CHINA DIRECT REAL ESTATE AND GENERAL STOCK MARKET, ARE THEY RUNNING OPPOSITE DIRECTIONS?

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ABSTRACT

This research uses 2008 till first quarter of 2015 quarterly direct real estate and stock market data. We investigate the relationships of direct real estate, securitized real estate, and general stock market. The research shows that investors could diversify investment by investing in both direct real estate and general stock market. However, real estate equity brings little if any diversification. We caution investors investing in China stock market. The stock market movement seems to deviate from its fundamentals. The stock rally is potentially created by switching of momentum from direct real estate to stock market and also by pure speculation.

INTRODUCTION

China's real estate market is one of the biggest recipients of foreign direct investment in China [10]. The rapid real estate appreciation caused concerns about real estate bubble. Wall street journal published an extensive article about the bubble in April, 2014 [9]. The monthly real estate price index published by the National Bureau of Statistics of the People's Republic of China shows price decline or stagnation for all major cities since around 2010. On the other hand, China's stock market is soaring, Shanghai composite index rose from around 2000 in June, 2014 to close to 5000 by May, 2015. This has sounded alarm internationally [34].

China's real estate market has unique characteristics. All real estate in China was owned and managed by the government under the central planning economic regime before 1988 [10]. The 1988 Constitutional Amendments separated the land ownership and land use right. One primary difference of real estate in China from other developed economies is that real estate refers to only land use rights plus the ownership of the improvements on the land. The state is the owner of the land. The lease terms of the land range from 50 to 70 years. Here we are only referring to mainland China. Hong Kong's real estate ownership system is similar to that of the United Kingdom. The Chinese real estate securities market is still relatively undeveloped. There is no REIT market in China.

The puzzling rise of China stock market and the seemingly opposite direct real estate market have motivated us to research on this unusual phenomenon. Stock price should be determined by the net present value of future dividends according to dividend discount model incorporating future growth of dividends and equity risk premium. In addition, many factors can affect stock prices, including money supply [13][15][18][32], interest rate [4][1], risk[33]. Though plenty researches have doubted the linkage [19]; This research is not attempting to identify stock price determinants. Our goal is to identify whether the recent China stock market rally is backed up by company underlying profitability, or it is caused by investors need for an alternative investment channel other than direct real estate. China has a strong culture of saving. If direct real estate is no longer the place to put the money in, people need alternative. This change of momentum could have contributed to stock market rise. A sluggish direct real estate market and a flourishing general stock market at the same time might suggest this change of momentum. Or the rally could simply be attributed to irrational speculation with borrowed money despite increasing evidence of stress in the financial sector and a slowing economy as Smith [34] pointed out. If this is the case, we could observe stock price increase despite slow or negative profit growth. We hope our research results will help a prudent investor's decision making.

LITERATURE REVIEW

Integration of Direct Real Estate, and General Stock Market

Chen, Chang, Yang & Hsieh [8] suggest that non-linear movement of housing prices is primarily driven by investment demand. The result shows a downward housing price trend when stock price index rises. Lin and Furst [22] study the long-term relationship between stock values and direct real estate values in nine Asian countries from 1980 to 2012. They find that the values of stocks and real estate were not related in six of the countries studied including China. They conclude that segmentation of property markets from stock markets does not appear to be linked to the differences in the maturity of national financial markets but that the differing degrees of integration are likely reflective of a range of factors impacting upon the underlying economic structures in each country. Lin & Lin [23] find no causality relationship between stock and real estate markets in China from March 1995 to June 2010. They gave several reasons for this and suggested to use the index of different regions or cities for further concise conclusions. Su [35] conclude that in the long-run, asymmetric price transmissions do exist between real estate and stock markets in Western European countries. These findings support the existence of long-run equilibrium relationships between the real estate market and the stock market, with asymmetric adjustment. The study period was 2000-2008. Gao, Li, & Gu [11] conclude that Chinese direct real estate market and stock market are integrated. Study period is 1999-2009. Tsai, Lee, & Chiang [36] investigate the long-run relationship between the housing and stock markets using quarterly data from the U.S. housing price index from 1970-2009. They find that cointegration exists between the markets, and that adjustments toward long-run equilibrium are asymmetric. Heaney and Sriananthakumar [14] conclude that investment in commercial or residential real estate with investment in the general stock market could provide considerable diversification benefits. Hui and Ng [17] find that the correlation between residential property price and the general stock market index has become weaker over time in Hong Kong between 1990 and 2006. Casni and Vizek [6] state that the level of codependence between equity price and real estate price movement is relatively high in all examined country groups (30 developed and emerging economies). However the degree of codependencies varies among country groups, with the reaction of both asset prices to economic news being more synchronized in economies with a market-based financial system and developed economies.

Integration of Securitized Real Estate, and General Stock Market

Yang, Zhou, & Leung [39] examine S&P 500 stocks daily index returns, US corporate bonds, and their real estate counterparts (REITs and CMBS). They find REITs returns have stronger asymmetric volatilities because of high leverage. They also suggest reduced hedging potential of REITs against the stock market during economic downturns. Olaleye & Ekemode [29] find that rates of return for real estate equity and non-real estate equity in Nigeria were related. Real estate equity had a slightly higher return but with more risk. Liow [24] examines the change in co-movements over time for eight Asian real estate securities markets and their local stock markets. He finds real estate-stock correlations at the local, regional and global levels that vary over time and are asymmetric in some cases.

