

Does Stock Market Affect Performance and Portfolio Allocation? Case of Thai Property Fund

ตลาดหลักทรัพย์มีผลต่อผลการดำเนินงานและการกระจายพอร์ตลงทุนหรือไม่?

กรณีศึกษากองทุนอสังหาริมทรัพย์ไทย

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Abstract

Trading in a stock market, Thai Property Fund might share not only characteristics of the underlying real estate asset but also those of stock. Similar to performances of REITs in many countries, such as U.S., Australia, Hong Kong, Singapore, Japan and Taiwan, that of Thai Property Fund is found to be influenced by the stock market effect. The quantitative and qualitative research suggest the significant effect from the market volatility at least in short term with the rationales of asset characteristics and investment decision of the investors. Similar to other findings, high correlation of the Property Fund to the stock market and higher correlation during pessimistic period are also found. Unlike other researches, the stock price speculation on IPO date is found to support the short-term market volatility. Asset reallocation to the asset with higher return and change in required return of the investors are additional findings to support the significant effect of the stock market in short term. However, the rationale for low volatility of the stock market in the long term are consistent to other studies because of similar characteristics to real estate in medium-long term, of income stock rather than growth stock, and long-term investment position of the institutional investors.

Keywords: *Thai Property Fund Performance, Short-Term Stock Market Effect, Long-Term Stock Market Effect*

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บทคัดย่อ

การซื้อขายในตลาดหลักทรัพย์ทำให้กองทุนอสังหาริมทรัพย์ไทยไม่เพียงแต่มีคุณลักษณะเหมือนอสังหาริมทรัพย์แต่มีคุณลักษณะเหมือนหุ้นด้วย โดยพบว่าผลกระทบของตลาดหลักทรัพย์มีอิทธิพลต่อผลการดำเนินงานของกองทุนอสังหาริมทรัพย์ไทย ซึ่งมีความคล้ายคลึงกับกองทรัพย์เพื่อการลงทุนในอสังหาริมทรัพย์นานาชาติ เช่น สหรัฐอเมริกา ออสเตรเลีย อ่องกง สิงคโปร์ ญี่ปุ่น และไต้หวัน จากการศึกษาเชิงปริมาณและคุณภาพพบว่า การเปลี่ยนแปลงของตลาดมีผลต่อการดำเนินงานอย่างมีนัยสำคัญอย่างน้อยในระยะสั้นจากคุณสมบัติของสินทรัพย์ และการตัดสินใจลงทุนของนักลงทุน รวมถึงการมีสหสัมพันธ์กับตลาดที่สูงขึ้นในช่วงตลาดขาลงซึ่งสอดคล้องกับผลการศึกษาอื่น นอกจากนี้ ยังพบว่าการเก็บกำไรในราคากองทุนอสังหาริมทรัพย์ในวันเสนอขายหลักทรัพย์วันแรกสนับสนุนผลกระทบจากตลาดในระยะสั้นซึ่งแตกต่างจากการวิจัยอื่น การจัดสรรสินทรัพย์ลงทุนในสินทรัพย์ที่ให้ผลตอบแทนสูงกว่า และการเปลี่ยนแปลงผลตอบแทนที่ต้องการของนักลงทุน เป็นข้อเสนอสนับสนุนนัยสำคัญของผลกระทบจากตลาดในระยะสั้น อย่างไรก็ได้ เหตุผลสนับสนุนการแปรผันของตลาดในระยะยาวสอดคล้องกับผลการศึกษาอื่นจากการมีคุณสมบัติคล้ายอสังหาริมทรัพย์ในระยะกลางและยาว เมื่อเทียบกับผลมากกว่าหุ้นเติบโต รวมถึงการลงทุนระยะยาวของนักลงทุนสถาบัน

คำสำคัญ: ผลการดำเนินงานกองทุนอสังหาริมทรัพย์ไทย ผลกระทบของตลาดในระยะสั้น ผลกระทบของตลาดในระยะยาว

