

Creditor Rights, Debt Capacity and Securities Issuance: Evidence from Anti-Recharacterization Laws

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November, 2019

MOTIVATION

1. Goal:

Understand the impact of creditors' rights protection on firms' financing decisions

Cross-Country Evidence on Creditors Rights:

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3. **Weakness:**

LLSV does not take into account how the laws are expected/actually enforced in practice

{Favara, Morellec, Schroth and Valta (2018), Favara, Schroth and Valta (2012)}

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- ▶ Country's bankruptcy procedure are **correlated** with **(un)observable** country characteristics
- ▶ Understanding **within** country effect(s) of creditor rights protection laws is important

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 - ▶ The transferee has the **right to pledge or exchange** the transferred asset
 - ▶ The transferor has no rights or obligations to reclaim the transferred assets
=> Transferor does **not maintain effective control** over the transferred assets

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(1) La Porta et al 1998	(2) U.S Bankruptcy
Approval of debtor's filing for reorganization First to be paid out of the proceeds (liquidation) Ability to seize collateral after reorganization petition is approved Ability to replace management during the reorganization process	Yes {120 Days} D.I.P {post-vs pre-petitioners}?? NO{Automatic Stay Clause} NO {DIP}

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3. The laws **effectively transfer** some control rights from borrowers to creditors: {liquidation value, financial slack}

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 - ▶ Texas (1997), Louisiana (1997), Alabama (2001)
 - ▶ Delaware (2002), South Dakota (2003)
 - ▶ Virginia (2004), Nevada (2005)
- Exogenous:**
Laws are due to the lobbying efforts of banking and securitization industries (Kettering, 2008)

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- ▶ Data period: 1990-2012

Summary Statistics:

	:Mean	Median	Std. Dev	25 th	75 th :
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Cash	0.204	0.0954	0.247	0.0237	0.299
Ln(assets)	4.56	4.53	2.46	2.91	6.22
Tangibility	0.265	0.187	0.265	0.077	0.387
Book Leverage	0.234	0.181	0.231	0.0175	0.375
Market Leverage	0.215	0.122	0.246	0.01	0.357
Capex	0.067	0.039	1.001	0.016	0.0749
Market-to-Book	2.30	1.52	2.43	1.09	2.45
Dividend Dummy	0.328	0.000	0.469	0.000	1.000
Profits	-0.056	0.093	1.02	-0.03	0.16
Equity Issuance	0.127	0.004	0.382	0.00	0.042
Debt Issuance	0.0701	0.00	0.296	0.00	0.08
Net Leverage	0.029	0.073	0.403	-0.22	0.313
Equity Rep.	0.0138	0.000	0.0597	0.000	0.002
Net working Capital	-0.283	0.041	25.5	-0.067	0.185

BASELINE REGRESSION: Staggered Difference-in-Difference

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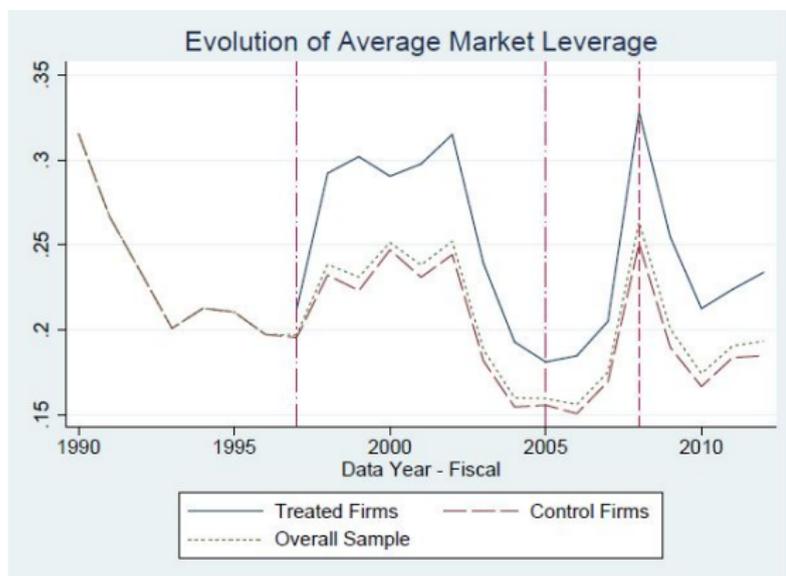
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- ▶ DiD Set-up: Favara, Gao and Giannetti 2019, Chu 2018, Li, Whited and Wu 2016, Mann 2017

