840)
Dividends <sub>t-1</sub>	0.1312* (0.0739)	0.2786** (0.0133)	0.0074 (0.6641)	0.0616** (0.0210)	0.1883*** (0.0023)	0.7148*** (0.0001)	0.6654*** (0.0002)	0.4483*** (0.0005)	-0.1300** (0.0183)
Δ Long-term Debt <sub>t-1</sub>	0.0404 (0.0004)	0.0365 (0.1704)	0.0082*** (0.0004)	0.0020 (0.6491)	-0.0148 (0.1342)	-0.0027 (0.6930)	0.0131 (0.7854)	0.0638 (0.1075)	0.0276** (0.0323)
Δ Short-term Debt <sub>t-1</sub>	0.0345*** (0.0044)	0.0109 (0.5193)	0.0121*** (0.0078)	0.0033 (0.5416)	0.0018 (0.8357)	-0.0019 (0.6868)	0.1237*** (0.0047)	-0.1217*** (0.0033)	-0.0278* (0.0842)
Δ Cash Balances <sub>t-1</sub>	0.0565** (0.0179)	0.0618** (0.0367)	-0.0122* (0.0567)	0.0026 (0.8129)	0.0489* (0.0821)	0.0922 (0.1496)	0.0383 (0.5964)	0.1078** (0.0418)	-0.1231*** (0.0009)
Size	4.8887*** (0.0063)	3.6077*** (0.0001)	-0.1873 (0.3769)	1.1935*** (0.0071)	-0.0650 (0.8673)	-0.2903 (0.4044)	5.7010*** (0.0015)	2.6422** (0.0381)	1.2083** (0.0133)
Market-to-Book	0.0008 (0.9987)	-0.8532*** (0.0100)	-0.0079 (0.8839)	0.7540*** (0.0001)	0.6676*** (0.0005)	-0.0864 (0.5589)	-0.5135 (0.4622)	0.8121 (0.1709)	1.3161*** (0.0001)

**Table IA.II**  
**Full-model Estimates for Table VIII of the Paper**

The table reports the full-model coefficient estimates for the model specified by equation (10) subject to the constraints specified by equation (11) using first differences. Results are presented for the full sample of *Compustat* firms from 1952 to 2007. As explanatory variables we use cash flow, all lagged dependent variables, size, and market-to-book. The number of firm-years is 237,412 and the number of firm clusters is 21,778. The *p*-values of the estimated coefficients (in parentheses) control for firm-level clustering using Rogers' (1983, 1993) method. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels.

	Capital Expenditures <sub>t</sub>	Acquisitions <sub>t</sub>	Asset Sales <sub>t</sub>	Equity Issues <sub>t</sub>	Share Repurchases <sub>t</sub>	Dividends <sub>t</sub>	Δ Long-term Debt <sub>t</sub>	Δ Short-term Debt <sub>t</sub>	Δ Cash Balances <sub>t</sub>
Cash Flow <sub>t</sub>	0.0429 (0.1162)	0.0550 (0.2517)	-0.0059 (0.4224)	-0.0067 (0.2136)	0.0216* (0.0651)	0.0136** (0.0448)	-0.4155*** (0.0030)	-0.3576*** (0.0021)	0.0813** (0.0434)
Capital Expenditures <sub>t-1</sub>	-0.2664** (0.0234)	0.0400 (0.1580)	0.0033 (0.7801)	0.0025 (0.9056)	0.0304** (0.0255)	0.0315** (0.0123)	-0.0144 (0.8431)	-0.1407*** (0.0083)	0.0151 (0.5656)
Acquisitions <sub>t-1</sub>	0.0355** (0.0223)	-0.4495*** (0.0001)	0.0002 (0.9264)	0.0017 (0.8238)	0.0124* (0.0795)	0.0058* (0.0666)	-0.2061*** (0.0012)	-0.1580*** (0.0050)	0.0336 (0.3748)
Asset Sales <sub>t-1</sub>	0.0010 (0.9917)	-0.0705 (0.6087)	-0.2590*** (0.0007)	0.0098 (0.6832)	0.0047 (0.9269)	-0.0321 (0.1748)	0.2589 (0.5830)	0.1387 (0.6025)	0.2453* (0.0523)
Equity Issues <sub>t-1</sub>	-0.1185** (0.0323)	-0.1192*** (0.0075)	-0.0020 (0.8300)	-0.4434*** (0.0001)	-0.0176 (0.4622)	-0.0208* (0.0604)	-0.0085 (0.9403)	0.1227 (0.2438)	-0.0551 (0.2748)
Share Repurchases <sub>t-1</sub>	0.1480*** (0.0001)	0.1613*** (0.0010)	0.0074 (0.5111)	-0.0244 (0.2814)	-0.2367* (0.0642)	-0.0323 (0.7094)	-0.0832 (0.5285)	0.0654 (0.4818)	-0.0751 (0.2422)
Dividends <sub>t-1</sub>	0.1333** (0.0474)	0.1609* (0.0814)	0.0065 (0.3848)	-0.0485* (0.0698)	0.0262 (0.5505)	-0.3636*** (0.0001)	-0.0593 (0.5727)	-0.0168 (0.8240)	-0.0749 (0.2528)
Δ Long-term Debt <sub>t-1</sub>	-0.0023 (0.9166)	-0.0828*** (0.0040)	0.0085*** (0.0048)	0.0141** (0.0357)	-0.0229*** (0.0099)	-0.0045 (0.1179)	-0.3480*** (0.0001)	0.1562** (0.0037)	-0.0568*** (0.0017)
Δ Short-term Debt <sub>t-1</sub>	0.0006 (0.9674)	-0.0464 (0.1230)	0.0035* (0.0719)	0.0109* (0.0706)	-0.0097 (0.1543)	-0.0084* (0.0671)	0.2632*** (0.0005)	-0.4132*** (0.0001)	-0.0716*** (0.0100)
Δ Cash Balances <sub>t-1</sub>	0.0296** (0.0217)	0.0755*** (0.0043)	-0.0033 (0.3121)	-0.0036 (0.7136)	0.0223 (0.1360)	0.0289*** (0.0089)	-0.2218*** (0.0001)	-0.1073** (0.0351)	-0.4924*** (0.0001)
Size	4.1751*** (0.0001)	0.4235 (0.2164)	0.1625* (0.0782)	0.5128*** (0.0001)	1.3130*** (0.0001)	1.2604*** (0.0001)	3.5454*** (0.0001)	2.7075*** (0.0001)	-0.2438 (0.4829)
Market-to-Book	0.5087** (0.0177)	0.0001 (0.9999)	-0.0320 (0.1796)	0.7828*** (0.0001)	0.6275*** (0.0001)	0.0393 (0.6421)	0.6384 (0.0565)	0.3432 (0.1856)	0.5569** (0.0129)