Introduction

Introduced by Congress in 1960s, a real estate can be invested in a form of an indirect vehicle called Real Estate Investment Trust (REIT). As of 2013, such real estate vehicles have been globally recognized in 37 countries (NAREIT, 2013). In Thailand, a similar financial vehicle called the Property Fund has been initially offered for trading in the Stock Exchange of Thailand (SET) in October

2003. Under the Security Exchange and Security Market Act, 1992 (B.E. 2535), the Property Fund can be established and listed for trading in the Stock Exchange of Thailand. In 2012, Thailand's market capitalization of the indirect real estate vehicle represented approximately 4% of total Asian REIT market and 0.5% of the global REIT market (APREA, 2012).

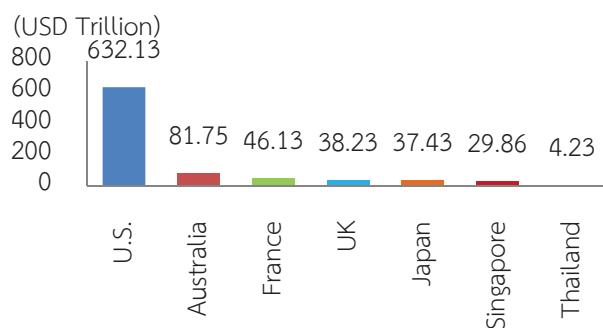


Figure 1 Global REIT Market Capitalization

Source: Ernst & Young (2012)

There are many supporting reasons for global growth of the internationally-recognized indirect real estate vehicle because it generates benefit to many stakeholders as follows:

- Benefits to the investors

The indirect real estate vehicle provides opportunities for the retail investors to invest in real estate asset with small amount of capital, and for the high-net-worth and institutional investors to have more alternative investment assets for portfolio investment. Investment portfolio allocation with minor portion of REITs in investment portfolio is found to provide higher return with lower volatility than portfolio with only bonds and common stocks for U.S. market from 1988–2013 (Atchison & Yueng, 2014). REIT has also been an interesting investment asset class which provides a steady rental cash flow at a comparably higher yield than the government bond for the investors, especially in the upcoming

phase of a global aging society status. After 2020, Thai population will move to the phase with 20% excess of the retirees to total population. In addition, such demographic changes made Asian pension funds to reassess their investment portfolios by increasing additional portion of real estate asset so as to match portfolios with their future liabilities and diversify the overall investment portfolios (Newell, Yue, Wing, & Kei, 2010). For instance, the Japanese Government Pension Investment Fund (GPIF) with over USD 1.2 trillion Asset under Management (AUM) announced to review its portfolio to increase more allocation in J-REIT and equity to expose more inflation risk so as to increase expected returns. The increasing proportion of the retirees to people at working age has greater impact on the financial status of the pension fund than the financial crisis in long term (Hinz, Zviniene, Biletskyy, & Bogomolova, 2009).

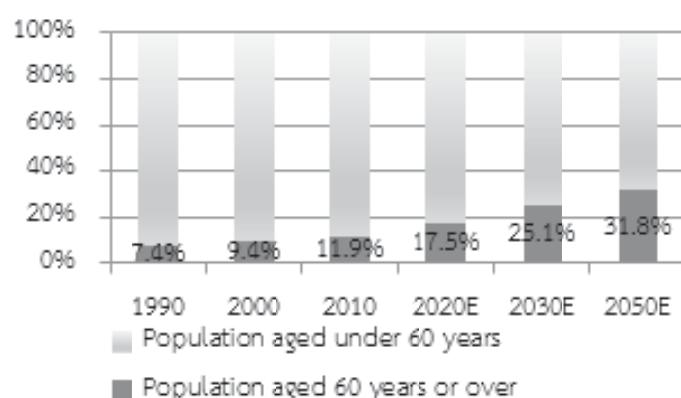


Figure 2 Demographic Structure of Thai Population from 1990 to 2050

Source: The United Nations (2014)

- Benefits to the developers

In a real estate development sector, the property developers or owners can dispose real estate asset to REIT so as to gain capital to reinvest in the other development projects, which

helps increase economic activities. REITs have become a more significant funding vehicle for such a capital-intensive real estate sector (Ooi, Newell, & Sing, 2006). By using only the traditional loan from lending institutions like commercial

banks for funding real estate project, the developers may face difficulties during the period of high interest rate (Issac, 1998). As evidence from the increase of new debenture offering value, the real estate developer requires various sources of fund to develop new projects.

