Real Effects of Rollover Risk: Evidence from Hotels in Crisis

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New evidence on borrower-creditor crisis bargaining

- **Idea:** firms with rollover debt facing severe neg. demand shocks force creditors to bargaining table by cutting opex $\longrightarrow$ adjustment cost frictions
- Start with new key facts about hotel rollover risk during COVID
  1. Earnings are low relative to balloon payments $\longrightarrow$ **not a liquidity constraints story**
  2. Most hotel loans were quickly renegotiated to avoid foreclosure
- **Results:** DiD comparing post-crisis (treatment) to pre-crisis (control) maturity borrowers uncovers negative real effects of rollover
  - Range of outcomes: revenues, wage bill, sales/marketing,profits, reserve, other opex
  - Heterogeneity: driven by hotels with strong incentives to renegotiate (high LTV, no ext. option, lockbox, servicer expertise)
- Impressive data work in building out the **full capital stack** tied to each hotel

Case study: Blackstone's Club Quarters default

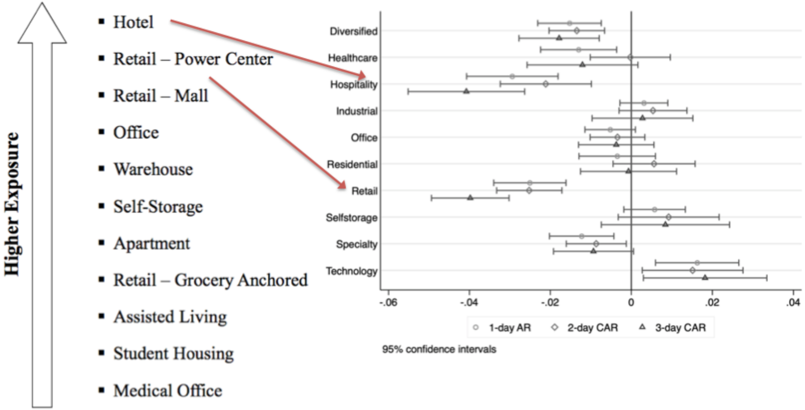
The Club Quarters Philadelphia hotel at 1628 Chestnut St.

- Blackstone defaulted on $274M loan tied to CQs in Philly, SF, Boston, Chicago
  - CMBS loan from BofA set to mature in Nov. 2019, then extended to Nov. 2020 (oops!)
  - Transferred to special servicer in June 2020, and now looking at deed in lieu
  - Philly property in foreclosure as of April 2024
- Strategic cutting of opex is suboptimal but may be **externality benefits** to avoiding foreclosure
- Story also hints at rollover risk **contagion**

Comment #1: is this instead a COVID paper?

- **COVID comes up surprisingly little in the paper**
  - Authors view COVID purely as a demand shock generating a crisis to the hospitality sector
- But COVID was also a geographically clustered public health crisis
  - Staggered stay-at-home orders issued in states with early disease outbreaks
  - Scope of lockdown mandates also varied geographically, concentrated in early months of pandemic (March 2020 – August 2020)
- Idea of the authors' DiD is that any common exposure to COVID-era regulation gets differenced out between early/late maturity borrower properties, conditional on controls
  - Widespread business closures at the county level (Spiegel & Tookes 2021)
  - **Which opex cuts are forced vs. strategic?**
  - Show us what the results look like cutting out symmetric window of months around the lockdown order period?

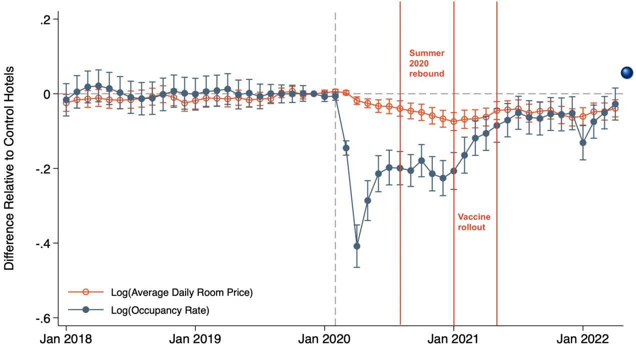
Neg. alphas largest for hotels in early outbreak areas



Source: Ling, Wang, Zhou (2020), "A First Look at the Impact of COVID-19 on Commercial Real Estate Prices," *Review of Asset Pricing Studies*