**Table IA.III**

**Full-model Estimates Excluding Firm-years with Missing *Compustat* Data**

This table shows that results from Tables V and VIII are robust when firm-year observations with any missing *Compustat* data are excluded. The table reports the full-model coefficient estimates for the model specified by equation (10) subject to the constraints specified by equation (11) using levels (Panel A) and first differences (Panel B). As explanatory variables we use cash flow, all lagged dependent variables, size, and market-to-book. The number of firm-years is 79,506 and the number of firm clusters is 12,760. The *p*-values of the estimated coefficients (in parentheses) control for firm-level clustering using Rogers' (1983, 1993) method. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels.

Panel A: Using Levels of Variables

	Capital Expenditures <sub>t</sub>	Acquisitions <sub>t</sub>	Asset Sales <sub>t</sub>	Equity Issues <sub>t</sub>	Share Repurchases <sub>t</sub>	Dividends <sub>t</sub>	Δ Long-term Debt <sub>t</sub>	Δ Short-term Debt <sub>t</sub>	Δ Cash Balances <sub>t</sub>
Cash Flow <sub>t</sub>	0.1070*** (0.0001)	0.0631*** (0.0056)	0.0003 (0.9682)	-0.0014 (0.8903)	0.1163*** (0.0001)	0.0676*** (0.0001)	-0.2623*** (0.0001)	-0.1349*** (0.0001)	0.2476*** (0.0001)
Capital Expenditures <sub>t-1</sub>	0.9111*** (0.0001)	-0.0459* (0.0980)	0.0224*** (0.0097)	0.0376** (0.0197)	-0.0732*** (0.0010)	-0.0190 (0.2070)	0.3352*** (0.0001)	0.1962*** (0.0001)	-0.1815*** (0.0001)
Acquisitions <sub>t-1</sub>	-0.0354 (0.1903)	0.1401*** (0.0046)	0.0028 (0.8453)	0.0012 (0.9848)	-0.0137 (0.7421)	0.0135 (0.2859)	0.1273** (0.0430)	-0.0638 (0.3167)	-0.0370 (0.5530)
Asset Sales <sub>t-1</sub>	0.0604 (0.5662)	-0.0992 (0.3353)	0.7127*** (0.0001)	-0.2052* (0.0689)	0.1155 (0.4186)	0.0303 (0.4779)	-0.4626*** (0.0041)	0.2032 (0.2535)	0.1411 (0.2081)
Equity Issues <sub>t-1</sub>	0.1080* (0.0950)	0.1811 (0.1325)	-0.0250 (0.3344)	0.4360* (0.0859)	0.2807 (0.1169)	0.0006 (0.9774)	0.1831 (0.2184)	-0.0112 (0.9029)	0.0126 (0.9033)
Share Repurchases <sub>t-1</sub>	-0.1175*** (0.0001)	0.1947*** (0.0015)	-0.0013 (0.8664)	0.1897*** (0.0085)	0.8446*** (0.0001)	0.0191 (0.5632)	0.4390*** (0.0001)	0.2299*** (0.0001)	-0.0837 (0.3257)
Dividends <sub>t-1</sub>	0.0323 (0.6244)	0.2549** (0.0126)	-0.0109 (0.5962)	-0.0644 (0.3654)	-0.1526 (0.2735)	0.7686*** (0.0001)	0.3801*** (0.0010)	0.1427* (0.0574)	-0.4557*** (0.0008)
Δ Long-term Debt <sub>t-1</sub>	0.0205 (0.2755)	-0.0459** (0.0195)	0.0263** (0.0291)	0.0054 (0.7569)	-0.0396** (0.0155)	-0.0113 (0.2352)	-0.0602* (0.0768)	0.0545 (0.1017)	0.1023*** (0.0006)
Δ Short-term Debt <sub>t-1</sub>	0.0410* (0.0782)	0.0386 (0.4295)	0.0295** (0.0494)	0.0871 (0.1924)	0.0417 (0.3917)	0.0001 (0.9984)	0.1462*** (0.0066)	-0.1621*** (0.0008)	-0.0207 (0.6037)
Δ Cash Balances <sub>t-1</sub>	0.0262 (0.2945)	0.0278 (0.4236)	-0.0218*** (0.0099)	0.0345 (0.2004)	0.0304 (0.2453)	0.0014 (0.9469)	-0.0408 (0.4074)	-0.0128 (0.8030)	-0.1267 (0.1477)
Size	1.3686 (0.1928)	5.4658*** (0.0001)	0.6051*** (0.0352)	1.9884 (0.1735)	-1.1731 (0.3463)	0.1985 (0.7223)	6.7985*** (0.0001)	-0.4473 (0.7559)	3.0850*** (0.0041)
Market-to-Book	1.0520** (0.0233)	-2.7160*** (0.0027)	-0.1260 (0.2078)	1.2490 (0.2711)	0.6879 (0.4607)	0.5175** (0.0475)	1.0250 (0.2690)	1.0617** (0.0458)	3.6683*** (0.0001)