- Benefits to economy

NAREIT (2013) mentions that REIT has been playing an important role as one of the major U.S. economic drivers. As one of the economic drivers, the Property Fund market increased value from 0.8% of Thailand's GDP in 2011 to 2.1% in 2014 (NESDB, 2015). Development of such investment asset and capital market is found to have a positive relationship with the growth of national economy (Barna & Mura, 2010). Almost one million jobs have been supported through operation and facility using of real estate held by REITs in U.S. (NAREIT, 2013). Also, job creation in Asset Management Companies, Security Companies, trustees, valuation and accounting services tends to increase as the growth in the indirect real estate business.

Literature Review

REIT Characteristics

One of the interesting reasons for the global recognition of such REITs and REIT-like vehicles are their interesting attributes. They distribute stable profits from their rental revenues to the investors and provide exposure to the real property assets for diversification benefits from their characteristics of low correlation to other asset classes (Block, 2006). In addition, each investment asset class would provide different risk exposure to the portfolio, thus a variety of investment assets might help diversify portfolio and achieve the best return (Worapatpruk, Worasilpachai, & Theppan, 2010). REITs' and their underlying real properties might diversify risk exposure of the overall

investment portfolio because of such characteristic dissimilarities. REITs have been found to provide portfolio diversification benefits for the investors (Kerrigan, 2012; David, David, & Charles, 2009).

However, there are some differences between investment in the direct and indirect real estate assets, such as liquidity, management structure, transaction cost and minimum investment capital requirement (Li, 2012; Yong, Allen, & Lim, 2009; Issac, 1998). For instance, the indirect vehicle helps the investors decrease liquidity risk compared to the real estate with illiquid characteristics (Jiamchoatpatanakul & Tangchitnob, 2014a). The Asset Management Company with the role of managing the Property Fund is found to have a low influence on the performance of the Property Fund, unlike the Property Management Company and sponsor (Jiamchoatpatanakul & Tangchitnob, 2014b). Similar to other international indirect vehicles or REITs, the Property Fund gains tax transparency benefits at the fund or trust level or implied tax pass-through status. Typically, REITs offer a superior dividend income than other fixed income assets along with the potential capital gain (Kerrigan, 2012). With high dividend payment, the Property Fund is likely to be an income-generating vehicle rather than operating company like Real Estate Operating Companies (REOCs) with a potential to reinvest retained earnings for future growth. Chan, Erickson, and Wang (2003) suggest that REITs might be considered as income stocks rather than growth stocks because they are enforced to pay high dividends and limited to grow with constraint ability of buying and selling their assets. In the overall, such different attributes contribute to some degrees of differences between the Property Fund and other common stocks. In terms of speculation, U.S. REITs do not provide a significant return on IPO day (Chan et al., 2003).

Dimovski (2010) found 45 Australia REITs appreciate approximately 3.37% on IPO dates during 2002 to 2008. Chan, Stohs, and Wang (2001) also found low IPO return of Hong Kong REITs between 1986 and 1997.

Influence of Stock Market to the Property Fund Performance

The other distinct difference between direct and indirect real estate assets is a trading market since the indirect vehicle is traded as a listed unit in a centralized market where the buyer and seller can quote price and trade on a daily basis. In this regard, there are some discussion issues whether the stock market affects REIT's performance. For instance, trading in the centralized market is found to have higher price efficiency than those with non-centralized market like the direct real estate investment (Buccola, 1985). The stock market volatility might affect REITs' price and return at least in short term (Chan et al., 2003). There is a finding that the capital market is more highly integrated with U.S. REITs than the non-exchange traded real property (Li, 2012). U.S. REITs show the hybrid characteristics with a time-varying correlation to the real property and stock market (Fei, Ding, & Deng, 2008; Clayton & MacKinnon, 2001). There is also an increase in correlation between common stocks and REITs during 1992–2012, which decrease diversification benefits in investment portfolio (Kerrigan, 2014). Many researches provide interesting results of significant co-movement between the return of REIT and stock markets in U.S. (Clayton & MacKinnon, 2001; Hoesli & Serrano, 2007).

