Discussion:

Two Tales of Debt by Kermani and Ma

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Findings

Super cool data from Chapter 11 filings on liquidation and going concern values, very convincing findings.

- Estimated liquidation value of PPE and working capital (inventory and receivables) is 23% of total book assets

  Including cash it is 44%

- 50% of firms with positive leverage, and 75% of non-IG firms have debt $>$ liquidation value.

  Including cash these are 34% and 63%.

Findings

There appears to be a pecking order within debt.

- Firms borrow against standardized, liquid assets first
- Next, they use cash flow based debt with weak control
- At high leverage levels, they turn to cash flow based debt with strong control (covenants or blanket liens)

Implications: Micro Finance

- Debt based on liquidation values rely on property rights institutions
- Debt based on going-concern values (also?) require monitoring technologies
- Capital structure models based on tangible asset collateral constraints are incomplete
- Future research suggestion: Can Fintech improve monitoring, relax constraints? Encourage more going-concern or cash-flow based lending?

Implications: Macro Finance

$$V(z,k,b) = \max_{k',b'}\{[zk^{\alpha} - (k' - (1-\delta)k) - (1+r)b + b' + \beta E[V(z',k',b')|s]\}$$

Subject to:

No equity issuance/non-negative payouts constraint:

$$zk^{\alpha} - (k' - (1-\delta)k) - (1+r)b + b' \geq 0 \qquad [\Gamma]$$

Borrowing constraints (choose one):

Collateral:

$$\theta\beta k' \geq b' \qquad [\Lambda_k]$$

Cash flow:

$$\theta\beta k' + \psi\beta E[z'k'^{\alpha} - (1+r)b|s] \geq b' \qquad [\Lambda_y]$$

Going concern: (New?)

$$\theta\beta k' + \phi\beta E[V(z',k',b')|s] \geq b' \qquad [\Lambda]$$

Implications: Macro Finance

Euler equation for capital k':

$$\frac{1}{\beta} = \frac{(1+\Lambda\phi)E[(\alpha z' k'^{\alpha-1} + (1-\delta))(1+\Gamma')]}{1+\Gamma-\beta\Lambda\theta}$$

Euler equation for borrowing b':

$$\frac{1}{\beta} = \frac{E[(-1-\Gamma')(1+r)](1+\Lambda\phi)}{\Lambda-1-\Gamma}$$

Implications: Macro Finance

- Capital is valuable for output, as collateral, and for going concern borrowing
- Main difference collateral vs. production input: higher productivity relaxes borrowing constraints ($\Rightarrow$ better allocations)

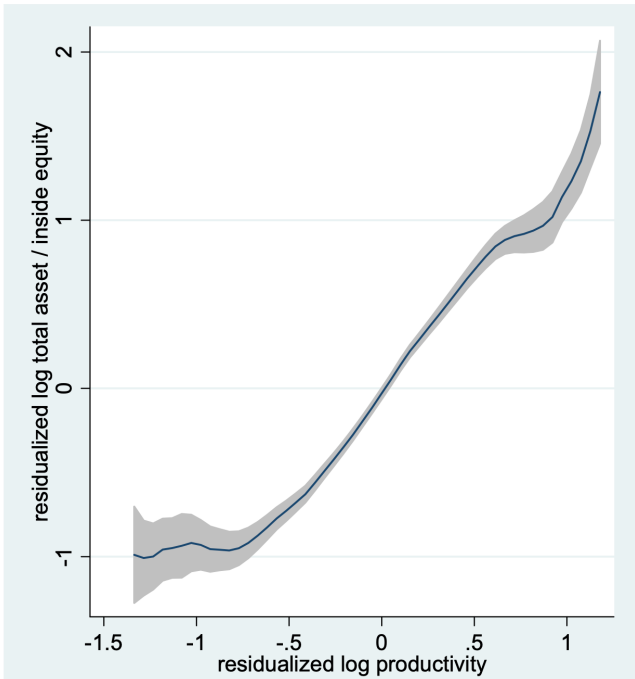


Figure 5: Firm leverage rises with firm productivity

Implications: Macro Finance

What would really make new (?) constraint interesting?