Panel B: Using First Differences of Variables

	Capital Expenditures <sub>t</sub>	Acquisitions <sub>t</sub>	Asset Sales <sub>t</sub>	Equity Issues <sub>t</sub>	Share Repurchases <sub>t</sub>	Dividends <sub>t</sub>	Δ Long-term Debt <sub>t</sub>	Δ Short-term Debt <sub>t</sub>	Δ Cash Balances <sub>t</sub>
Cash Flow <sub>t</sub>	0.0707*** (0.0005)	0.0270 (0.4561)	0.0117 (0.1910)	-0.0021 (0.9194)	0.0904*** (0.0002)	0.0249* (0.0552)	-0.3053*** (0.0001)	-0.1564*** (0.0001)	0.3348*** (0.0001)
Capital Expenditures <sub>t-1</sub>	0.1939*** (0.0013)	-0.0040 (0.9586)	0.0138* (0.0940)	0.0988 (0.3025)	0.1518 (0.1030)	0.0749*** (0.0073)	0.1154 (0.2683)	0.0360 (0.6257)	-0.1526* (0.0597)
Acquisitions <sub>t-1</sub>	0.0343* (0.0707)	-0.4303*** (0.0001)	0.0098 (0.4148)	0.0278 (0.4467)	0.0470* (0.0723)	0.0086 (0.2426)	-0.1256* (0.0790)	-0.0760 (0.3042)	0.1763* (0.0514)
Asset Sales <sub>t-1</sub>	-0.1681*** (0.0012)	-0.2734** (0.0304)	-0.3206*** (0.0001)	0.0460 (0.5566)	-0.1308 (0.1910)	-0.0658** (0.0352)	-0.3838* (0.0906)	0.2000 (0.2500)	0.1796 (0.5274)
Equity Issues <sub>t-1</sub>	-0.0185 (0.6332)	-0.0726 (0.2285)	-0.0076 (0.5061)	-0.4798*** (0.0001)	-0.0329 (0.5350)	0.0001 (0.9952)	0.1049 (0.2307)	-0.0033 (0.9595)	-0.2619*** (0.0008)
Share Repurchases <sub>t-1</sub>	0.0159 (0.6222)	0.1632* (0.0509)	-0.0111 (0.5168)	0.0862 (0.3395)	0.0004 (0.9972)	0.0751* (0.0812)	-0.0181 (0.8550)	0.0581 (0.3829)	-0.1396* (0.0813)
Dividends <sub>t-1</sub>	0.1768*** (0.0035)	0.3251*** (0.0042)	0.0054 (0.6780)	-0.0240 (0.4297)	-0.0979 (0.6743)	-0.3454*** (0.0001)	-0.1319 (0.5520)	-0.1455 (0.2249)	-0.3545 (0.2348)
Δ Long-term Debt <sub>t-1</sub>	-0.0180 (0.2207)	-0.0793*** (0.0056)	0.0171** (0.0154)	0.0010 (0.9679)	-0.0615** (0.0184)	-0.0082 (0.2850)	-0.3274*** (0.0001)	0.0909*** (0.0056)	-0.0514* (0.0629)
Δ Short-term Debt <sub>t-1</sub>	-0.0221 (0.1753)	-0.0115 (0.7639)	0.0044 (0.3097)	0.0224 (0.1274)	-0.0197 (0.2249)	-0.0002 (0.9907)	0.2535*** (0.0001)	-0.4940*** (0.0001)	-0.1602*** (0.0001)
Δ Cash Balances <sub>t-1</sub>	0.0341 (0.1101)	0.0423 (0.3616)	-0.0058 (0.1190)	0.0221 (0.3057)	0.0617* (0.0577)	0.0163 (0.1207)	-0.1942*** (0.0001)	-0.0962*** (0.0018)	-0.4286*** (0.0001)
Size	3.6416*** (0.0001)	2.7489*** (0.0004)	0.5272*** (0.0001)	-0.0380 (0.9515)	1.4138** (0.0341)	1.6801*** (0.0001)	4.7307*** (0.0001)	2.7218*** (0.0001)	-1.5426*** (0.0099)
Market-to-Book	2.1301*** (0.0001)	-0.0075 (0.9890)	-0.0610 (0.5046)	0.9364** (0.0371)	1.5439*** (0.0030)	0.8531*** (0.0002)	2.6419*** (0.0001)	1.3466*** (0.0003)	0.3443 (0.4931)



**Table IA.IV**

**Full-model Estimates with Industry Fixed Effects**

This table supplements the analysis of Tables V and VIII by controlling for industry fixed effects. The table reports the full-model coefficient estimates for the model specified by equation (10) subject to the constraints specified by equation (11) using levels (Panel A) and first differences (Panel B). As explanatory variables we use cash flow, all lagged dependent variables, size, and market-to-book. We further include industry fixed effects. Industries are classified based on two-digit SIC codes. Results are presented for the full sample of *Compustat* firms from 1952 to 2007. The number of firm-years is 237,412 and the number of firm clusters is 21,778. The *p*-values of the estimated coefficients (in parentheses) control for firm-level clustering using Rogers' (1983, 1993) method. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels.

