

[Home](#) > [The Journal of Real Estate Finance and Economics](#) > Article

Real Estate Risk, Corporate Investment and Financing Choice

Published: 22 March 2017


Volume 57, pages 87–113, (2018) [Cite this article](#)



[The Journal of Real Estate Finance and Economics](#)

[Aims and scope](#) →

[Submit manuscript](#) →


[Xiaoying Deng](#) ¹, [Seow Eng Ong](#)² & [Meijun Qian](#)³

 **3920** Accesses [Explore all metrics](#) →

Abstract

This paper empirically examines how real estate risk impacts corporate investment and financing decisions. Using a panel of United States firms from 1985 to 2013, we document that real estate risk is negatively associated with firms' long-term investments and long-term external financing in equity and debt. The results are robust to different risk measurements and in particular salient during the financial crisis period when the endogeneity between risk and investment is less of a concern. The effect on firm leverage, however, depends on risk measures. Overall, in contrast to previously documented positive effects of the real estate value, real estate risk exposure exhibits mostly the opposite effects on investment, financing and capital structure. This difference is consistent with option value determinants. Findings in this paper shed new lights on the impact of real estate holding on corporate decisions, offer a new explanation for the

underperformance of hedge funds' real estate strategies, and confirm the theoretical predictions in Deng et al. ([2015](#)).

 This is a preview of subscription content, [log in via an institution](#)  to check access.

Access this article

[Log in via an institution](#) →

[Buy article PDF 39,95 €](#)

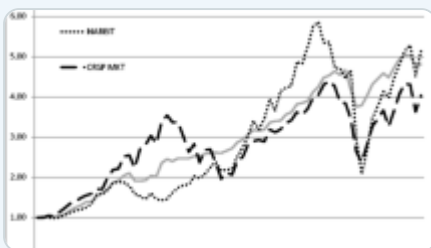
Price includes VAT (Poland)

Instant access to the full article PDF.

Rent this article via [DeepDyve](#) 

[Institutional subscriptions](#) →

Similar content being viewed by others



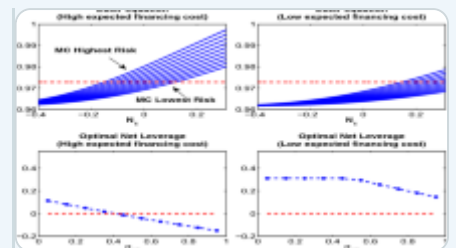
Real Estate Risk and Hedge Fund Returns

Article | 02 August 2015



Does Debt Management Matter for REIT Returns?

Article | 06 January 2022



Cash flows risk, capital structure, and corporate bond yields

Article | 07 January 2019

Notes

1. High adjustment cost associated with real estate assets is documented both in

business media press and academic research papers. For example, WSJ (3/26/01) expressed analysts' concerns about Hilton and Starwood in particular because "owning hotels is more risky than managing or franchising them because of the cost of carrying and maintaining property". In term of magnitude, Tuzel ([2010](#)) set the adjustment cost parameter for real estate investment to 2.4 but other investment 0.8, after calibrations to match the volatilities of structures and equipment investment growth.

2. The literature has demonstrated that, the value of real estate assets is positively associated with corporate investments through collateral functions in the lending channel. Gan [2007a](#) uses the Japanese land market collapse in 1990s as a natural experiment, to show that through the lending channel, Japanese firms that hold lands suffer from the credit crunch more severely, especially when the firms have no alternative external financing channel. Gan ([2007b](#)) further shows the real effect of the collateral value loss. Manufacturing firms reduce their investment significantly as firms with larger losses in collateral value obtain a smaller loan amount.
3. The analysis on Japan however is restricted to the time-series dimension of the valuation changes. There is no characterization of the microeconomic mechanism through which firm-level collateral value changes due to the asset risk. The financing frictions during the collapse of Japanese land market may also bias the effect upward.
4. The FTSE NAREIT Composite REITs index is a market capitalization-weighted index of all tax-qualified publicly-traded REITs, including equity REITs (EREITs), hybrid REITs (HREITs), and mortgage REITs (MREITs). Observations of the index returns are available at the National Association of Real Estate Investment Trusts (NAREIT), www.nareit.com.
5. We infer equity issuance by observing the change of the shares (scaled by multiple stock price and divided by book value of total assets at the end of the year). As firms may repurchase or issue shares for option compensation, we

require the change of equity to be larger than 1% to be quantified as equity issuance equal 1, otherwise 0.

