

Journal of Real Estate Finance and Economics, 24:1/2, 5-8, 2002 © 2002 Kluwer Academic Publishers. Manufactured in The Netherlands.



Guest Editorial

PIET EICHHOLTZ

Maastricht University

KANAK PATEL University of Cambridge

Introduction

Research in real estate finance and economics has developed in an exciting way in the past twenty-five years or so. The resulting theoretical and empirical findings are shining a new light on some of the classic mysteries of the real estate markets. It is good to see that a growing proportion of this research output is concerned with contemporary problems and issues regarding the European and Far Eastern property markets.

To stimulate a creative exchange of new ideas and a debate of the latest research findings regarding the global property markets, we have established the Maastricht-Cambridge Real Estate Finance and Investment Symposium. This initiative aims at bringing together a number of leading researchers in the field for a short, intensive conference. The 2000 Symposium, which was hosted by Maastricht University in the Netherlands in June of that year, is the first in an annual series of such conferences, which will alternate between Maastricht University and Cambridge University.

To decide which themes to include in the first meeting of the Symposium, we began by consulting the members of the advisory board and a number of experts in the field. Although tastes varied with respect to the ordering of important topics, the professional consensus erred in favor of breadth of topics rather than a single unifying theme. This resulted in a first Symposium meeting, which was attended by 42 participants, and which included presentation of twelve papers on a broad range of topics including property companies' capital structure and securitization, real options, rents and mortgage contracts, housing risk and portfolio issues.

The value of the Symposium is greatly increased by the parallel initiative taken by the *Journal of Real Estate Finance and Economics* for a Special Issue of symposium proceedings. This Special Issue, named "New Directions", stimulates international discussion of economic and financial issues regarding the global real estate markets.

The twelve articles that were selected for presentation at the Symposium subsequently went through the Journal's normal refereeing process, which resulted in the collection of eight papers published in this issue. These eight articles represent a well-balanced mix of contemporary topics. It does not seek to be a comprehensive guide of the contemporary literature, but rather reflects the selection of major issues that participants at the first Maastricht-Cambridge Symposium meeting considered to be challenging. In choosing individual contributions we used a number of guiding principles, of which importance of

6 EICHHOLTZ AND PATEL

the problem at hand, contribution to knowledge and originality were most important. We slightly favored contributions concerning inferences about investors' behavior from observed data. Finally, we did not restrict our attention solely to articles originating from any specific region or country, even though all contributions surviving the screening process are from the United States and Europe. Granted the breadth of the topics, the sketch of the articles provided below may prove to be helpful to the reader.

Calhoun and Deng analyze the prepayment and default experience of fixed-rate mortgages (FRM) and adjustable-rate mortgages (ARM) in the United States. The empirical analysis of the conditional probabilities of prepayment and default, based on a multinomial logit specification, is set in the context of option-theoretic variables, mortgage age effect, and other exogenous factors. The key option-theoretic predictors are the mortgage premium values and the equity position of the borrower. Mortgage age captures the "structural" duration-dependence in prepayment rates and the "residual" impact of unobserved heterogeneity amongst borrowers. The main other exogenous variables included are dummy variables for origination years, the original loan-to-value ratio, and current seasonal variables that account for whether, school schedules, seasonal employment patterns, and occupancy status. The multinomial logit estimates show that the expected rates of prepayment by age are very similar for FRM and ARM, suggesting that most systematic differences between these two sets of loans are explained by the other explanatory variables. The option-related variables for FRMs and ARMs indicate that borrower behavior is consistent with the option theory of prepayments and default.

Jones and David Nickerson develop a game-theoretic model for both the analysis and valuation of mortgage contracts. Their model emphasizes two aspects of multiperiod loans in a strategic setting: The mortgagor can receive flows of housing services from the property as long as he makes his loan payments, and the option to default is an element of the strategy set of the borrower. The authors derive the value of the mortgage contract to both lender and borrower, and evaluate whether certain features of mortgage contracts and variations in access to mortgage credit can be explained solely in terms of the options each party holds as elements of the strategy sets in lending negotiations, without recourse to asymmetric information. Their results show that both increasing flows of housing services accruing to the mortgagor and an increase in the price volatility of property serving as collateral reduce the willingness to lend. Faster amortization and shorter terms to maturity for fixed mortgages are found to increase the volume of credit offered by the lender. They also show that the mortgage credit offered by a rational lender may be a small fraction of the fair current market value of the collateral, and will decrease as bankruptcy costs or housing service flows increase. Indeed, when bankruptcy costs are sufficiently high, the supply of mortgage funds, as a function of the difference of the yield charged over the riskless rate, becomes negatively sloped.

