Journal of Property Research ›
Volume 22, 2005 - Issue 4: Special Issue for the European Real Estate Society (ERES) Conference 2005

Original Articles

REIT Returns and Pricing: The Small Cap Value Stock Factor

Randy Anderson, Jim Clayton, Greg Mackinnon & Rajneesh Sharma

Pages 267-286 | Received 08 Aug 2005, Accepted 05 Jan 2006, Published online: 21 Aug 2006

Cite this article https://doi.org/10.1080/09599910600558454

Full Article | Figures & data | References | Citations | Metrics
Reprints & Permissions | Read this article | Share

Abstract

This study employs a variance decomposition approach to explore the investment characteristics of equity REITs within a multi-factor model relating REIT returns to returns to small capitalization value stocks, small cap growth stocks, large cap stocks, bonds and private real estate. It also examines the changing nature of the return process over time, utilizing a finer partition of the stock market factor than many previous researchers have by distinguishing between small capital growth and small capital value stocks. This decomposition allows the effect of small stocks to be measured more accurately. In addition, this study is unique in that it incorporates a real estate factor at the monthly frequency, constructed from monthly REIT share price premium to NAV estimates. Our results show that REITs have a significant small capital value component, yet also exhibit a large sector-specific component that has increased in importance in recent years. Conversely, REIT return volatility is not highly related to

small capital growth stocks, and the contribution of large capital stock drivers to REIT volatility has declined over time. On a monthly level, private real estate returns play only a marginal role in explaining REIT volatility. Our results contribute to an improved understanding of the role played by REITs in portfolios diversified across asset classes.

Keywords:

Equity REITs | small capital value stocks | multi-factor model | variance decomposition

Acknowledgements

We are grateful to participants in our session at the 2005 ERES meetings and four anonymous reviewers for helpful comments. We thank Brad Stevenson for excellent research assistance. Clayton and MacKinnon also wish to acknowledge the Real Estate Research Institute (RERI) for funding a previous project upon which this article builds.

Notes

1. While the evaluation horizon for portfolios, or portfolio managers, may be annual or even multi-year, the basic unit of evaluation for calculating risk/return measures is often monthly.

2. The order in which the orthogonalizing regressions are performed does matter. The derivation of equation (3) treats large capital stocks as the base, or numeraire, asset class. This means that the other asset classes are orthogonalized relative to large capital stocks, a point illustrated by the fact that actual (or raw) large capital stock returns appear as an explanatory variable. We discuss the implications of this in detail below.

3. The appraisal-based return index produced by the National Council of Real Estate Investment Fiduciaries (NCREIF) is available quarterly over the 1978–2003 period, but suffers from well documented ‘smoothing’ problems, due in part to the appraisal-based nature of the index and also the seasonality in the timing of appraisals. Clayton and

MacKinnon (2003) employ unsmoothed or de-lagged versions of the NCREIF index in testing for a link between REIT return and private real estate return variability.

4. Green Street does not follow every firm that is part of the NAREIT index. Based on numbers, it follows approximately half of the 180 equity REITs in the NAREIT index, but based on market capitalization these firms comprise more than 70% of the NAREIT index.

5. We also experiment with a total return series that incorporates a monthly income return component, but given the focus on monthly REIT return volatility, the inclusion of a relatively stable income return does not affect the results reported later in the article.

6. For additional analysis of the Green Street NAV index, including a brief comparison with the raw NCREIF value index, see Green Street Advisors (2002). Both the average REIT sector premium to NAV and the special report are available online at www.greenstreetadvisors.com/sampleresearch.html.

7. While Lee and Stevenson (2005) do not explicitly consider the idiosyncratic component, the large role it plays in REIT pricing documented here is consistent with their result that large and small cap stock returns do not 'span' the space of REIT returns.

8. This data is taken from Ken French's website at http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/. Details of the construction of the SMB and HML factors are provided there and in Fama and Franch (1993).