6. This paper report regression results where the specification does not include industry fixed effect, although our key results are robust to industry fixed effects and the table are available upon request. This report decision is made to keep our paper focused by avoiding distraction by an interesting finding on a control variable that is not central to this paper's focus but important for the broad literature: Contrary to the existing literature that real estate value has a positive relation with investment, when we include the risk of the real estate and industry in the analyses, the coefficients on this control variable become negative. This finding cast new light or possibly doubts on the existing studies. That is, the existing evidence on the effect of real estate value might be likely due to the failure of control real estate risk and industry at the same time. Given its impact, we think, if to report, it is better to be accompanied by a rigorous further investigation, which practically needs another differently focused and carefully executed paper. Since it is not the focus of our paper and has no impact on our results, we decide to report results without losing this paper's own focus.

References

Ambrose, B.W., Cao, C., & D'Lima, W. (2013). Real estate risk and hedge fund returns. Working paper.

[Google Scholar](#)

Berger, A. N., & Udell, G. F. (1990). Collateral, loan quality and bank risk. *Journal of Monetary Economics*, 25, 21-42.

[Article](#) [Google Scholar](#)

Berk, J. B., Green, R. C., & Naik, V. (1999). Optimal investment, growth options,

and security returns. *Journal of Finance*, 54, 1553-1607.

[Article](#) [Google Scholar](#)

Bernanke, B., & Gertler, M. (1989). Agency costs, net worth, and business fluctuations. *American Economic Review*, 79, 14-31.

[Google Scholar](#)

Bernanke, B., & Gertler, M. (1990). Financial fragility and economic performance. *Quarterly Journal of Economics*, 105, 87-114.

[Article](#) [Google Scholar](#)

Brennan, M.J., Schwartz, E. S. (1985) Evaluating natural resource investments. *The Journal of Business*, 58, (2):135-157.

Carlson, M., Fisher, A., & Giammarino, R. (2004) Corporate investment and asset price dynamics: implications for the cross-section of returns. *Journal of Finance*, 59, 2577-2603.

[Article](#) [Google Scholar](#)

Carlson, M., Fisher, A., Giammarino, R. (2006) Corporate investment and asset price dynamics: Implications for SEO event studies and long-run performance. *The Journal of Finance*, 61, (3):1009-1034

Chaney, T., Sraer, D., & Thesmar, D. (2012). The collateral channel: how real estate shocks affect corporate investment. *American Economic Review*, 102, 2381-2409.

[Article](#) [Google Scholar](#)

Chang, C. W., & Chang, J. S. K. (2003). Optimum futures hedge in the presence of

clustered supply and demand shocks, stochastic basis, and firm's costs of hedging. *Journal of Futures Markets*, 23, 1209–1237.

[Article](#) [Google Scholar](#)

Cooper, I. (2006). Asset pricing implications of nonconvex adjustment costs and irreversibility of investment. *Journal of Finance*, 61, 139–170.

[Article](#) [Google Scholar](#)

Deng, X.Y., Ong, S.E., & Qian, M.J. (2015). Asset heterogeneity, optimal investment and financing channels, Working paper.

[Google Scholar](#)

Dixit, A. K., and Pindyck, R. S. (1994). *Investment under uncertainty*. Princeton: Princeton University Press.

Funke, C., Gebken, T., Gaston, M., & Lutz, J. (2010). Real estate risk in equity returns. Working paper.

[Google Scholar](#)

Gan, J. (2007a). Collateral, debt capacity, and corporate investment: evidence from a natural experiment. *Journal of Financial Economics*, 85, 709–734.