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$$\text{Market_Leverage}_{it} = \left\{ \frac{DLTT_{it} + DLC_{it}}{DLTT_{it} + DLC_{it} + MVE} \right\}, MVE = \{PRCC_{it} XCSHO_{it}\} \quad (2)$$



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 - ▶ Contractual space is bounded by pre-existing debt/ debt capacity
 - ▶ The laws are pareto improving since some firms will increase their borrowing capacity

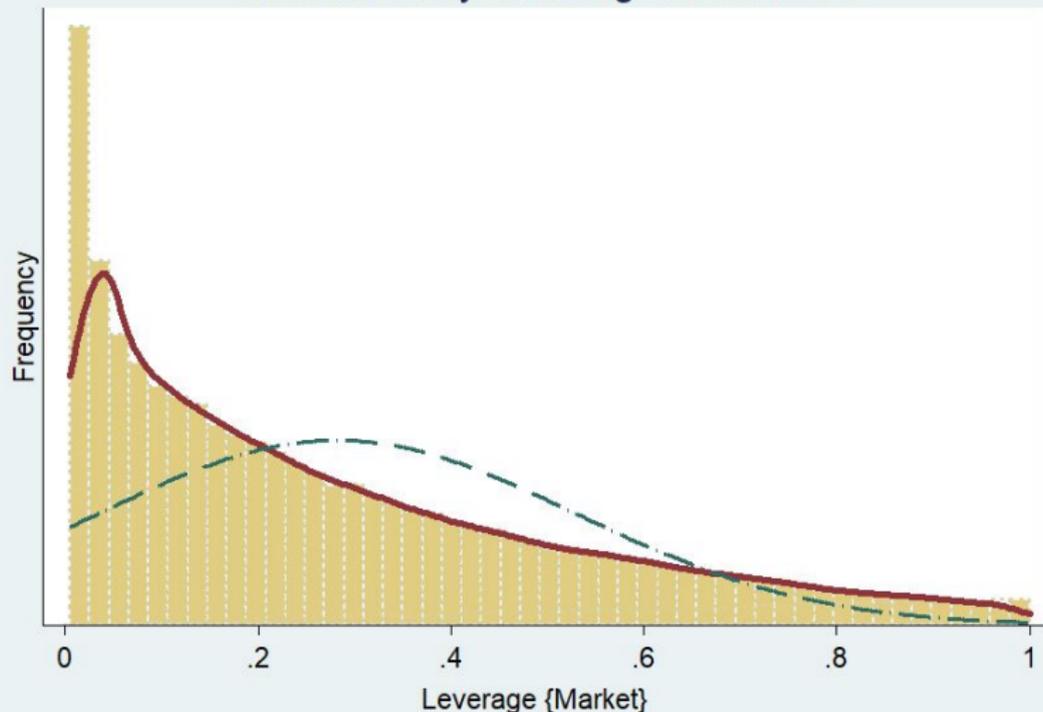
DEBT CAPACITY:

Market Leverage:

	(1)	(2)	(3)	(4)	(5)
	Mkt Lev	Mkt Lev	Mkt Lev	Mkt Lev	Mkt Lev
			Quantile	Regression	Estimates
Law	0.0127*** (3.81)	0.0127* (1.75)	0.00390*** (3.85)	0.00615** (2.23)	-0.000517 (-0.10)
Constant	0.0394*** (12.76)	0.0394*** (6.39)	-0.0181*** (-5.66)	-0.00798*** (-6.97)	0.0991*** (17.40)
Firm Controls	YES	YES	YES	YES	YES
Firm F.E	YES	YES	NO	NO	NO
Year F.E	NO	YES	NO	NO	NO
Clustered Std Errors	NO	YES	NO	NO	NO
Robust Std Errors			YES	YES	YES
Regression Type	FE	FE	25 th %	50 th %	75 th %
<i>N</i>	103,650	103,650	103,650	103,650	103,650
<i>R</i> ²	0.0997	0.0997			
Pseudo <i>R</i> ²			0.056	0.102	0.078

DEBT CAPACITY:

Kernel Density: Leverage Distribution



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Firm Controls	YES	YES	YES	YES	YES
Firm F.E	YES	YES	NO	NO	NO
Year F.E	NO	YES	NO	NO	NO
Clustered Std Errors	NO	YES	NO	NO	NO
Robust Std Errors			YES	YES	YES
Regression Type	FE	FE	25 th %	50 th %	75 th %
<i>N</i>	103,650	103,650	103,650	103,650	103,650
<i>R</i> ²	0.0997	0.0997			
Pseudo <i>R</i> ²			0.056	0.102	0.078

