

Critique

OPTIMAL HOLDING PERIOD ANALYSIS: YET UNRESOLVED

by Bruce N. Wardrep

Austin J. Jaffe presented a criticism of the role of optimal holding periods in real estate analysis to the readers of *Real Estate Issues* in "Optimal Holding Period Analysis: Much Ado About Not Much."¹ Jaffe concludes that "since changes in the holding period have been found to be relatively insignificant, the recent attempts to identify, measure, and analyze the optimal holding periods for real estate projects nearly becomes a futile exercise."² Jaffe's conclusion that the importance of optimal holding period analysis for decision making is barely worth the effort, if useful at all, is based on an analysis by Messner and Findlay³ and on his own research.⁴

The main purpose of the Messner and Findlay paper was, as I see it, to introduce the FMRR technique. That and subsequent papers suggest that a use of FMRR may be to identify optimal holding period. Jaffe's own quote may suggest the importance of the role of investment abandonment in real estate decision making. He quotes: "From this analysis, we can say that an investor planning to hold the property $15 \pm$ three years would optimize his position ... The greater the spread in years, the less important are exact knowledge of the investor's circumstances or market conditions at the optimal moment of disposition."⁵

Investment decision making is a trade-off between the holding period of an investment and its income producing life. As the difference between the time horizons becomes larger, risk increases and should be offset by increased return.

Trainer, Yawitz and Marshall show this for fixed-income, fixed-principal securities.⁶ They showed an

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absolute risk in rate of return of up to 8.15 times for holding periods unmatched to security lives. (The risk measurement is the mean absolute value of unanticipated changes in return over the holding period.) In their example, a 50 percent change in



holding period, by a reduction from 10- to 5-year holding periods for a 30-year security, yields a 49 percent increase in risk. It is assumed that such an increase in risk would underscore the importance of holding period analysis. The parallel nature of 30-year securities and real estate investments is important in terms of durability of the investment vehicle and the timing of abandonment decisions. The fixed-principal nature of the security is quite different from real property investments.

This last point elicits a comment about Jaffe's model. Jaffe has described a bond-type investment, and he includes depreciation, debt considerations and income tax considerations. The model does not, however, allow for any changes in income except for

the decreasing tax deductibility of the debt service payments, creating a nearly fixed-income status. More importantly, the model does not allow for a change in the eventual selling price of the asset, that is, treats it like a fixed-principal security. The reader may be misled and believe that IRR is insensitive to holding period when one cannot draw that conclusion from the data given. What Jaffe presents is a case of apples, from which he concludes that the presence of oranges is unimportant. Trainer, Yawitz and Marshall deal with the situation described in Jaffe's model, bond-type investments, but extend the analysis to recognize price changes.⁷

One may simplify assumptions, but it is not okay to assume away the problem for purposes of simplifying the model. The analyses criticized by Jaffe do not assume that real estate is a fixed-principal security. Perhaps there is a lesson to be learned from those analysts, the portfolio managers, and the financial managers. We have not learned, however, from the sensitivity analysis of a situation that is constant. Jaffe has resolved little regarding the importance of the analysis of optimal holding periods.

The bottom line? The jury is still out on the importance and the cost effectiveness of optimal holding

period analysis for real estate decisions. The key problem is an analysis that can disaggregate the effects of changes in various input variables simultaneously using a simulation approach. This is a difficult problem, yet one that should be addressed prior to drawing conclusions on any single factor specified in the analysis.

NOTES

1. Austin J. Jaffe, " 'When Should Real Estate be Sold?': A Comment" and "Optimal Holding Period Analysis: Much Ado About Not Much," *Real Estate Issues* 4 (Summer 1979), 79-95.
2. *Ibid.*, 93.
3. Stephen D. Messner and M. Chapman Findlay, III, "Real Estate Investment Analysis: IRR Versus FMRR," *The Real Estate Appraiser* 41 (July/August 1975), 5-20.
4. Jaffe, *supra* note 1.
5. *Ibid.*, 89 and Messner and Findlay, 18-19.
6. Francis H. Trainer, Jr., Jess B. Yawitz, and William J. Marshall, "Holding Period is the Key to Risk Thresholds," *The Journal of Portfolio Management* 5 (Winter 1979), 48-54.
7. Trainer, Yawitz and Marshall, *supra* note 6.