- Betas generally larger for REITs with hotel properties given exposure to procyclical discretionary spending
  - **External validity:** wedge between early vs. late maturing loans might be larger for hotels than other CRE segments

That said, probably not just a COVID-specific effect



- Persistent effect on prices and quantities even beyond the lockdown period
  - Fast-forward to "inflationary" crisis?
- Fixed effects (FEs) should take care of most of this lockdown-related variation
  - Results hold conditional on FEs
  - With $N = 133$k observations for $\pm$ 12 month bandwidth $\implies$ $\approx$ 5,500 unique hotel properties if balanced panel
  - FEs are almost certainly collinear in many cases
- Still, odd that no discussion of this in the paper given hit to tourism/travel

Comment #2: Role of internal capital markets (1)

- Literature showing how **firms smooth out demand shocks** by equating MPL and MPK across locations (Giroud & Mueller 2015, 2019)
  - Relatively unscathed plants see reductions in employment when other plants within same firm more exposed to subprime housing crisis
  - Internal capital market also matters for reallocation of workers in response to cash flow shocks (LaPoint & Sakabe 2024)
- **Labor hoarding hypothesis:** is strategic opex really just furloughing workers?
  - Adjustment costs for creditor will be larger if workers truly separated from firm
  - In a traditional crisis like GFC, liquidity unconstrained firms retain workers in anticipation of recovery given hiring search costs
    - ★ Labor shortages after COVID $\implies$ *ex post* search costs can be high for firms
  - Ideally, decompose employment growth into dummies for $\Delta L < 0$ vs. $\Delta L > 0$ by location

Comment #2: Role of internal capital markets (2)

- ICM literature runs regressions like this:

$$\Delta \log(L_{i,j,k}) = \alpha + \eta_1 \cdot \Delta \log(demand\_shock_k) + \eta_2 \cdot \sum_{\ell \neq k} \omega_{j,k,\ell} \Delta \log(demand\_shock_\ell) + \varepsilon_{i,j,k}$$

- Use rich cross-sectional variation induced by COVID to calibrate the demand shock
  - **Rollover risk contagion** if $\eta_2 > 0$ within firm j
- Test for heterogeneity in scale or **geographic diversification** of underlying assets
  - Borrower FEs soak up differences due to e.g. REIT-owned properties
    - ★ REITs are 23% control group; 8% of treatment group
  - But if strategic and not about financing constraints, then we should not expect to see any difference in outcomes by ability to reallocate within firm

Comment #3: Strategic opex cuts vs. poison pill (1)

- Argument of model is that firms with debt maturing during crisis cut opex when...
  - Creditors face adjustment costs associated with operating the hotel post-foreclosure
    - ⋆ Does the functional form of the adjustment costs matter?
  - Debt is not too small (redeem) or too large (default) relative to operating profits

- Could do the same with CAPX as well, but capital is assumed to be static:

$$F(K, L_t) = K^{1-\alpha} \cdot L_t^{\alpha}$$

- **Why does this matter for the results?**
  - Alternative story: reduce opex to harm recovery value in event of foreclosure
  - Opex is included in NOI, and $P = NOI/$cap rate is main CRE valuation method
  - In contrast, CAPX is not included in NOI since it is considered non-recurring

Playing with opex vs. CAPX is a common accounting trick

Significantly, Hindenburg's forensic review concludes that:

(1) Equinix inflates its adjusted funds from operations ("AFFO"), the key profitability metric for REITs, by at least 22% during 2023 alone;

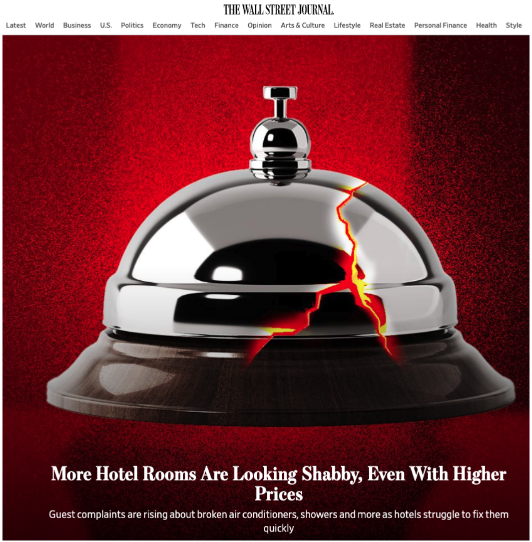
(2) "[a] key accounting trick to boost AFFO is to misclassify 'maintenance CapEx' as 'growth CapEx,' giving the appearance that the company's cost to maintain its revenue base is lower than it actually is, making the company appear more profitable[;]"