There are some suggestions that the returns of REITs are low in volatility than those of stocks (Clayton & MacKinnon, 2001; Ghosh, Miles, &

Sirmans, 1996). REITs are considered to represent hybrid characteristics of security and real estate on a short-term basis but they tend to perform more like the real estate in long term (Anderson et al., 2006). Chang (2006) mentions that REITs might be more insensitive and respond to market information more slowly than the general stocks, which explains REITs may help the investors evade market fluctuation in short-term investment. REIT returns have predictable income streams from rent payments of long term real estate leases, which causes less volatile in the returns of REITs than those of stocks (Hartzell, Stivers, Ludgin, & Pire, 1999). In addition, Ghosh et al. (1996) concluded from analyzing the sensitivity of REIT returns to the stock market returns and found less likely being stocks over time in the 1990s. Clayton and MacKinnon (2001) found that REITs have gradually been like nature of their underlying assets and becoming more independent to the market stock indices. Despite the fact that REIT stocks are not being fully integrated to the stock market, the equity REIT returns seem to be impacted by both real estate and stock markets (Clayton & MacKinnon, 2002). Even if the correlation between U.S. REIT and stock market returns has varied overtime, the REIT is a good diversifier to S&P 500 in the investment portfolio (Fei et al., 2008). The implication is that hardly are REIT returns summarized to be similar to only stock or real estate returns completely. Even though adding direct real estate to an investment portfolio with the composite of stocks and bonds might improve the risk/return of the overall portfolio, it is questionable whether the indirect real estate vehicle is influenced by the market they are traded or not.

Rationale of the Study

Compared to the U.S. REIT with over the half of century history, there is a very limit number of academic studies about Thai Property Fund with only ten-year history. Behaving like stock, the Property Fund might not gain much benefits as the real estate assets for the investment portfolio diversification. It is important to envisage this aspect because the investors can utilize the indirect vehicle as a real estate proxy in their investment portfolios if their returns replicate the returns of the underlying properties. Also, the finding might be another supporting evidence for development of a new REIT vehicle and decision to transform the existing 49 Property Funds. Understanding about the investment performance in the capital market is important for further development (Burasiri, 2012; Cheong, Wilson, & Zurbruegg, 2009; Yong et al., 2009). Since there are many stakeholders, such as the investors, developers, asset management companies and security companies, the understanding about the stock market effects on the performance of the indirect real estate investment might support development and growth of the indirect vehicle business, and consequently economic growths and job creation as well as an alternative asset class in the aging society (NAREIT, 2013). Limited understanding about the investment asset may also lead to investment loss to investors, pessimistic viewpoints toward the asset class and low growth potential of the market (Bond, Karolyi, & Sanders, 2003; Ratcliffe &

Dimovski, 2012). Loss of confidence from some Property Funds with poor performance may reduce investment appetite and reduce the growth of financial sector (Rohde, 2011). Owing to such investment loss, the investors may consequently not spend money, which could result in low consumption and deceleration of country's economic growth (Luo, 2013). In this study, the researcher anticipates understanding the following aspects:

- 1) Understanding whether the stock market affects the performance of the Property Fund
- 2) Understanding the rationales of such stock market effect

Research Methods

In this research, both of the quantitative and qualitative approaches were conducted.