DEBT CAPACITY:

Market Leverage:

	(1)	(2)	(3)	(4)	(5)
	Mkt Lev	Mkt Lev	Mkt Lev	Mkt Lev	Mkt Lev
			Quantile	Regression	Estimates
Law	0.0127*** (3.81)	0.0127* (1.75)	0.00390*** (3.85)	0.00615** (2.23)	-0.000517 (-0.10)
Constant	0.0394*** (12.76)	0.0394*** (6.39)	-0.0181*** (-5.66)	-0.00798*** (-6.97)	0.0991*** (17.40)
Firm Controls	YES	YES	YES	YES	YES
Firm F.E	YES	YES	NO	NO	NO
Year F.E	NO	YES	NO	NO	NO
Clustered Std Errors	NO	YES	NO	NO	NO
Robust Std Errors			YES	YES	YES
Regression Type	FE	FE	25th%	50th%	75th%
<i>N</i>	103,650	103,650	103,650	103,650	103,650
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- ▶ Firms in adopting states react by exercising this option

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Diamond (1984, 1991)
- ▶ The laws transfer control rights from debtors to creditors => mitigate potential distortions (debt overhang)
Shift in composition of debt financing -Giannetti (2003)

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1. **[H1B]: Anti-recharacterization laws are negatively related to short term debt financing**

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Diamond (1984, 1991)
- ▶ **Long-term vs. Short-term Debt:**
Increase in financial flexibility reflects the option-value of unused debt capacity- DeAngelo, DeAngelo and Whited (2011)

DEBT CAPACITY:

Debt Maturity Structure:

	(1)	(2)	(3)	(4)	(5)	(6)
	LT Debt	LT Debt	LT Debt	ST Debt	ST Debt	ST Debt
Law	0.00575** (2.19)	0.00601*** (2.58)	0.00601* (1.73)	-0.00452** (-2.50)	-0.00452** (-2.50)	-0.00452* (-1.93)
<i>LTDebt_{t-1}</i>		0.468*** (159.49)	0.468*** (73.94)			
<i>STDebt_{t-1}</i>					0.260*** (77.87)	0.260*** (26.25)
Constant	0.0478*** (19.77)	0.00243 (1.04)	0.00243 (0.63)	0.0358*** (20.40)	0.0123*** (6.79)	0.0123*** (4.15)
Firm Controls	YES	YES	YES	YES	YES	YES
Firm F.E	YES	YES	YES	YES	YES	YES
Clustered Std Errors	NO	NO	YES	NO	NO	YES
Year F.E	NO	NO	YES	NO	NO	YES
<i>N</i>	103650	96890	96890	103650	96890	96890
<i>R</i> ²	0.0284	0.253	0.253	0.0135	0.0789	0.0789

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Firm Controls	YES	YES	YES	YES	YES	YES
Firm F.E	YES	YES	YES	YES	YES	YES
Clustered Std Errors	NO	NO	YES	NO	NO	YES
Year F.E	NO	NO	YES	NO	NO	YES
N	103650	96890	96890	103650	96890	96890
R^2	0.0284	0.253	0.253	0.0135	0.0789	0.0789

DEBT CAPACITY:

Debt Maturity Structure:

	(1)	(2)	(3)	(4)
	DEBT_MAT	DEBT_MAT	DEBT_MAT	DEBT_MAT
Law	0.00333**	0.00333*	0.00413***	0.00413**
	(2.51)	(1.78)	(3.14)	(2.32)
<i>Leverage_{t,t-1}</i>			0.0716***	0.0716***
			(49.55)	(26.60)
Constant	0.00953***	0.00953***	-0.00236*	-0.00236
	(7.79)	(4.69)	(-1.78)	(-1.10)
Firm Controls	YES	YES	YES	YES
Firm F.E	YES	YES	YES	YES
Year F.E	YES	YES	YES	YES
Clustered Std Errors	NO	YES	NO	YES
<i>N</i>	102152	102152	95537	95537
<i>R</i> ²	0.00514	0.00514	0.00787	0.00787

DEBT CAPACITY:

Hypothesis [2]: Financing Activities:

1. **[H2A]: Anti-recharacterization laws are positively related to debt issuance**

