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Title: **Real Estate Holdings of Public Firms and Collateral Discount**

Authors: Irem Demirci, Umit C. Gurun, and Erkan Yonder
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This paper examines the sale of property by owner-occupiers. In particular, the authors look at the effect of a company's financial health on the prices received when selling real estate, and the effect of a property's characteristics on its value as collateral. The results may be of interest to property investors looking at the conditions under which they might get "fire sale" prices on properties when buying from distressed sellers, as well as to lenders (and other debt investors) interested in the value of different types of properties as collateral.

The authors combine two main databases for their research. Data from Real Capital Analytics (RCA) is used to identify all property transactions of $2.5 million or more over the period from 2000 to 2013. The property types examined are limited to industrial, retail, and office. For each transaction the name of the seller of the property is then matched to Compustat - a database of financial statement data of publicly traded firms. This allows the authors to look at the characteristics of the transaction and property, and the characteristics of the selling firm itself. Sales by financial firms, REITs, utilities, and government entities are excluded so as to concentrate on properties sold by owner-occupiers. The final sample consists of 2295 properties sold by 323 public firms.

First, the authors classify each firm by its likelihood to be suffering financial distress. They do this is by measuring the leverage ratio of the firm relative to the average for its industry (they also investigate other measures). Based on this they then break the firms into categories of high, medium or low leverage. Controlling for the effect of various characteristics of both the property and the firm, they find more highly levered firms receive lower prices (measured as price per square foot) for properties when selling. Based on this, it does seem that a type of "fire sale" effect does exist; more distressed sellers sell for less.

Next, the authors argue, based on past research, that the "discount" they observe when sellers are distressed will vary depending on two important characteristics of the property: how flexible the property is in terms of it being able to be redeployed into other uses, and how many potential buyers of the asset there are in the same geographic region. They classify office and flex-industrial properties as assets that are able to be redeployed to other uses relatively easily, while retail and other industrial properties are assumed less flexible in use (i.e. an office building could be used by a firm in almost any industry, whereas retail properties are much harder to repurpose). They find that the discount on price observed for distressed sellers does not exist for assets that are redeployable (office and flex). This may be important to real estate investors looking to gain by opportunistically buying assets from distressed sellers; in this research those gains are only, on average, seen in the retail and warehouse sectors. The authors then examine the effect of the number of possible buyers of an asset. They measure the number of possible buyers in a few ways, including the number of other firms in the same industry as the seller who mention the U.S. state of the property in their financial statements, and the number of firms in the same industry that are headquartered in the same U.S. state as the property (the basic idea is that when there are more firms in the same line of business as the seller and who operate in the same location as the property, there are more possible buyers of the property). The authors then look at their tests again and find that a larger number of possible buyers significantly reduces the discount in a distressed sale.

Finally, since the value of a property as collateral for debt will depend on its value when the firm is facing distress, the paper looks at the spreads on the firms' debt and relates that to the value of the firms' property holdings in the event of distress occurring (the

estimate of distressed value is based on the results from the prior tests on price discounts). The results show that lenders do take into account the nature the assets used for collateral. Spread are high when a firms' properties are not easily redeployable and when there are fewer potential buyers in the same geographic area.