

EXECUTIVE SUMMARY

THE DETERMINANTS OF REAL ESTATE ASSET ALLOCATIONS FOR LIFE INSURERS

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Traditionally, institutional real estate research has focused on how much of an institution's portfolio should be allocated to real estate. An equally important issue concerns whether an institution elects to invest in real estate at all. A life insurance company as a prospective real estate investor has many vehicles available for real estate exposure in its portfolio. However, for practical purposes a life insurance company must be of sufficient size in order to hold individual, institutional-grade properties in its portfolio.

This study investigates the factors that insurers consider when choosing their real estate asset allocation. We document the determinants of real estate allocation at the firm level for life insurance companies between 1990 and 1999. Our empirical tests are based on existing theoretical models that relate the investment decisions of a firm to scale economies, agency theory, and regulatory influences. Our empirical method explicitly addresses the sequential nature of the decision process via a two-stage model, with the first stage modeling the probability of a positive real estate allocation and the second stage modeling the extent of real estate investment for the subset of firms that choose a positive allocation.

The empirical analysis yields a number of interesting findings. First, we find that the size of an insurer not only affects the probability of the firm investing in real estate, but also influences the extent of real estate investment, with larger firms allocating a greater proportion of invested assets to real estate. These results not only reflect barriers to entry in the institutional real estate market, but also suggest the existence of economies of scale in real estate investment.

Another key finding is that mutuals are more likely to invest in real estate than are stock insurers, and among those firms that do invest in real estate, mutuals are likely to have a greater real estate allocation than stock insurers. If real estate is viewed as a diversification tool that can actually reduce the overall risk of an insurer's asset portfolio, then these results can be interpreted to support the agency theory argument that mutual insurers tend to prefer less risky activities than stock insurers.

The liability structure of the insurer also appears to influence the real estate asset allocation decision. Insurers who receive a greater proportion of their premium income from life insurance, as opposed to health insurance and annuities, tend to be more likely both to hold real estate and to hold a greater proportional allocation of real estate. This is consistent with insurers matching the long-duration liabilities associated with real estate with the long-duration asset category of real estate.

We find that cash holdings are negatively related to real estate investment, while stock holdings are positively related to real estate investment, in both the first and second stages of the model. The negative association with cash may reflect agency problems that cause managers to prefer holding excess cash and a sub-optimal amount of illiquid real estate.

Investment real estate holdings are found to be positively related to holdings of occupied real estate, real estate acquired in satisfaction of debt, real estate mortgages, as well as less direct forms of real estate ownership such as those reported under other long term assets. Thus, these alternative forms of investment in real estate do not appear to substitute for straight investment real estate. Instead, it may be that since the underlying asset in all these investments is real estate, the same skill set and infrastructure is needed to manage investment real estate as is needed to manage occupied and foreclosed real estate and mortgages, resulting in a positive association.

Finally, we find empirical support for the anecdotal evidence that the introduction of the NAIC's Risk-Based Capital requirements in 1993 has made equity real estate a less attractive investment for life insurers. Specifically, we find that in the pre-RBC period, life insurers are more likely to have investment real estate than in the post-RBC period, and of those who do have positive real estate allocations, the allocations tend to be higher in the pre-RBC period than the post-RBC period. Some additional tests indicate that this effect has been mitigated as the investment climate improved throughout the 1990s.

Overall, we conclude that structural changes in the insurance industry (e.g., demutualizations and shifts in the business mix of life insurers) may be more economically significant in defining future institutional real estate allocations than the traditional notion of scale-based barriers to entry.