Hendershott, McGregor and White use a reduced-form error-correction model to explain the "long-run" levels and the "short-run" movements of commercial property rents. They look at office, retail, and industrial property in eleven market regions in the United Kingdom. In the long run model, supply of occupied space is equal to demand with demand expressed as a function of rent and economic activity. The short run model is the first difference of the long run equation with the addition of an error-correction term. In the

GUEST EDITORIAL 7

retail sector, the error-correction coefficient shows that rents adjust to about 30 percent of the imbalance in the previous period. In the office sector, the error-correction coefficient for London is significant when the lag of rental change is added, and "for all regions except London" it is highly significant but has a small magnitude, suggesting a long adjustment process. The implied long run price elasticity and the income elasticity are lower in absolute value in London than in the "all regions except London" panel. This study reveals that, while the economic drivers may vary, there is no evidence of differences in the operation of the regional property markets outside London.

Ben-Shahar, Feldman, and Greenberg analyze rent control using an option approach. The rent-control rental contract is modeled as a series of compounded European call options as a complement to the no-arbitrage condition that the tenant's costs of renting in the free market are equal to his or her costs under controlled rent. The solution, the value of the key money for a tenant occupying a controlled rent dwelling unit, is a function of the expected remaining tenure horizon. In the rational expectations equilibrium, the representative agent's expected tenure duration is determined endogenously by accounting for both the nodes on the binomial tree where the tenant selects to vacate the real estate unit and the probabilities of reaching those nodes. An interesting result derived from the simulation of the model is that, for a sufficiently long "conditional life expectancy," the equilibrium levels of both the key money and the expected tenure duration are hardly affected by the distribution of the key money between the departing tenant and the landlord.

Brounen and Eichholtz investigate Initial Public Offering (IPO) underpricing, and the subsequent log-run performance of a sample of 86 European companies that went public during between 1984 and 1999. The average IPO is found to outperform a within-country common stock benchmark by 1.74 percent on the issue date and to underperform its common stock benchmark over the three-year period subsequent to the initial offering. The cross-national differences in market structure and maturity, however, give rise to substantial variation in initial day returns across different countries. The results of a multivariate regression analysis show that factors such as issue size, debt ratio, standard deviation, and sector specialization of the property portfolio affect IPO underpricing. Issues of lesser size, with smaller debt ratios and higher aftermarket standard deviations are associated with more underpricing.

Ling and Naranjo analyze the performance of listed property companies using a database of approximately 600 companies in 28 countries for the period 1984 through 1999. Using a one-factor model with a global stock index as the proxy for the world wealth portfolio, they find a strong global factor in property share returns. They subsequently extend this model with an orthogonal country-specific factor to capture systematic risk factors independent of world-wide systematic risk for each country. This model shows that significant country-specific effects exist, suggesting international diversification opportunities for property share investors.

Cauley and Pavlov use an option approach to explain the fall in liquidity following negative shocks in demand for residential real estate. They base their analysis on a dataset of residential real estate in Los Angeles. They regard the levered purchase of a home as an American option, with the exercise price being the mortgage loan balance. After a

8 EICHHOLTZ AND PATEL

negative demand shock, when an owner has little or negative home equity, the exercise price and the value of the option owned by a potential buyer. This would prevent otherwise mutually advantageous transactions, and result in a fall in liquidity. After a positive demand shock, buyer's and seller's option values are likely to be more in line, which implies that mutually advantageous transactions will not be precluded, and that market liquidity will not be affected as much.

Englund, Hwang and Quigley investigate the risk faced by homeowners on the basis of a dataset of Swedish housing transactions between 1981 and 1993. They construct a transaction-based house price index to which they add an imputed rental value to get a total return index of residential property. They use this index to look at the investment performance of housing relative to other assets. Their main contribution is in an investigation of the effect of different holding periods on risk, return and correlations of residential property and other asset classes, and on the efficient portfolios consisting of all these assets. They find that the optimal allocation to home equity increases with longer holding periods, suggesting that the large exposure to home equity that is often observed in homeowners' portfolios may not be sub-optimal, but due to a relatively long investment horizon.

Indebtedness for this Special Issue and for the Maastricht-Cambridge 2000 Symposium meeting runs wide and deep, and we therefore make no attempt to enumerate individually all those whom we owe our thanks. However, in addition to all the authors, discussants and referees who made this Issue possible, some special notes of appreciation are in order.

The Maastricht-Cambridge Symposium owes its existence to C. F. Sirmans, who has provided the stimulus for its inception and facilitated its proceedings to be published in this Journal. We should like to express our gratitude to him and the four other members of the advisory board, Patric Hendershott, Dean Paxson, James Shilling and Charles Ward, who assisted us in the selection process described above. We should also like to thank the RICS Foundation and Maastricht University for generously sponsoring the Special Issue and hosting the Symposium meeting. Stephen Brown, Research Officer, the RICS Foundation, has played a large role in making this a successful venture.