Integration of Direct and Securitized Real Estate

Oikarinen, Hoesli, & Serrano [28] develop evidence of cointegration between securitized and direct real estate total return indices in the U.S. The two real estate indices are cointegrated with one another but not with the stock market. Higher liquidity, greater number of market participants, smaller transaction costs, and the existence of a public market place in the securitized market enables the indirect real estate market to be more information efficient than the direct market. The prices of indirect real estate investments should react faster to shocks in the fundamentals than those of direct real estate. Empirical evidence shows that the securitized market leads the direct real estate market [12][27][3][21].
Olaleye & Ekemode [29] results show that real estate stocks returns are not integrated with direct real estate market and are not influenced by the returns of the underlying direct real estate assets. Real estate stocks returns are integrated with general stock market instead.

Direct Real Estate and General Stock Market

Huang [16] predicted that China's direct real estate price is going to drop and stock market is going to rise. . He points out that 80% of Chinese savings went into house market. He believes with the crush of house bubble, investors who cannot find a suitable investment channel will enter the stock market. Wang [38] made the same prediction as Huang [16]. China securities journal reported on 6/6/15 that first tier cities housing price rise, and some investors are leaving the stock market and entering the house market.

Other

Liow & Newell [25] study the relationship of the securitized real estate markets in Mainland China, Hong Kong, and Taiwan and their links with the securitized real estate markets in the United States. They find that the real estate securities markets in these three areas are integrated with each other. They also are linked with the real estate securities market of the U.S. but not as strongly as they are related to each other. Piazzesi & Schneider [31] find that a relatively small group of optimists can drive up housing prices.Whelan [37] documents that the U.S. stock market indexes had a total return of 32.4% in 2013, while real-estate investment trusts had average returns of just 2.7%. Chan, Treepongkaruna, Brooks and Gray [7] observe the existence of two distinct regimes, "tranquil" (economic expansion) and "crisis (economic decline). They document a contagion between stocks and other assets during economic decline. Carlson, Wright and Walle [5] Provide information about performance of the 78 stocks in the U.S. Real Estate Index. Pagliari, Scherer, & Monopoli [30] compare public and private real estate equities. They find that the means and volatility of these two types of equities are not statistically different from one another. This has important implications for portfolio management.

METHODOLOGY

Data Collection

Currently, the most quoted Shanghai Stock Exchange index is the Shanghai composite index The Shanghai composite index is calculated using all listed stocks and considering total shares outstanding. The biggest drawback of this method is that total shares outstanding includes state owned shares and legal person shares. These shares are not tradable. So using total shares outstanding, instead of tradable shares, distorts the real stock market performance. We recognize its drawbacks. Shanghai Stock Exchange classify listed companies into six industries, manufacturing, real estate, utilities, wholesale and retail, financial and complex. Shanghai real estate index is calculated using all listed real estate stocks from the industry. Quarterly EPS (earnings per share) growth rate is collected from China Stock

Market & Accounting Research Database (CSMAR) data. Direct real estate price data is from National Bureau of Statistics of China. The direct real estate includes both residential and commercial real estate. The data range from 2008 to the first quarter of 2015.

EPS Growth, Direct Real Estate Return & Stock Indexes

We compare the index movement with quarterly EPS growth rate. Stock prices usually parallel EPS growth in the long term, but the link between EPS increases and stock price is not always linear or straightforward in the short term. If underlying profitability is the reason for the stock rally, we should see EPS growth rate move the same pattern as stock indexes. We use the median EPS growth rate for the real estate industry and median EPS growth rate from all listed companies of Shanghai Stock Exchange. If the market is driven by speculation with borrowed money as Smith (2014) pointed out with no rational underlying economic factors, stock price can go up with low to negative company growth. The linkage between EPS growth and stock index will be disrupted. If there is a change of momentum, we should see direct real estate return being sluggish compared with stock market.

Real Estate Industry Performance & Real estate Stock Index

Stock prices usually parallel EPS growth in the long term. If the market is driven by speculation with borrowed money as Smith (2014) pointed out with no rational underlying economic factors, stock price can go up with low to negative company growth. The linkage between EPS growth and stock index will be disrupted. We further investigate this issue by using one industry, the real estate industry. We will compare direct real estate return, real estate industry performance (EPS growth), and real estate stock indexes (Shanghai real estate index). We single out real estate industry because of all the attention they are getting from the investors and analysts. The media seems to be filled with negative news about Chinese property developers. Law (2015), Udland (2015), and Barboza (2015) to list a few. They all draw a bleak picture of the Chinese real estate industry.

CONCLUSION

The research shows that investors could diversify investment by investing in both direct real estate and general stock market. However, real estate equity brings little if any diversification. We caution investors investing in China stock market. The stock market movement seems to deviate from its fundamentals. The stock rally is not supported by EPS growth, but potentially by switching of momentum from direct real estate to stock market and also by pure speculation.

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