

UNIVERSITY OF MACAU
FACULTY OF BUSINESS ADMINISTRATION

HERDING AND MOMENTUM IN U.S. HOUSING MARKET



Thesis presented to the
Faculty of Business Administration
University of Macau

In partial fulfillment for granting the Master of Science Degree
(In Finance)

2012

Abstract

Although the existing theoretical and empirical studies have discussed price divergence and abnormality in housing market, few efforts have been put on investor herding and momentum effect in housing market, which this thesis focuses. During the past three decades, U.S. housing market has undergone boom and bust cycle. Unlike equity market, housing market has the characteristics of high transaction cost, less frequent trading and absence of short selling, giving arbitrage opportunity to profit in inefficient market. Among all the anomalies that cause price deviation, we study the linkage between herding and momentum effect of U.S. housing market at both national and geographic state level. By employing quantile regression, we find that herding tends to exist in the middle and high quantile of housing index dispersion. It is worthwhile to point out that the national housing boom from February 1998 to July 2006 is uniqueness in its fast speed and pervasiveness and the following bust happened right after the peak of the boom. To gain an insight into herding during this boom and bust cycle, a boom & bust period herding analysis is done at both national and geographic state level. In addition, we argue that the absence of herding cannot lead to the conclusion that housing market is free from abnormality. The positive statistically significant sign of R_m^2 indicates possibility of momentum effect. When the market moves either up or down dramatically, return dispersion increases, implying that there are at least two groups of investors trading in opposite directions and one group may be momentum traders who

purchase past winners and sell past losers. To check the existence of momentum effect, this thesis utilizes Jegadeesh and Titman (1993) long-winner, short-loser and momentum strategies and discovers that at national level (1) In the up-state market (lagged three-year return market is not negative), momentum effect is driven by winner indexes. (2) In the down-state market (lagged three-year return market is negative), momentum effect is driven by loser indexes. At geographic state level, the results vary across states. Similar as herding analysis, we also have a special focus on the momentum effect during the recent boom and bust cycle. We find that during boom period, both winner and loser indexes have positive returns and during bust period, both winner and loser indexes have negative returns. Finally, we investigate whether herding destabilizes or stabilizes market using double-sort strategy: sort 13 state portfolios by past market returns and then *CSAD* (Cross-Sectional Absolute Dispersion). We find that the momentum effect doesn't differ under high and low herding conditions.

Acknowledgements

My first, and most sincere, acknowledgement must go to my supervisor, Professor Rose Lai. She gives me advice, support and encouragement during my thesis writing and future study plan. Professor Rose Lai is very patient in answering the most basic questions I raised and correcting numerous mistakes. Most importantly, her rigorous attitude on research makes me understand the spirit of academic and professional teaching.

There are too many people to thank who lay a concrete foundation of finance for me during my Master of Science in finance study such as Professor Feng Wu, Jinjuan Ren, Keith Lam, Lewis Tam, Steve Lo and Xiaolin Qian.

My final acknowledgement must go to my parents and friends who support my graduate study and help me chase my dream.

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