Panel A: Using Levels of Variables

	Capital Expenditures <sub>t</sub>	Acquisitions <sub>t</sub>	Asset Sales <sub>t</sub>	Equity Issues <sub>t</sub>	Share Repurchases <sub>t</sub>	Dividends <sub>t</sub>	Δ Long-term Debt <sub>t</sub>	Δ Short-term Debt <sub>t</sub>	Δ Cash Balances <sub>t</sub>
Cash Flow <sub>t</sub>	0.0912** (0.0433)	0.0520 (0.1094)	-0.0154* (0.0502)	0.0028 (0.6209)	0.0456*** (0.0015)	0.0386** (0.0131)	-0.3688*** (0.0001)	-0.3005*** (0.0001)	0.0907*** (0.0020)
Capital Expenditures <sub>t-1</sub>	0.8257*** (0.0001)	-0.0664** (0.0257)	0.0340*** (0.0008)	0.0155 (0.2623)	-0.0521*** (0.0002)	0.0176 (0.2843)	0.3710*** (0.0001)	0.2677*** (0.0002)	-0.0366 (0.1941)
Acquisitions <sub>t-1</sub>	0.0125 (0.5371)	0.1245*** (0.0005)	0.0059 (0.2953)	0.0193 (0.1050)	0.0121 (0.2556)	0.0245 (0.1710)	0.1313** (0.0124)	0.0135 (0.6731)	-0.0037 (0.8166)
Asset Sales <sub>t-1</sub>	0.1451 (0.2735)	0.2255* (0.0653)	0.7731*** (0.0001)	-0.0112 (0.6786)	0.0905*** (0.0020)	-0.0186 (0.6164)	0.0082 (0.9735)	-0.1761 (0.3128)	0.1517*** (0.0010)
Equity Issues <sub>t-1</sub>	-0.3776 (0.1546)	0.0251 (0.6884)	-0.0209 (0.1029)	0.2061*** (0.0002)	0.0649 (0.1122)	-0.0190 (0.2164)	-0.2895* (0.0968)	-0.1794 (0.1956)	0.0230 (0.7057)
Share Repurchases <sub>t-1</sub>	-0.0201 (0.5275)	0.0351 (0.4357)	0.0186** (0.0445)	0.0424 (0.1133)	0.7803*** (0.0001)	0.0630* (0.0661)	0.4310*** (0.0001)	0.3111*** (0.0001)	-0.0552 (0.1950)
Dividends <sub>t-1</sub>	0.1391* (0.0607)	0.2731** (0.0162)	0.0085 (0.6268)	0.0708*** (0.0081)	0.1944*** (0.0016)	0.7062*** (0.0001)	0.6586*** (0.0003)	0.4461*** (0.0006)	-0.1288** (0.0222)
Δ Long-term Debt <sub>t-1</sub>	0.0410*** (0.0002)	0.0348 (0.1753)	0.0078*** (0.0004)	0.0022 (0.6092)	-0.0143 (0.1364)	-0.0024 (0.7225)	0.0124 (0.7935)	0.0644 (0.1010)	0.0277** (0.0294)
Δ Short-term Debt <sub>t-1</sub>	0.0339*** (0.0042)	0.0105 (0.5263)	0.0124*** (0.0051)	0.0031 (0.5477)	0.0015*** (0.8564)	-0.0015 (0.7453)	0.1235*** (0.0054)	-0.1208*** (0.0031)	-0.0262* (0.0952)
Δ Cash Balances <sub>t-1</sub>	0.0564** (0.0195)	0.0610** (0.0348)	-0.0113* (0.0634)	0.0040 (0.7139)	0.0469* (0.0829)	0.0916 (0.1477)	0.0346 (0.6279)	0.1005* (0.0555)	-0.1283*** (0.0005)
Size	5.1183*** (0.0049)	4.0688*** (0.0001)	-0.1668 (0.4687)	1.4410*** (0.0010)	0.1065 (0.7844)	-0.1263 (0.6846)	6.3626*** (0.0004)	2.9781** (0.0210)	1.4476*** (0.0030)
Market-to-Book	0.1037 (0.8337)	-1.1155*** (0.0025)	0.0362 (0.5192)	0.6913*** (0.0001)	0.7446*** (0.0002)	-0.1095 (0.5160)	-0.7704 (0.3337)	0.9321 (0.1752)	1.2659*** (0.0001)

