Discussion of Daniel Green, Corporate Refinancing, Covenants, and the Agency Cost of Debt

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Mar 2018

PS: UCLA was not on the job market this year, so I have not seen the paper presented. I may be off.
PS: 10 minutes so short attempt at intuition recap and some questions.

Key Points

- Firms should exercise (call) outstanding bonds **immediately** when equivalent (fixed-) interest rates have (sufficiently) declined.
- How do you determine rate decline?
- Choice 1: Yield of bond with same cvnts: any yield decline should trigger refi

  Problem: Rare or (for some) impossible.

  Why did you not refi your mortgage daily? X-costs? Optionality (loss)?
- Choice 2: Compare to yield of different bond (more/less cvnts). Prblm: Not exactly comparable.
  - Call delay is value (loss) of (more) cvnts

HY — must/will have 10 cvnts

Today's Yield = 6%/year.

- HY-A financed at 8% (1yr ago HY): had 10 cvnts.
  refis on avg 1 mo late.
  expected foregone interest waste: $0.02.

- HY-B financed at 8% (2yrs ago IG). had 4 cvnts.
  refis on avg 6 mos late.
  expected foregone interest waste: $0.12.

- Value of –6 cvnts: $0.10.

IG — must/will have 4 cvnts

Today's Yield = 6%/year.

- IG-A financed at 8% (2yrs ago, IG). had 4 cvnts.
  refis on avg 1 mo late.
  expected foregone interest waste: $0.02.

- IG-B financed at 8% (1yr ago, HY). had 10 cvnts.
  refis on avg 1 mo **early**.
  expected foregone interest waste: $0.02.

- Value of –6 cvnts: $0.04? $0.02? $0.00?
  not as clear to me. both waste some money would IG-B have delayed 1-mo, too?
  could IG ever volunteer to 10 cvnts?

Asymmetry in Conflict of Interest?

- Refinancing can
  - redistribute value (to creditors) = asym
  - create value (could be due to more or less cvnts!)
- Equity makes decisions. (Q: could IG choose 10 cvnts?)
- if (in some cases) the same investors own old (not new) debt and equity,
  - redistribution is now irrelevant.
  - only the value gain matters.
  - great identification...but useless w/o cases and data.

- No Value Gain, Redistribution Loss to E:
  - Never delay upon credit quality improvement HY$\rightarrow$IG
  - Delay upon credit quality deterioration IG$\rightarrow$HY
- All Value Gain, No Redistribution Loss to E:
  - Never delay upon credit quality improvement HY$\rightarrow$IG
  - Never delay upon credit quality deterioration IG$\rightarrow$HY
  - But value gain would be due to mngrl self-control from more covenants.
  - what if fewer cvnts hurt creditors and refi costs are higher? could IG like more cvnts? delay? voluntary cvnts?
- Paper finds only delay w/ deterioration. $\Rightarrow$ Redistribution Loss to E > V Gain.

Model helps with thinking through tradeoffs of

- high-yield firm choosing many cvnts.
- low-yield firm choosing few cvnts.

How voluntary is voluntary?

Could the model calibration use observed estimates of ΔE and ΔD, rather than just call delay refi information?

- Paper is great showing average cvnts by grade.
- Can it exploit the x-section of some HY firms choosing low cvnts and vice-versa better?
- Could firms up their cvnts by committing themselves without a new debt issue? Would they ever want to (e.g., value increase $\gg$ redistributive effects)? Do they always have to go together?

Not Entirely Clear

- Effect measurement leans very heavily on the changing vs stable benchmarks.
- What if the firms are still somewhat different?
- Could X-Costs be different? (Yes!)
- Could signaling be different? (Yes!)
  - Does lack of delay mean cvnts impose no net cost **on equity** (perhaps), or that firm signals confidence?
  - Does more delay signal lack of confidence? which causes delay, not cost of cvnts per se?
  - (Test: Announcement Response?)
- Would be nice to explain with one **representative** case illustration.

The Good

- (Hangover) model just smells right
- Identification idea of diff-in-diff is very nice, esp w/ structural model.
- Wonderful (picts about) different cvnts by credit quality. (Which cvnts actually matter in the future in predicting default? Do they in the model, or do they just prevent out-of-equilibrium behavior? In eqilibrium, do they get firms more often into deeper default?)
- Always love placebos.

The Not So Good

- what exactly are the alternative hypotheses?
- what are confounding forces (e.g., signaling)?
- what other financing could sub in?
  - currently assumed constant
  - What about covenant alternatives in counterfactual? Collateral? Convertible? Floating? Equity? Bank Debt? Leasing?
  - Don't non-callables still have many covenants?? Collateral?? Favorite Nation Clauses?

Not so Good continued

- ID leans heavily on benchmarks and effect exclusivity.
- what effects of refi-d bonds different to fallen IG vs HY? or merely these (counted) covenants?
- Could other constraints prevent refi (relatively) more for fallen angels? Pride of CEOs? Internal arrangements? Don't wake **sleeping clientele** through refi?
- is refi bp (boundary shift) same if 6 years left vs 3 days left?
- Use more info on $\Delta D, E, V$?
  Cohort-year matching? Time dummies, interest controls, composition changes?

The Ugly: Order of Magnitudes

- If a 10-year bond pays 50bp more **forever**, and the whole benefit begins at time ε, then the value effect should be 1% of the bond or about **0.1%** of the firm. Here, we get a few months delay and infer a value gap of **2-5%**. Probably counfounding factors somewhere.
- \$100 firm. \$15 bond. \$1.50 interest/year. \$0.12 interest per month. Seemingly inefficient delay (10% rather than 11% loan, which is a big 1-mo drop) wastes \$0.02 this month. An inefficient delay of 1 month should cost roughly 0.02% of firm value. 6-mo of inefficient delay is about 0.1% of firm value. Effect is 10-50 times this size.
- Other credit may still have many of the same cvnts? (use for ID?) Surprisingly early refi for HY$\rightarrow$IG. Multiple actions after 6-mo delay?

SKIP REST

DISORGANIZED

Something or more is wrong about counterfactual.

- Effects are way too large.
  - Deadweight losses ex-ante, not just redistributive.
  - I think this is just ex-post loss in E?! (not D+E, not ex-ante)
- And ex-ante dead-weight loss (detracting value) is $\ll$ than equity-cost.
- Don't force 0 vs 50, but reverse IG and HY.

- How often would we expect covenants even to matter a lot?
  What exactly do covenants really prevent that will contingently destroy such huge amounts of value?
- The typical bond may be 10% of the firm, its interest may capitalize to $10\% \cdot 10\%$.
  Force HY not to use any cvnts **ever** (0): 3%
  Force IG to use tons of cvnts **ever** (50): –1%
- Do (differential) cvnts covary with something else that matters more?
- Does time since downgrade matter? Does time to expiration of bond matter? Amount of bond?
- And remember—this is the a-priori deadweight loss?! How often would firms even get into situations where covenants would matter?
- empirically, do fallen angels tend to have a little different num covenants?

- What are the (soft?) substitutes?
  cheap shot: why would IG not issue conditional cvnts that increase when firms go down to HY to resolve potential future conflict.
- Collateral as substitute? Leasing as substitute? Short-term debt?
- What if HY firms could not issue cvnts but still use convertibles?
- Could HY firm commit itself in any other way?
- Could IG or HY firm simply decide not to issue bonds but finance otherwise to begin with? Floating-Interest bonds?