- Quantitative Approach

The quantitative research applied the Ordinary Least Square (OLS) regression to find an existence of the relationship between the monthly returns of stock market and those of the Property Fund. The data for this research were derived from Bloomberg database. Since this research concentrates on understanding the stock market effects, the data of monthly return of the Thai Property Fund index (SET PFund index) and the Stock Exchange of Thailand Index from November 2003–December 2013 was analyzed via the generalized linear regression model as follows:

$$\text{Thai Property Fund Monthly Return} = B_0 + B_1 \text{ Thai Stock Market Monthly Return}$$

Table 1 Descriptive variables of the monthly total returns of Thai Property Fund index and stock market Index

Dependent Variable (Y)	TOT_RETURN_INDEX_NET_DVDS Monthly total return of the Thai Property Fund (Bloomberg)		
Independent Variable (X)	TOT_RETURN_INDEX_NET_DVDS Monthly total return of the Stock Exchange of Thailand (Bloomberg)		
Period	November 1, 2003 – December 31, 2013		
No of Sample	122		
Mean	1.12%	Minimum	-30.1%
Std. Dev.	6.44%	Maximum	19.6%

Table 2 Regression result of the monthly total returns of Thai Property Fund index and stock market Index

Variable	
Constant	0.002 (1.20)
Monthly total return of the Stock Exchange of Thailand	0.293 (9.24)*
R Square	0.42
F	85.43
Correlation	0.65

The t-statistics are reported in parentheses

*denotes significance at 1% level

Return of the Stock Exchange of Thailand as an indicative proxy for the stock market change and volatility has shown a significantly positive relationship to that of Thai Property Fund return index during November 2003–December 2013. Similar findings to other markets, there is a positive relationship between the returns of the Australia REITs (A-REITs) and stock market index (S&P/ASX200) over 2004–2007 (Yong et al., 2009). Although the relationship has shown an insignificantly positive relationship in a long-term timeframe during the year 1990–2007, they explained the Australia REITs have increasingly integrated to the overall stock

market in the recent period. In U.S., there is a significantly positive relationship between REITs and the stock market index (NYSE monthly return index) with strong correlation at 0.72 during 2001–2011. In other markets, Taiwan REITs have also shown a significantly positive relationship to their stock market (TWSE) during 2006–2011 (Shiu, 2011). REITs in most countries were also found to exhibit a moderately positive relationship to the stock market, for instance, Malaysia REITs (Lee & Hwa, 2008), Hong Kong REITs (Newell, Yue, Wing, & Kei, 2010), Singapore REITs (Wong, Tong, & Keow, 2012) and Japan REITs (Newell & Peng, 2012), except a

low negative relationship to the stock market of South Korea REITs (Nawawi, Azmi, & Fadzil, 2010).

- Qualitative Approach

The qualitative approach was conducted by interviewing 41 experts in the Property Fund business so as to understand their viewpoints about how the stock market volatility affects the Property Fund performance. The interviewees requiring three years or more experience in the Property Fund investment asset requirement to deem the qualified person include 11 Property Fund managers, 8 security analysts, 14 institutional and sophisticated retail investors and 8 real estate and financial professional consultants. In this research, the average age and experience of the interviewees are 41 and 9 years respectively. Applying the data triangulation technique, different sources of information from various groups of the interviewees would enhance the credibility of scientific knowledge and validity of a study (Hussein, 2009). For this study, an approach of the semi-structured interview was applied. Afterwards, a method of summative content analysis was used for analyzing data. This approach helps increase understanding about the rationale of the stock market effect from the experienced-base opinion. The interview method helps clarify the answer of the complex issues based on opinions of the interviewees (Ebrahim, 1995). To understand about the effects of the stock market on the performance of the Property Fund, the interview results were considered as “agree” or “disagree” opinions in each subcategory of short-term and long-term market effects. Both short-term and long-term factors are concluded “accept”, “fail” and “partially accept” when the subcategories are all agreed, all disagreed and partly agreed respectively.

Short-Term Stock Market Volatility Effect

From the interviews, there are 68 experts' comments about reasons for the short-term impact of stock market volatility, most of whom provided agreed opinions to support the significance of such short-term effect on the performance of the Property Fund (86.8% agree and 13.2% disagree).