(3) "[w]hen Equinix transitioned to become a REIT in 2015, it began using AFFO as a key metric in determining executive bonuses[;]"

(4) "[d]uring our investigation, former employees and executives provided an array of examples of obvious maintenance CapEx being classified as growth CapEx in order to boost reported AFFO[]" and "[t]his manipulative practice stems from top management[;]" and

(5) "[w]e estimate that Equinix's manipulation of maintenance CapEx has resulted in a cumulative $3 billion boost to AFFO since its 2015 conversion to REIT status."

Evidence of delayed hotel renovation projects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More Hotel Rooms Are Looking Shabby, Even With Higher Prices

Guest complaints are rising about broken air conditioners, showers and more as hotels struggle to fix them quickly

- *WSJ* on Nov. 10, 2022

While some big properties used the pandemic to get ahead on renovations, most were trying to survive as bookings plunged. Many put funds typically reserved for improvements toward expenses such as leases. Even those with the funds to make improvements had to navigate a dearth of available workers and Covid restrictions, analysts say.

Hotels typically renovate or convert 300,000 rooms in the U.S. each year out of the approximately 5.5 million available, says Bruce Ford, director of global business development at research firm Lodging Econometrics. This year, the number being renovated is likely 20% to 25% higher. The cycle will likely continue for the next year or two as more rooms are in need of renovation, he says.

Comment #3: Strategic opex cuts vs. poison pill (2)

- Small piece of evidence already in paper that there were also CAPX cuts
  - **Replacement reserve (RR):** lender requires borrower to set aside fraction of revenues in "escrow" to pay for unforeseen CAPX needs
  - Payment into RR account falls by $\approx$ \$1.2M (Table IX)
  - Assuming a standard 1% reserve imposed by primary lender and \$120 million annual income, effect size also consistent with lender waiving RR as a modification
- **Lean into this result to rule out poison pill channel**
  - CoStar will have limited information on CAPX for properties included in CMBS
  - Too few REITs in sample (only 8% of treatment group) to collect this information from the 10-Ks/Schedule IIIs
- Could be an important dimension to the heterogeneity by owner-operator to extent brands have mandated **property improvement plans (PIPs)** across franchisees
  - Branded properties cut expenses by less in response to pandemic maturity (Figure XVII)

Ripple effects of adjustment costs after COVID

"Everybody played very nicely in the sandbox during COVID, whether it was lenders, brands or investors, because it was nobody's fault. Those days are over," said Daniel Lesser, president and CEO of New York-based LW Hospitality Advisors. "The pressure to get any deferred PIPs done will ratchet up as time goes on."

Indeed, hotel brands are stepping up their demands for PIP compliance as U.S. room demand has reached levels not seen since prior to the pandemic. Such expenses may involve more traditional amenities such as "soft goods" including bedding, carpeting, wall art and window treatment as well as improvements in food-and-beverage operations and banquet facilities.

But hotel owners are also being asked to foot the bill to upgrade their properties' technology, whether it be faster Wi-Fi capability, new point-of-sale capabilities or touchless check-in.

Source: CoStar, "Bill Comes Due for Hotel Owners Who Delayed Required Renovations," March 25, 2024.

- Negotiation problem between owners and parent brand is interesting in its own right!

Takeaways and thoughts for future work

- Very careful analysis of knock-on effects of CRE lending using **non-regulatory** data
- Rollover risk has real effects on output in the hospitality sector post-COVID
  - **Unlikely due to liquidity constraints** $\longrightarrow$ reliance on IO loans with outsized balloon payments relative to EBITDA
  - Facts can be explained by model of strategic cutting of opex to force lenders to negotiate
- **Large DiD effects comparing crisis to non-crisis maturity borrowers**
  - Magnitude of effects $\uparrow$ due to legally enforced cuts in control group $\longrightarrow$ what would happen in a "normal" crisis?
- Some alternative mechanisms that might warrant further discussion
  - Poison pill vs. adjustment costs, role of lockdowns, internal capital markets
- **Future work:** multiplier effects due to avoiding foreclosure externalities?

THANKS!