Things that drive a wedge between market and book value of firm and capital:

- adjustment costs
- non-separability and intangible capital
- rents/markups
- risk premia

Implications: Macro Finance

- Misallocation: See Buera, Kaboski, Shin (2011), Moll (2014), Li (2016), Eisfeldt Shi (2018)
- Collateral values and overinvestment, leverage cycles
- Capital structure cycles in book debt ratios (MVD/MVA stable while BVD/BVA cyclical)
- Bond spreads/default modeling
- Interaction with intangible capital and/or labor leverage
- Lending channel of monetary policy
- Little focus on time series here, but borrowing constraints do seem to vary and going-concern or cash flow borrowing constraints may help explain this.

Implications: Explains time series variation?

A.L. Eisfeldt, T. Muir / Journal of Monetary Economics 84 (2016) 116–133

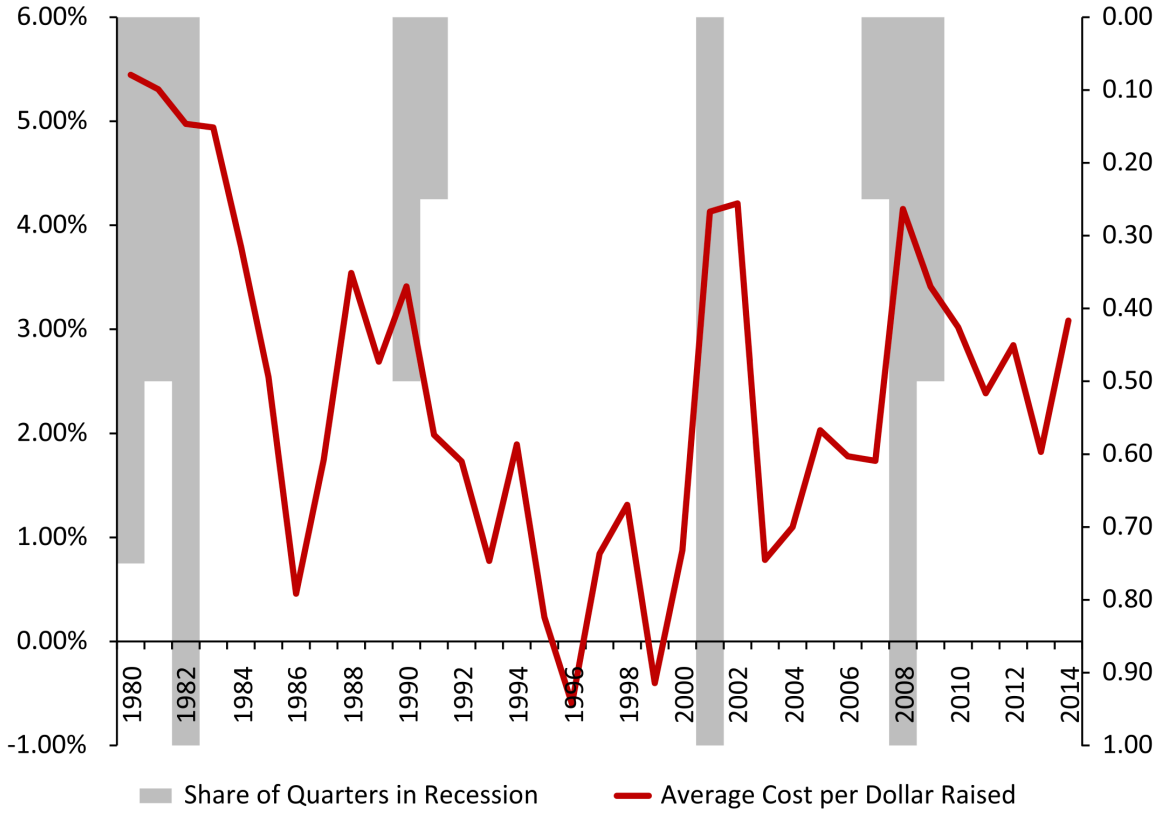
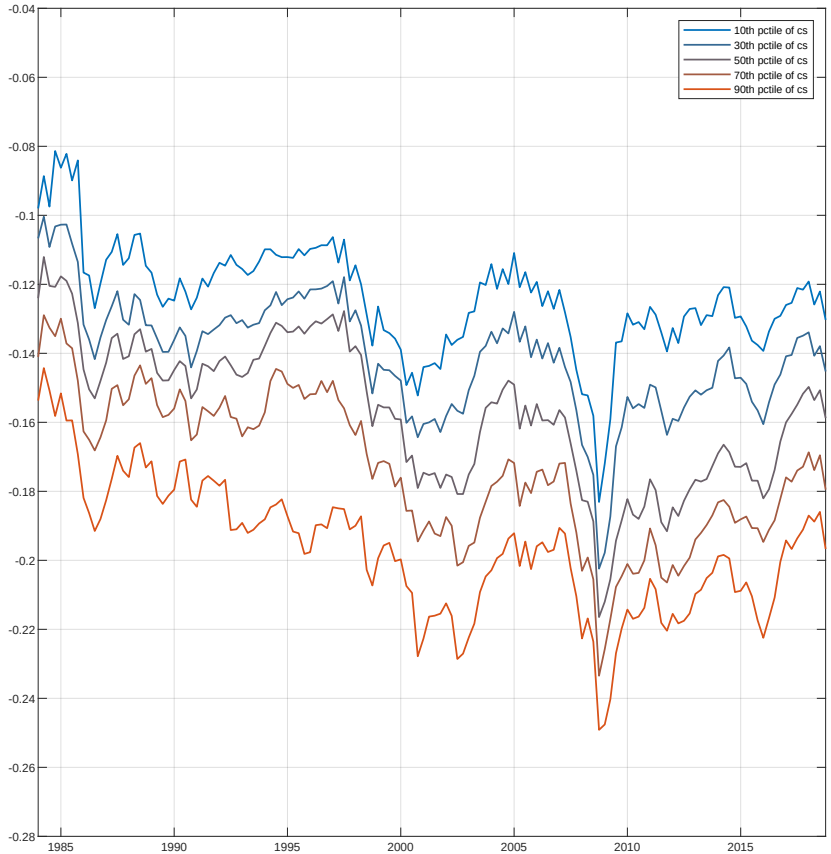