[Article](#) [Google Scholar](#)

Gan, J. (2007b). The real effects of asset market bubbles: loan- and firm-level evidence of a lending channel. *Review of Financial Studies*, 20, 1941–1973.

[Article](#) [Google Scholar](#)

Glaeser, E. L., & Gyourko, J. (2005). Urban decline and durable housing. *Journal of Political Economy*, 113, 345–375.

Jorion, P. (1990). The exchange rate exposure of U.S. multinationals. *Journal of Business*, 63, 331-345.

[Article](#) [Google Scholar](#)

Kiyotaki, N., & Moore, J. (1997). Credit cycles. *Journal of Political Economy*, 105, 211-248.

[Article](#) [Google Scholar](#)

Ling, D., Naranjo, A., & Ryngaert, M. (2012). Real estate ownership, leasing intensity, and value: do stock returns reflect a firm's real estate holdings? *The Journal of Real Estate Finance and Economics*, 44, 184-202.

[Article](#) [Google Scholar](#)

Liu, P., Liu, C.H., & Zhang, Z. (2012). Real assets, liquidation value and choice of financing. Working paper.

[Google Scholar](#)

Mayer, C. (1990). Financial systems, corporate finance, and economic development. In R. G. Hubbard (Ed.), *Asymmetric information, corporate finance and investment*. Chicago: University of Chicago Press.

[Google Scholar](#)

McCauley, R. N., & Yeaple, S. (1994). How lower Japanese asset prices affect Pacific financial markets. *Federal Reserve Bank of New York, Quarterly Review*, Spring, 19-33.

McDonald, R. L., Siegel, D. R. (1985) Investment and the valuation of firms when

there is an option to shut down. *International Economic Review*, 26, (2):331–349.

McDonald, R., & Siegel, D. (1986). The value of waiting to invest. *The Quarterly Journal of Economics*, 101, 707–728.

[Article](#) [Google Scholar](#)

Nelson, T., Potter, T., & Wilde, H. (2000). Real estate assets on corporate balance sheets. *Journal of Corporate Real Estate*, 2, 29–40.

[Article](#) [Google Scholar](#)

Peek, J., & Rosengren, E. S. (1997). The international transmission of financial shocks: the case of Japan. *American Economic Review*, 87, 495–505.

[Google Scholar](#)

Shleifer, A., & Vishny, R. W. (1992). Liquidation values and debt capacity: a market equilibrium approach. *The Journal of Finance*, 47, 1343–1366.

[Article](#) [Google Scholar](#)

Tuzel, S. (2010). Corporate real estate holdings and the cross-section of stock returns. *Review of Financial Studies*, 23, 2268–2302.

[Article](#) [Google Scholar](#)

Author information

Authors and Affiliations

School of Public Economics and Administration, Shanghai University of Finance and Economics, 777 Guoding Road, Shanghai, 200433, China

Xiaoying Deng

Department of Real Estate, National University of Singapore, 4

Architecture Drive, Singapore, 117566, Singapore

Seow Eng Ong

Research School of Finance, Actuarial Studies and Statistics, Australian

National University, CBE 26C, Kingsley, Acton, ACT 2601, Australia

Meijun Qian

Corresponding author

Correspondence to [Xiaoying Deng](#).

Appendix

Table 8 Variable definitions

Table 9 The industry distribution of the sample firms

Rights and permissions

[Reprints and permissions](#)

About this article

Cite this article

Deng, X., Ong, S.E. & Qian, M. Real Estate Risk, Corporate Investment and Financing Choice. *J Real Estate Finan Econ* **57**, 87–113 (2018). <https://doi.org/10.1007/s11146-017-9599-y>

Published

22 March 2017

DOI

Issue Date

July 2018

Keywords

[Real estate risk](#)

[Corporate investment](#)

[External financing](#)

Jel Codes

[G12](#)

[G30](#)

[G32](#)

Search

Search by keyword or author



Navigation

Find a journal

Publish with us

Track your research