- High correlation to the stock market

The experts' most comment about the short-term impact of the stock market volatility that was of high correlation to the stock market. Many interviewees mentioned that market price of the Property Fund has typically changed based on a situation of the stock market. The interviewee no. 8 commented that the overall change in the stock market situation affects the market prices of common stocks and the Property Fund. For instance, the market price of Samui Airport Property Fund (SPF) decreased approximately 40–50% during the Global Financial Crisis, although the performance of the underlying property gained much less impact in the actual situation. However, interviewee no. 28 commented that the lower business risk exposure and sensitivity of future income stream result in less effect of the market volatility than most the other common stocks. Beta of the Property Fund to the stock market ranges from 0.2 to 0.3.

- Stock price speculation on IPO date from the retail investors to deviate market price

The experts' second most comment about this issue was a stock price speculation on IPO date from the retail investors to deviate market price market. Some interviewees supported that some retail investors may anticipate the speculating market price of the property fund on IPO date for

the capital gain thanks to small lots first rule to allocate investment units to major buyers. The interviewee no. 15 believed that the retail investors may decide to dispose the investment unit at a discount to market price to maintain portfolio liquidity when they do not gain capital appreciation. This leads to a discount in market price of many Property Funds previously. Some interviewees, however, made counterargument to support the low stock price speculation. The interviewee no. 33 said that there is a limited capital gain of the Property Fund for the retail investors to make the capital gain from the Property Fund investment. Because of a book building process, some Property Funds were offered at premium prices to the property value (NAV), which possibly brought about a low premium gap between the market and the IPO prices.

- Capital movement to general stock during a bullish market

The experts' third most comment about the short-term impact of stock market volatility was a capital movement to invest in other general stocks during a bullish market. Some interviewees mentioned that the investment capital may move from the Property Fund to other general stocks for a higher upside of the capital gain. On the other hand, some interviewees proposed that the investors who make investment in the Property Fund do not mainly expect for capital gain, but consistent dividend in the investment. The interviewee no. 16 said that many Property Fund investors are money market investors with low risk acceptance and not the same group as general stock investors. For other supports, some investors may allocate their capital for Property Fund investment at a specific amount to diversify their

portfolios; therefore they would not relocate the investment to other general stocks.

- Higher correlation to the stock market during downturn market

In this regard, the experts' fourth most comment was about a higher correlation to the stock market during downturn market. The interviewee no. 21 suggested that the Property Fund tends to show a higher degree of correlation during the negative situation of the market. The interviewee no. 18 also supported that some investors might dispose general stocks and even the Property Fund stocks to regain money during such a pessimistic period. The more the stock market drops, the more the investors cash out from the capital market investment. Consequently, the price of the Property Fund negatively changes as the overall stock market at a higher correlation.

- Change in P/E of the stock market and price of the property fund

Few interviewees commented about the change in P/E of the overall stock market to affect the price and return of the Property Fund. The interviewee no. 9 pointed out that many Property Funds have been offered at higher price than Par Value in the recent years. The book building process might cause a higher offered price from an acceptance of lower investment yield during the bearish market.

Long-Term Stock Market Volatility Effect

From the interview research, 32 experts commented about reasons for long-term impact of stock market volatility, most of whom disagreed to support significance of such a long-term effect on the performance of the Property Fund (3.1% agree and 96.9% disagree).

- Insignificant long-term investment position of the institutional investors and less price volatility

The experts' most highly discuss about the long-term impact of stock market volatility was the long-term investment position of the institutional investors to cause less price volatility. The interviewee no. 2 suggested in this issue that the institutional investors are likely to buy and hold the Property Fund for a long-term investment, therefore a price speculation tends to be lower than the retail investors. Their investments with low trading activities make the Property Fund gain a lower volatility effect from the stock market. Also, some retail investors holding the Property Fund units for long-term seem to expect a consistent rental yield rather than capital gain. The interviewee no. 28 commented that the institutional investors like insurance companies and pension funds have liabilities to pay to the investors and members; therefore they tend to hold the Property Fund to gain a consistent rental dividend for long term.

