Investing for the Long-run in European Real Estate

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Abstract We calculate optimal portfolio choices for a long-horizon, risk-averse investor who diversifies among European stocks, bonds, real estate, and cash, when excess asset returns are predictable. Simulations are performed for scenarios involving different risk aversion levels, horizons, and statistical models capturing predictability in risk premia. Importantly, under one of the scenarios, the investor takes into account the parameter uncertainty implied by the use of estimated coefficients to characterize predictability. We find that real estate ought to play a significant role in optimal portfolio choices, with weights between 12 and 44%. Under plausible assumptions, the welfare costs of either ignoring predictability or restricting portfolio choices to traditional financial assets only are found to be in the order of 150–300 basis points per year. These results are robust to changes in the benchmarks and in the statistical framework.

Keywords Optimal asset allocation · Real estate · Predictability · Parameter uncertainty

JEL Classifications G11 · L85
Introduction

Predictability of asset returns is known to have powerful effects on the structure and dynamics of optimal portfolio weights for long-horizon investors. This conclusion holds across alternative models for predictability, different data sets and asset allocation frameworks (e.g. Brennan et al. 1997) and (Campbell et al. 2003). However, most of this evidence has been obtained in asset menus limited to traditional financial portfolios only, i.e. stocks, bonds, and short-term liquid assets. On the contrary, contributions available to asset managers with long horizons—such as pension fund managers—are invested not only in equity and bonds, but in real estate assets too.

For instance, as of the mid-1990s, in the UK 75.0 and 7.8% of managed pension fund assets were held in stocks and real estate, respectively; the corresponding percentage weights were 6.6 and 4.2 in Germany, and 26.9 and 2.2 in France. In the last two countries, long-term bonds represented 42.3 and 59.0% of long term portfolios (see Miles 1996, p.23), while bonds were given a negligible weight in the UK. So it appears that considerable heterogeneity exists in the relative weights assigned to stocks, bonds and real estate. Although our paper aims at tracing out the normative implications of predictability for optimal portfolio composition, we report results that shed light on the preferences, investment horizons and predictability models under which one may obtain rational choices consistent with either the German-French pattern (dominated by bonds) or with the British one (dominated by stocks). Additionally—since the evidence is for real estate weights between 2 and 8%—in this paper we ask whether existing data support the notion that real estate ought to be included in long-horizon portfolios.

Our paper provides evidence on the effects of predictability on long-run portfolio choice when the asset menu includes real estate assets. Furthermore, our asset allocation results are based on predictability patterns characterizing a European data set that has been left unexplored thus far. On the one hand, both extensions are crucial to make the results found in the literature relevant to the operational goals of long-horizon asset managers that commonly employ asset menus not limited to financial securities only, and that fail to circumscribe their portfolio choices to North American assets only. Obviously, among them, European institutional investors occupy a leading position. On the other hand, our results allow us to perform comparisons to parallel findings obtained from comparable U.S. data on stocks, bonds and cash.

1 Flavin and Yamashita (2002) represent an exception, although their focus is on life-cycle effects at the household level.

2 At the end of 2004 TIAA-CREF, one of the largest U.S. pension funds, invested about 17% of assets in real estate (source: www.tiaa-cref.org).