Fig. 1. Estimated average cost of external finance paid per dollar of external finance raised using cross-sectional moments at each date.

Implications: Explains time series variation?

$$\frac{\delta[I/k]/[I/k]}{\delta cs/cs}$$



Chang, D'Avernas, Eisfeldt, 2020

Other Comments

- Cash: Does not seem to disappear in Chapter 11 $\Rightarrow$ should be included in liquidation value?
- Time and geographic effects on liquidation values (vs. industry only)
- Leases: More important for (constrained) smaller firms. In census data:

Leasing, Ability to Repossess, and Debt Capacity

Table 2
Ratio of rental payments to measures of total capital and firm size across asset deciles

Variable	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Rent to total cost of capital services ($\frac{rent}{rent + r\% \times assets + depreciation}$) (%)										
Total	46.64	38.18	32.04	28.62	27.09	23.21	20.70	17.61	14.81	10.65
Structures	74.76	69.93	65.01	61.21	56.68	51.42	45.18	39.49	32.87	23.28
Equipment	20.66	15.38	12.22	10.83	10.35	8.38	8.30	7.42	7.16	5.93
Rent to sum of rent and capital expenditures ($\frac{rent}{rent + capital\ expenditures}$) (%)										
Total	51.38	46.92	42.98	41.45	41.10	37.76	34.22	30.31	25.05	18.30
Structures	43.97	40.57	35.92	37.21	37.21	37.40	34.43	33.19	29.08	23.68
Equipment	25.48	22.03	20.21	20.08	19.54	17.58	17.61	17.65	17.82	15.05
Rent to employment ($\frac{rent}{number\ of\ empolyees}$) (in thousands)										
Total	1.986	2.075	1.857	1.875	1.925	1.781	1.675	1.552	1.445	1.291
Structures	1.347	1.387	1.323	1.314	1.356	1.252	1.178	1.046	0.915	0.678
Equipment	0.639	0.688	0.534	0.561	0.568	0.528	0.491	0.496	0.523	0.558
Rent to total shipments ($\frac{rent}{total\ value\ of\ shipments}$) (%)										
Total	2.92	2.63	2.18	2.18	2.09	1.65	1.47	1.35	1.12	0.75
Structures	1.87	1.74	1.51	1.47	1.37	1.18	1.05	0.88	0.74	0.40
Equipment	1.05	0.89	0.67	0.70	0.72	0.47	0.42	0.47	0.38	0.32
Decile cutoff (millions)										
	0	0.08	0.18	0.34	0.64	1.2	2.2	4.1	8.1	21

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