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1. **[H2A]: Anti-recharacterization laws are positively related to debt issuance**
 - ▶ The laws enhance the value of pledgeable assets and increase the **option-value of unused debt capacity**
 - ▶ Firms would respond to **exogenous change** in debt capacity by issuing debt: **borrowing cost**

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 - ▶ Frequency of security issuance might reflect special features of the issuing firm
Billet, Flannery and Garfinkel (2011), Ritter and Huang (2018)
 - ▶ Proactive issuers might behave very differently from passive issuers following the enactment of anti-recharacterization laws

DEBT CAPACITY:

Debt Issuance:

	(1)	(2)	(3)	(4)
	Debt Issuance	Debt Issuance	Active 5%	Passive of Assets
Law	0.0189** (2.41)	0.0189* (1.65)	0.0522* (1.70)	0.00484 (-1.19)
Constant	0.00198 (0.26)	0.00198 (0.18)	0.218*** (6.85)	-0.0400*** (-6.39)
Firm Controls	YES	YES	YES	YES
Firm F.E	YES	YES	YES	YES
Clustered Std. Errors	NO	YES	YES	YES
Year F.E	NO	YES	YES	YES
<i>N</i>	47304	47304	14272	33032
<i>R</i> ²	0.0123	0.0123	0.0643	0.0290

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- [H3B]: Proactive issuers are more likely to decrease equity issuance following adoption of the laws**
 - ▶ Frequent issuers tend to have greater and pressing needs for external financing -Ritter and Huang (2017)
 - ▶ **Divergence** in the cost of equity vs debt tend to lead to higher utilization of debt over equity

DEBT CAPACITY:

Equity Issuance:

	(1)	(2)	(3)	(4)	(5)
	Equity Issuance	Equity Issuance	Active 5%	Passive of Assets	Repurchases
Law	-0.0264*** (-5.10)	-0.0264*** (-4.20)	-0.103*** (-4.43)	-0.000290 (-0.85)	0.00515*** (3.28)
Constant	0.205*** (35.41)	0.205*** (14.701)	0.472*** (14.47)	0.00149*** (3.26)	0.00237 (1.51)
Firm Control	YES	YES	YES	YES	YES
Firm F.E	YES	YES	YES	YES	YES
Year F.E	NO	YES	YES	YES	YES
Clustered Std. Errors	NO	YES	YES	YES	YES
<i>N</i>	94952	94952	21826	28730	95246
<i>R</i> ²	0.218	0.218	0.328	0.00645	0.00255

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Firm Control	YES	YES	YES	YES	YES
Firm F.E	YES	YES	YES	YES	YES
Year F.E	NO	YES	YES	YES	YES
Clustered Std. Errors	NO	YES	YES	YES	YES
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 - ▶ Louisiana [Kentucky], Virginia [Washington]
 - ▶ Alabama [S. Carolina], Delaware [Montana]
 - ▶ Texas [Michigan], S. Dakota [N. Dakota], Nevada [Arkansas]

Robustness Tests:

Confounding Effects: Placebo Tests

	(1) Market Lev	(2) Equity Issuance	(3) Debt Issuance	(4) ST Debt	(5) LT Debt
Placebo Law	0.0129 (1.23)	-0.00875 (-1.17)	-0.00128 (-0.14)	-0.00228 (-0.57)	0.00963 (1.18)
Size	0.0261*** (22.60)	-0.0550*** (-20.27)	0.00961*** (5.27)	0.00142** (2.30)	0.0152*** (15.50)
Tangibility	0.233*** (19.54)	-0.197*** (-11.34)	0.0562*** (2.99)	0.0639*** (10.04)	0.170*** (16.72)
Profits	-0.00969*** (-2.72)	-0.149*** (-4.96)	-0.0167* (-1.92)	-0.0157*** (-5.37)	-0.00452*** (-2.79)
MB	-0.000284 (-1.17)	0.000761 (1.16)	0.000129 (0.65)	-0.0000353 (-1.00)	-0.0000715 (-1.18)
Constant	0.0392*** (6.37)	0.405*** (30.11)	0.00943 (1.00)	0.0359*** (11.16)	0.0477*** (9.19)
Firm F.E	YES	YES	YES	YES	YES
Clustered Std Errors	YES	YES	YES	YES	YES
Year F.E	YES	YES	YES	YES	YES
<i>N</i>	103650	101879	50591	103650	103650
<i>R</i> ²	0.0410	0.151	0.00383	0.0134	0.0284

