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# Economic Fundamentals, Capital Expenditures and Asset Dispositions

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## Abstract

The real estate literature recognizes the real option to invest in capital expenditures (CAPEX) or sell a property but treats these options as independent. We show that these real options are interconnected. We provide empirical evidence that, consistent with the real option framework, CAPEX increases in income growth expectations but declines in their volatility; that CAPEX are partially capitalized into property market values; and that CAPEX significantly reduce the subsequent likelihood of sale. We also present evidence that, controlling for market timing, past property performance influences CAPEX but not disposition choices, consistent with a value-add investment strategy.



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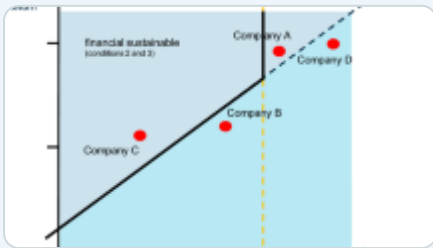
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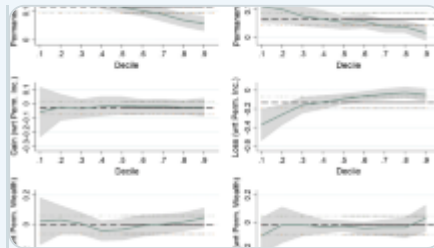
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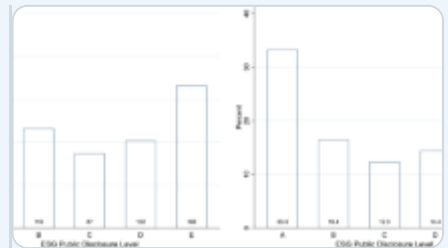
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## Notes

1. We assume that leases are reviewed or renewed so that rents can be reset to the prevailing market level.
2. See <http://www2.philly.com/philly/blogs/inq-phillydeals/Philly-office-to-apartment-conversions-surge-report.html>

3. See <https://www.bisnow.com/philadelphia/news/multifamily/philadelphia-industrial-multifamily-conversions-finite-resources-80191>
4. See <https://www.wsj.com/articles/land-squeezed-developers-convert-office-buildings-into-hotels-1493736404>
5. Those represent accounting anomalies where excess reserves for CAPEX projects were booked and then reversed when the actual cost of the projects was revealed.
6. It is important to note that we do not consider routine repairs and maintenance, which would fall under operating expenses, nor tenant incentives and lease commissions.
7. It is possible for a property to be bought and subsequently sold quickly, potentially within the same year. There are no instances of “flipping” properties in our final sample.
8. These results are robust to the inclusion of a variable that measures the time since acquisition. However, the homogeneous and low baseline likelihood of sale in the NCREIF data works against us establishing empirical evidence for a significant relationship between CAPEX and subsequent disposition; as a result our estimates can be regarded as conservative.

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