Panel B: Using First Differences of Variables

	Capital Expenditures <sub>t</sub>	Acquisitions <sub>t</sub>	Asset Sales <sub>t</sub>	Equity Issues <sub>t</sub>	Share Repurchases <sub>t</sub>	Dividends <sub>t</sub>	Δ Long-term Debt <sub>t</sub>	Δ Short-term Debt <sub>t</sub>	Δ Cash Balances <sub>t</sub>
Cash Flow <sub>t</sub>	0.0427 (0.1115)	0.0560 (0.2463)	-0.0060 (0.4058)	-0.0057 (0.2580)	0.0211* (0.0665)	0.0131** (0.0479)	-0.4161*** (0.0031)	-0.3585*** (0.0024)	0.0808** (0.0465)
Capital Expenditures <sub>t-1</sub>	-0.3117*** (0.0045)	0.0430 (0.1264)	0.0020 (0.8614)	-0.0149 (0.3190)	0.0307** (0.0251)	0.0269** (0.0184)	-0.0327 (0.6568)	-0.1526*** (0.0081)	0.0129 (0.6396)
Acquisitions <sub>t-1</sub>	0.0332** (0.0205)	-0.4514*** (0.0001)	0.0000 (0.9886)	0.0027 (0.7121)	0.0119* (0.0832)	0.0052 (0.1112)	-0.2072*** (0.0011)	-0.1620*** (0.0046)	0.0347 (0.3577)
Asset Sales <sub>t-1</sub>	-0.0026 (0.9756)	-0.0711 (0.6172)	-0.2808*** (0.0004)	0.0138 (0.5353)	0.0078 (0.8808)	-0.0280 (0.1999)	0.2805 (0.5634)	0.1337 (0.6292)	0.2411* (0.0573)
Equity Issues <sub>t-1</sub>	-0.1188*** (0.0086)	-0.1099** (0.0146)	-0.0019 (0.8444)	-0.4388*** (0.0001)	-0.0206 (0.3637)	-0.0205* (0.0608)	-0.0173 (0.8798)	0.1343 (0.2092)	-0.0539 (0.2873)
Share Repurchases <sub>t-1</sub>	0.1235*** (0.0001)	0.1584*** (0.0011)	0.0082 (0.4272)	-0.0357* (0.0630)	-0.2448* (0.0511)	-0.0398 (0.6506)	-0.1093 (0.4052)	0.0575 (0.5431)	-0.0766 (0.2256)
Dividends <sub>t-1</sub>	0.1161* (0.0538)	0.1490* (0.0961)	0.0067 (0.3654)	-0.0513* (0.0568)	0.0239 (0.5805)	-0.3679*** (0.0001)	-0.0821 (0.4222)	-0.0309 (0.6778)	-0.0785 (0.2309)
Δ Long-term Debt <sub>t-1</sub>	-0.0002 (0.9917)	-0.0832*** (0.0037)	0.0081*** (0.0044)	0.0139** (0.0384)	-0.0225** (0.0103)	-0.0041 (0.1531)	-0.3464*** (0.0001)	0.1581*** (0.0033)	-0.0563*** (0.0017)
Δ Short-term Debt <sub>t-1</sub>	0.0005 (0.9721)	-0.0479 (0.1165)	0.0036* (0.0589)	0.0102* (0.0783)	-0.0098 (0.1461)	-0.0079* (0.0790)	0.2609*** (0.0008)	-0.4099*** (0.0001)	-0.0702** (0.0138)
Δ Cash Balances <sub>t-1</sub>	0.0258** (0.0405)	0.0747*** (0.0040)	-0.0029 (0.3395)	-0.0043 (0.6536)	0.0208 (0.1541)	0.0281*** (0.0090)	-0.2261*** (0.0001)	-0.1149** (0.0254)	-0.4976*** (0.0001)
Size	3.8266*** (0.0001)	0.6457* (0.0660)	0.1748** (0.0470)	0.5386*** (0.0001)	1.4969*** (0.0001)	1.2661*** (0.0001)	3.6165*** (0.0001)	2.6438*** (0.0001)	-0.2616 (0.4401)
Market-to-Book	0.6825*** (0.0013)	-0.2260 (0.1838)	0.0051 (0.8174)	0.7571*** (0.0001)	0.7229*** (0.0001)	0.0806 (0.3856)	0.5480 (0.1135)	0.5113* (0.0515)	0.5615** (0.0143)

**Table IA.V**  
**Full-model Estimates Using I/B/E/S Data**

This table shows that results in Tables V and VIII are robust when cash flows are forecasted using analyst estimates rather than using realized cash flows. The table reports the full-model coefficient estimates for the model specified by equation (10) subject to the constraints specified by equation (11) using levels (Panel A) and first differences (Panel B). As explanatory variables we use forecasted cash flows, all lagged dependent variables, size, and market-to-book. Forecasted cash flows are calculated as actual cash flows minus actual net income (NI) plus forecasted net income minus extraordinary items and discontinued operations (XIDO). Forecasted net income is the number of common shares outstanding (CSHO) times the mean analyst estimate of earnings per share for the examined fiscal year, where the estimate was made at least nine months and at most 15 months prior to the end of the examined fiscal year. Results are presented for the full sample of *Compustat* firms from 1952 to 2007. The number of firm-years is 42,454 and the number of firm clusters is 6,630. The *p*-values of the estimated coefficients (in parentheses) control for firm-level clustering using Rogers' (1983, 1993) method. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels.