Robustness Tests:

Legal Challenge: Federal vs. State laws:

1. **Case Law Precedent 2003:**

Reaves Brokerage Company Inc. v. Sunbelt Fruit & Vegetable Company

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- ▶ Creditors were unable to repossess pledged collateral

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- ▶ Federal courts recharacterized debtor's transfer
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Legal Challenge: Federal vs. State laws:

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3. The effects of the state laws should be limited to pre-2003 period

Robustness Tests:

Legal Challenge(s): Federal vs State Laws:

	(1)	(2)	(3)	(4)	(5)	(6)
	Mkt Lev	Mkt Lev	Equitylss	Equitylss	Debtlss	Debtlss
<i>Law₃states</i>	0.0238*** (6.16)	0.0238*** (2.89)	-0.0184*** (-3.07)	-0.0184** (-2.31)	0.0239*** (2.71)	0.0239* (1.76)
Constant	0.0395*** (12.79)	0.0395*** (6.41)	0.405*** (85.25)	0.405*** (30.03)	0.00920 (1.46)	0.00920 (0.97)
Firm Control	YES	YES	YES	YES	YES	YES
Firm F.E	YES	YES	YES	YES	YES	YES
Year F.E	YES	YES	YES	YES	YES	YES
Clustered Std. Errors	NO	YES	NO	YES	NO	YES
<i>N</i>	103650	103650	101879	101879	50591	50591
<i>R</i> ²	0.0998	0.0998	0.247	0.247	0.0109	0.0109

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 - ▶ Firms **trade-off** the benefit of security issuance the against associated information sensitivity cost
 - ▶ **Conjecture:** Negative r/ship between cash and leverage
 - ▶ **Higher cash holdings** firms might be less **responsive** to the laws

Robustness Tests:

Role of Internal Funds:

	(1)	(2)	(3)	(4)	(5)	(6)
	Mkt Lev	Mkt Lev	Mkt Lev	DebtLss	DebtLss	DebtLss
Law	0.0302*** (10.67)	0.0398*** (5.77)	0.0398*** (12.47)	0.0195* (1.72)	0.0257*** (2.89)	0.0257* (1.76)
LawxCash		-0.0737*** (-2.95)	-0.0737*** (-6.52)		-0.0393 (-1.48)	-0.0393 (-1.11)
Cash	-0.0884*** (-23.39)	-0.0836*** (-12.35)	-0.0836*** (-21.74)	-0.103*** (-8.81)	-0.101*** (-10.88)	-0.101*** (-8.32)
Constant	0.349*** (98.80)	0.349*** (43.09)	0.349*** (98.81)	0.0417*** (3.17)	0.0418*** (4.70)	0.0418*** (3.18)
Firm Controls	YES	YES	YES	YES	YES	YES
Firm F.E	YES	YES	YES	YES	YES	YES
Year F.E	YES	YES	YES	YES	YES	YES
Clustered Std Erros	YES	NO	YES	YES	NO	YES
N	96442	96442	96442	47270	47270	47270
R ²	0.365	0.365	0.365	0.0156	0.0157	0.0157

Robustness Tests:

2008 Financial Crisis:

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Are the documented “treated effects” due to the 2008 financial crisis ?

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2. Empirical Strategy **Difference-in-Difference:**

- ▶ Dummy “**After**” => Account for financing decision(s) before and after the financial crisis

Robustness Tests:

Financial Crisis:

	(1)	(2)	(3)	(4)	(5)	(6)
	Mkt Lev	Mkt Lev	Equitylss	Equitylss	Debt lss	Debtlss
Law	0.0285*** (10.00)	0.0285*** (4.48)	-0.0242*** (-4.66)	-0.0242*** (-3.93)	0.0182** (2.32)	0.0182 (1.60)
After	0.00698*** (5.14)	0.00698*** (2.69)	-0.0149*** (-6.03)	-0.0149*** (-4.04)	0.00591* (1.76)	0.00591 (0.92)
Constant	0.314*** (98.18)	0.314*** (42.13)	0.203*** (34.90)	0.203*** (14.22)	-0.000375 (-0.05)	-0.000375 (-0.03)
Firm Control	YES	YES	YES	YES	YES	YES
Firm F.E	YES	YES	YES	YES	YES	YES
Year F.E	YES	YES	YES	YES	YES	YES
Clustered Std Errors	NO	YES	NO	YES	NO	YES
<i>N</i>	96442	96442	94952	94952	47270	47270
<i>R</i> ²	0.361	0.361	0.218	0.218	0.0124	0.0124

Robustness Tests:

Which Firms Respond More Strongly?

1. **Constrained vs. Unconstrained:**

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- ▶ Constrained Firms:
 - ▶ Access is conditional on value of pledgeable assets in place
 - ▶ Implications for equity issuance

Robustness Tests:

Which Firms Respond More Strongly?:

	(1)	(2)	(3)	(4)
	EquityIssuance	EquityIssuance	EquityIssuance	EquityIssuance
	Unconstrained	Constrained	Unconstrained	Constrained
Whited-Wu Index	LOW	HIGH	LOW	HIGH
Law	-0.00940*** (-3.12)	-0.0138 (-1.32)	-0.00940*** (-2.85)	-0.0138 (-1.26)
Constant	0.0263*** (39.99)	0.103*** (64.71)	0.0263*** (19.32)	0.103*** (81.39)
Firm Controls	YES	YES	YES	YES
Firm F.E	YES	YES	YES	YES
Year F.E	NO	NO	YES	YES
Clustered Std. Errors	NO	NO	YES	YES
<i>N</i>	45262	43320	45262	43320
<i>R</i> ^s	0.0594	0.0162	0.0594	0.0162

Growth in Firm-Level Covariates:

1. Controlling for firm-level determinants does not take into account the effects of changes in firm's determinants

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 - ▶ Treatment Effects might be attributable to **mechanical balance sheet expansion**

Robustness Tests:

Growth in Firm-Level Covariates:

	(1)	(2)	(3)	(4)	(5)	(6)
	Mkt lev	Mkt Lev	$\Delta Mktlev_{t,t-1}$	$\Delta Mktlev_{t,t-1}$	Equitylss	Equitylss
Law	0.0219***	0.0219***	0.0163***	0.0163***	-0.0130***	-0.0130***
	(6.13)	(2.83)	(5.06)	(5.63)	(-2.80)	(-2.60)
$\Delta size_{t,t-1} \times Law$	-0.00243	-0.00243	0.000730	0.000730	-0.0237***	-0.0237**
	(-0.73)	(-0.41)	(0.24)	(0.17)	(-5.49)	(-2.20)
$\Delta size_{t,t-1}$	-0.0178***	-0.0178***	0.0135***	0.0135***	0.0159***	0.0159***
	(-16.60)	(-11.99)	(13.82)	(9.03)	(11.49)	(4.69)
$\Delta tang_{t,t-1} \times Law$	0.0457**	0.0457	0.0204	0.0204	0.170***	0.170***
	(2.02)	(1.50)	(1.00)	(0.52)	(5.83)	(4.46)
$\Delta profits_{t,t-1} \times Law$	-0.000897	-0.000897	0.00702***	0.00702	0.0302***	0.0302*
	(-0.41)	(-0.47)	(2.64)	(0.93)	(10.74)	(1.70)
$\Delta MB_{t,t-1} \times Law$	-0.000141	-0.000141	0.00109***	0.00109	0.00126***	0.00126
	(-0.61)	(-0.41)	(4.54)	(1.10)	(4.22)	(1.21)
$\Delta profits_{t,t-1}$	-0.00208***	-0.00208***	-0.0138***	-0.0138***	-0.0227***	-0.0227
	(-3.17)	(-3.46)	(-12.42)	(-3.75)	(-26.98)	(-1.42)
$\Delta tang_{t,t-1}$	0.0638***	0.0638***	0.209***	0.209***	-0.260***	-0.260***
	(8.18)	(6.33)	(29.66)	(17.08)	(-25.78)	(-12.39)
$\Delta MB_{t,t-1}$	-0.000132***	-0.000132**	-0.00229***	-0.00229***	-0.00129***	-0.00129
	(-2.77)	(-2.09)	(-23.17)	(-4.23)	(-21.20)	(-1.50)
Constant	0.222***	0.222***	0.00649***	0.00649***	0.0701***	0.0701***
	(359.64)	(300.98)	(11.71)	(19.10)	(87.71)	(98.32)
Firm F.E & Year F.E	YES	YES	YES	YES	YES	YES
Clustered Std. Errors	NO	YES	NO	YES	NO	YES
N	90149	90149	90125	90125	88582	88582
R ²	0.00593	0.00593	0.0254	0.0254	0.0175	0.0175

Conclusion:

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