Panel A: Using Levels of Variables									
	Capital Expenditures <sub>t</sub>	Acquisitions <sub>t</sub>	Asset Sales <sub>t</sub>	Equity Issues <sub>t</sub>	Share Repurchases <sub>t</sub>	Dividends <sub>t</sub>	Δ Long-term Debt <sub>t</sub>	Δ Short-term Debt <sub>t</sub>	Δ Cash Balances <sub>t</sub>
Cash Flow <sub>t</sub>	-0.0050 (0.8186)	0.0933* (0.0864)	-0.0244*** (0.0080)	-0.0026 (0.4863)	0.0575** (0.0415)	0.0352* (0.0830)	-0.3399** (0.0179)	-0.3418*** (0.0082)	0.1103* (0.0574)
Capital Expenditures <sub>t-1</sub>	0.9816*** (0.0001)	-0.1592*** (0.0003)	0.0326*** (0.0010)	0.0111 (0.1439)	-0.0661** (0.0390)	0.0540* (0.0920)	0.3695** (0.0420)	0.3270** (0.0320)	-0.0702 (0.2285)
Acquisitions <sub>t-1</sub>	-0.0053 (0.8234)	0.1867** (0.0475)	0.0258*** (0.0043)	-0.0065 (0.5012)	0.0251 (0.3863)	0.0569* (0.0775)	0.2959*** (0.0012)	0.0151 (0.8530)	0.0670 (0.2325)
Asset Sales <sub>t-1</sub>	0.0032 (0.9536)	0.4590** (0.0397)	0.7603*** (0.0001)	-0.0008 (0.9663)	0.1170* (0.0716)	-0.0308 (0.6814)	0.0457 (0.9315)	-0.1005 (0.7989)	0.1562 (0.1238)
Equity Issues <sub>t-1</sub>	0.0945** (0.0221)	-0.0059 (0.9540)	-0.0126 (0.2685)	0.2559*** (0.0001)	0.0803 (0.2699)	-0.0081 (0.8577)	-0.2241 (0.1562)	-0.0178 (0.8950)	-0.1594 (0.1783)
Share Repurchases <sub>t-1</sub>	0.0142 (0.5011)	-0.0154 (0.7370)	0.0108 (0.3371)	0.0562** (0.0405)	0.8110*** (0.0001)	0.0620* (0.0936)	0.3836*** (0.0004)	0.3616*** (0.0001)	-0.0596 (0.3340)
Dividends <sub>t-1</sub>	0.1084** (0.0213)	0.1762 (0.2103)	0.0345** (0.0454)	0.0344** (0.0175)	0.2488*** (0.0001)	0.6132*** (0.0001)	0.5434*** (0.0011)	0.4379*** (0.0012)	-0.0963 (0.1387)
Δ Long-term Debt <sub>t-1</sub>	-0.0123 (0.4547)	0.0727*** (0.0001)	0.0022 (0.7484)	0.0095 (0.1425)	-0.0264 (0.1971)	0.0038 (0.6969)	0.0248 (0.6982)	0.0159 (0.7634)	0.0146 (0.6433)
Δ Short-term Debt <sub>t-1</sub>	0.0201*** (0.0001)	0.0192** (0.0217)	0.0133*** (0.0001)	0.0027* (0.0818)	-0.0123* (0.0573)	0.0017 (0.5587)	0.0466 (0.1299)	-0.0619*** (0.0009)	-0.0282 (0.1026)
Δ Cash Balances <sub>t-1</sub>	0.0419** (0.0256)	0.0594 (0.2456)	0.0062 (0.3029)	0.0154 (0.1342)	0.1028** (0.0297)	0.1678 (0.1128)	0.0917 (0.2873)	0.2151*** (0.0051)	-0.0434 (0.3323)
Size	7.0846*** (0.0001)	16.6361*** (0.0001)	-0.2152 (0.7559)	7.8517*** (0.0001)	-3.3842 (0.1765)	1.4339 (0.2796)	10.5797** (0.0225)	8.5934** (0.0449)	5.0392* (0.0678)
Market-to-Book	2.3948* (0.0813)	-6.2565*** (0.0025)	-0.8846*** (0.0063)	4.8383*** (0.0001)	2.0486 (0.2727)	4.7786*** (0.0044)	3.2120 (0.2960)	3.2865 (0.2565)	7.4867*** (0.0001)

Panel B: Using First Differences of Variables

	Capital Expenditures <sub>t</sub>	Acquisitions <sub>t</sub>	Asset Sales <sub>t</sub>	Equity Issues <sub>t</sub>	Share Repurchases <sub>t</sub>	Dividends <sub>t</sub>	Δ Long-term Debt <sub>t</sub>	Δ Short-term Debt <sub>t</sub>	Δ Cash Balances <sub>t</sub>
Cash Flow <sub>t</sub>	0.0019 (0.9201)	0.0567 (0.3560)	-0.0139 (0.0586)	-0.0051 (0.2013)	0.0338 (0.2370)	0.0209 (0.1952)	-0.2868 (0.1004)	-0.4778** (0.0116)	0.1033 (0.1321)
Capital Expenditures <sub>t-1</sub>	0.0086 (0.9276)	-0.0761* (0.0681)	0.0126 (0.7716)	-0.0239** (0.0357)	0.0607** (0.0482)	0.0641*** (0.0006)	0.2204** (0.0220)	-0.2516* (0.0661)	-0.1000* (0.0641)
Acquisitions <sub>t-1</sub>	-0.0121 (0.5641)	-0.5470*** (0.0001)	0.0059 (0.4518)	-0.0165** (0.0405)	0.0103 (0.5553)	-0.0057 (0.5956)	-0.0748 (0.4375)	-0.4135*** (0.0004)	0.0557 (0.2269)
Asset Sales <sub>t-1</sub>	-0.1972* (0.0838)	-0.2840 (0.2724)	-0.5127*** (0.0001)	0.0028 (0.9271)	-0.0629 (0.5864)	0.0091 (0.7836)	-0.0007 (0.9990)	0.0351 (0.9591)	0.0595 (0.8049)
Equity Issues <sub>t-1</sub>	0.0784** (0.0102)	0.0018 (0.9724)	-0.0189 (0.1819)	-0.3728*** (0.0001)	-0.0472 (0.2202)	0.0225 (0.4483)	-0.1058 (0.6713)	0.4454** (0.0122)	-0.1075 (0.2519)
Share Repurchases <sub>t-1</sub>	0.0652*** (0.0052)	0.1500*** (0.0033)	0.0003 (0.9686)	-0.0059 (0.6509)	-0.1181 (0.2386)	-0.0824 (0.4606)	0.0223 (0.8922)	-0.0784 (0.6203)	-0.0764 (0.3542)
Dividends <sub>t-1</sub>	0.0525* (0.0870)	0.0860*** (0.0082)	0.0018 (0.8448)	-0.0572*** (0.0001)	0.1117*** (0.0003)	-0.4284*** (0.0001)	-0.0083 (0.9326)	-0.1227 (0.1633)	-0.0081 (0.8460)
Δ Long-term Debt <sub>t-1</sub>	-0.0188* (0.0857)	-0.0436** (0.0351)	-0.0085 (0.1829)	0.0023 (0.6360)	-0.0319** (0.0303)	-0.0010 (0.8930)	-0.3874*** (0.0001)	0.2613*** (0.0047)	-0.0370 (0.2000)
Δ Short-term Debt <sub>t-1</sub>	0.0060 (0.6149)	-0.0381 (0.2993)	0.0013 (0.6008)	0.0064* (0.0673)	-0.0273 (0.1049)	-0.0094 (0.3352)	0.1476 (0.2175)	-0.2921** (0.0271)	-0.0680 (0.1572)
Δ Cash Balances <sub>t-1</sub>	0.0135 (0.4053)	0.0749** (0.0111)	-0.0052 (0.6404)	0.0065 (0.4537)	0.0666*** (0.0027)	0.0305* (0.0916)	-0.1336 (0.1061)	-0.1464 (0.1289)	-0.4641*** (0.0001)
Size	11.1470*** (0.0001)	5.7370*** (0.0006)	1.0927** (0.0146)	2.3237*** (0.0001)	6.8855*** (0.0001)	5.4412*** (0.0001)	7.0730** (0.0158)	16.8232*** (0.0001)	-1.8979 (0.2346)
Market-to-Book	5.9969*** (0.0001)	0.2903 (0.7453)	0.0112 (0.9631)	3.8978*** (0.0001)	6.1799*** (0.0001)	4.3301*** (0.0001)	6.0819*** (0.0041)	5.9616*** (0.0092)	-0.8446 (0.6816)

**Table IA.VI**

**Determination of Financial Constraint Category**

This table shows that the results are similar to those reported in Table IX when Cleary’s (1999) discriminant analysis is used to form financial health subsamples. Panel A of the table presents coefficients for the cash flow variable specified by equation (10) subject to the constraints specified by equation (11) using Cleary’s (1999) discriminant analysis method for categorizing firm-years according to their degree of financial constraint. In that approach, firms are classified into three groups depending on whether they increase, leave unchanged, or decrease dividend payments. Coefficients that best distinguish each independent variable between the group that increases dividends and the group that reduces dividends according to the  $Z_{FC}$  value are then estimated:

$$Z_{FC} = \beta_1 Current + \beta_2 FCCov + \beta_3 SLACK / K + \beta_4 NI\% + \beta_5 Sales Growth + \beta_6 Debt . \quad (IA.1)$$

In this case  $Z_{FC}$  is the value associated with the firms that reduce dividend payments (i.e., the financially constrained firms). The independent variables are described in Panel B of the table. We use the estimated coefficients to calculate  $Z_{FC}$  for each firm in our sample and then create three portfolios based on the 25<sup>th</sup> and 75<sup>th</sup> percentiles of  $Z_{FC}$ . The regressions in Panel A of the table are estimated using first differences. The  $p$ -values of the estimated coefficients (in parentheses) control for firm-level clustering using Rogers’ (1983, 1993) method. The last two rows report the number of firm-years and firm clusters for each subsample. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels.

Panel A: Model Estimates Using Cleary-based Breakpoints

Dependent Variable	Unconstrained	Partially Constrained	Constrained
Capital Expenditures $_t$	0.0275 (0.1433)	0.1119*** (0.0008)	0.0293 (0.2204)
Acquisitions $_t$	0.0094 (0.6966)	0.0724*** (0.0034)	0.0543 (0.3858)
Asset Sales $_t$	0.0045 (0.3087)	- 0.0030 (0.4691)	- 0.0065 (0.4397)
Equity Issues $_t$	- 0.0200 (0.2527)	- 0.0178** (0.0311)	- 0.0021 (0.6143)
Share Repurchases $_t$	0.0373** (0.0499)	0.0412*** (0.0002)	0.0171 (0.1626)
Dividends $_t$	0.0100* (0.0639)	0.0388*** (0.0023)	0.0082* (0.0936)
$\Delta$ Long-term Debt $_t$	- 0.3211*** (0.0004)	- 0.3732*** (0.0001)	- 0.4203** (0.0174)
$\Delta$ Short-term Debt $_t$	- 0.4243*** (0.0001)	- 0.1289*** (0.0010)	- 0.4066*** (0.0097)
$\Delta$ Cash Balances $_t$	0.1548*** (0.0001)	0.2129*** (0.0001)	0.0556 (0.1638)
Firm-years	56,146	112,329	56,186
Firm Clusters	14,476	17,376	13,727

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Panel B: Description of Variables

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Variable	Description	<i>Compustat</i> Item
Current	Current ratio	$ACT \div LCT$
FCCov	Fixed charge coverage	$\frac{EBIT}{XINT + DVP \times \left( \frac{1}{1 - \left( \frac{TXT}{EBIT - XINT} \right)} \right)}$
SLACK/K	Slack/fixed assets	$(CHE + (0.5 \times INVT) + (0.7 \times RECT) - (NP)) \div PPENT$
NI%	Net income margin	$NI \div SALE$
Sales Growth	Sales growth	$(SALE_t - SALE_{t-1}) \div SALE_{t-1}$
Debt	Debt ratio	$(DLC + DLTT) \div AT$

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**Table IA.VII**

**Testing for Symmetry of Positive and Negative Cash Flow Shocks**

This table shows that responses to negative and positive cash flows are symmetric when the model is estimated using levels rather than first differences (Table X). Estimates are obtained by estimating equation (10) subject to the constrained specified in equation (11). The system in (10) is estimated with the right-hand side including an interaction variable equal to Cash Flow\*DUMMY, where DUMMY is one when cash flow is positive and zero otherwise. The dummy variable is also included in the model but its coefficient is not reported for brevity. The *p*-values of the estimated coefficients (in parentheses) control for firm-level clustering using Rogers' (1983, 1993) method. The full sample contains 237,412 firm-years and 21,778 firm clusters. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels.

	Capital Expenditures <sub>t</sub>	Acquisitions <sub>t</sub>	Asset Sales <sub>t</sub>	Equity Issues <sub>t</sub>	Share Repurchases <sub>t</sub>	Dividends <sub>t</sub>	Δ Long-term Debt <sub>t</sub>	Δ Short-term Debt <sub>t</sub>	Δ Cash Balances <sub>t</sub>
Positive Cash Flow <sub>t</sub>	0.1220** (0.0218)	0.0467 (0.1623)	-0.0160 (0.1359)	0.0093 (0.3195)	0.0540*** (0.0012)	0.0580*** (0.0022)	-0.3467*** (0.0022)	-0.2390*** (0.0060)	0.1269*** (0.0001)
Negative Cash Flow <sub>t</sub>	0.0236 (0.6031)	0.0631 (0.3884)	-0.0134** (0.0156)	-0.0137 (0.3002)	0.0294** (0.0304)	0.0017 (0.8633)	-0.4151** (0.0172)	-0.4184*** (0.0088)	0.0216 (0.6011)
Capital Expenditures <sub>t-1</sub>	0.8108*** (0.0001)	-0.0662** (0.0331)	0.0333*** (0.0073)	0.0122 (0.4604)	-0.0600*** (0.0001)	0.0003 (0.9801)	0.3556*** (0.0001)	0.2119*** (0.0012)	-0.0719*** (0.0009)
Acquisitions <sub>t-1</sub>	0.0003 (0.9848)	0.1282*** (0.0002)	0.0064 (0.2637)	0.0157 (0.1747)	0.0091 (0.3809)	0.0190 (0.1883)	0.1242* (0.0316)	-0.0037 (0.9051)	-0.0141 (0.3325)
Asset Sales <sub>t-1</sub>	0.1175 (0.3484)	0.2342* (0.0580)	0.7809*** (0.0001)	-0.0186 (0.4921)	0.0901*** (0.0022)	-0.0217 (0.5552)	-0.0052 (0.9833)	-0.1739 (0.3125)	0.1631*** (0.0002)
Equity Issues <sub>t-1</sub>	-0.3111 (0.1759)	0.0284 (0.6111)	-0.0188 (0.1248)	0.2291*** (0.0003)	0.0671* (0.0986)	-0.0083 (0.6311)	-0.2520 (0.1093)	-0.1408 (0.2463)	0.0414 (0.4485)
Share Repurchases <sub>t-1</sub>	-0.0303 (0.3328)	0.0338 (0.4693)	0.0179 (0.1103)	0.0438* (0.1000)	0.7812*** (0.0001)	0.0517* (0.0894)	0.4230*** (0.0001)	0.2758*** (0.0001)	-0.0758* (0.0556)
Dividends <sub>t-1</sub>	0.0921 (0.1176)	0.2852*** (0.0084)	0.0085 (0.6381)	0.0524** (0.0500)	0.1785*** (0.0053)	0.6923*** (0.0001)	0.6384*** (0.0054)	0.3771** (0.0158)	-0.1718*** (0.0017)
Δ Long-term Debt <sub>t-1</sub>	0.0444*** (0.0001)	0.0358 (0.1861)	0.0081*** (0.0002)	0.0030 (0.4458)	-0.0137 (0.1568)	-0.0003 (0.9625)	0.0158 (0.7117)	0.0711* (0.0668)	0.0318*** (0.0057)
Δ Short-term Debt <sub>t-1</sub>	0.0346*** (0.0069)	0.0109 (0.5313)	0.0121*** (0.0077)	0.0034 (0.5550)	0.0018 (0.8371)	-0.0018 (0.6813)	0.1238*** (0.0058)	-0.1213*** (0.0047)	-0.0276* (0.0624)
Δ Cash Balances <sub>t-1</sub>	0.0455* (0.0675)	0.0637** (0.0324)	-0.0120* (0.0675)	0.0001 (0.9952)	0.0461* (0.0984)	0.0859 (0.1593)	0.0306 (0.6997)	0.0877 (0.1229)	-0.1348*** (0.0002)
Size	4.5074*** (0.0039)	3.6705*** (0.0001)	-0.1773 (0.4234)	1.1051*** (0.0081)	-0.1601 (0.7019)	-0.5077 (0.1947)	5.4352*** (0.0080)	1.9475 (0.1766)	0.8002 (0.1155)
Market-to-Book	-0.1357 (0.7974)	-0.8310** (0.0121)	-0.0043 (0.9437)	0.7227*** (0.0001)	0.6337*** (0.0011)	-0.1639 (0.2721)	-0.6089 (0.4452)	0.5635 (0.3570)	1.1699*** (0.0001)

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