- Behave less like real estate in medium-long term

The experts' second most comment disagreed to behavior of less like real estate in medium-long term. The interviewee no. 21 commented that the return of the Property Fund might deviate from the underlying investment property due to

price volatility over the short period. However, its return in medium to long term tends to reflect more real estate characteristics than in short term. The interviewee no. 11 also suggested that the performance of the Property Fund mainly stems from the quality of the underlying investment properties. He also commented that a relatively consistent rental yield of the Property Fund would push their market prices back from the short-term effect.

- Behave like growth stock rather than income stock

In this regard, the experts' third most commented was about the behavior like the growth stock of the Property Fund. The interviewee no. 28 explained that the Property Fund was likely to envisage as the income stock rather than the growth stock because they tend to provide a relatively high yield from the rental income but are limited to grow from approximately 3-5% average market rental grow per annum. Therefore, they tend to have a lower capital gain to support active trading and consequently less volatile than other common stocks in the market. The interviewee no. 7 also supported that the investors should invest in the Property Fund asset for at least three years to gain a relatively high yield and avoid a possibly market price discount of the Property Fund in short term.

Table 3 Findings and Conclusions of the qualitative research

Factor affecting performance of the Property Fund	Result	Agreed Result
Short - Term Stock Market Volatility Effect	Accept	(59/68) 86.8%
- High correlation to the stock market	Agree	(38/38) 100.0%
- Stock price speculation on IPO date from the retail investors	Majority agree	(8/13) 61.5%
- Capital movement to general stock during a bullish market	Majority agree	(8/12) 66.7%
- Higher correlation to the stock market during downturn market	Agree	(3/3) 100.0%
- Change in P/E of the stock market and price of the property fund	Agree	(2/2) 100.0%
Long - Term Stock Market Volatility Effect	Fail	(1/32) 3.1%
- Insignificant long – term investment of the institutional investors and less price volatility	Disagree	(0/17) 0.0%
- Behave less like real estate in medium – long term	Majority disagree	(1/9) 11.1%
- Behave like growth stock rather than income stock	Disagree	(0/6) 0.0%

The qualitative findings suggest about the significant effect of the stock market volatility to performance of the Property Fund in short term. There are five issues to support this rationale. High correlation to the stock market and even a higher correlation during the pessimistic period were discussed and showed consistent results to findings in other markets (Fei et al., 2008; Clayton & Mackinnon, 2001; Hartzell et al., 1999). However, other interesting findings to support the rationale of the short-term effect were derived from the behavior of investors, including stock price speculation on IPO date, investment reallocation to riskier assets during a bullish market, and acceptance of the higher price and lower return of the investors. For IPO speculation, these findings are inconsistent to other studies of REITs in U.S., Australia and Hong Kong (Dimovski, 2010; Yong et al., 2009; Chan et al., 2003). The qualitative findings suggest about the insignificant effect of the stock market volatility on the performance of the Property Fund in long term. There are three issues

to support this rationale. Asset characteristics of real estate behavior in medium-long term and income stock were suggested. These findings are also similar to those of other researches (Kerrigan, 2012; Newell et al., 2010; Hinz et al., 2009; Chan et al., 2003).

Research Summary

Hardly do the Property Fund avoid effects from trading in the stock market. Having said this, the quantitative and qualitative research suggest the significant effect from the market volatility at least in short-term with the rationales of asset characteristics and investment decision of the investor. High correlation of the Property Fund to the stock market and higher correlation during pessimistic period are explained like other findings. Similar to the performance of Thai Property Fund, those of many international REITs in U.S., Australia, Hong Kong, Singapore, Japan and Taiwan were found to have the moderate-high correlation and show a significantly positive relationship to

the stock market return. Compared to other studies, this research also introduces controversial and additional reasons for the short-term market volatility. Unlike other researches, the stock price speculation on IPO date is found to support the rationale for the short-term market effect. Asset reallocation to a stock with higher return during a bullish market and change in required return of the investor from change in P/E of the stock market are additional findings to support the significant effect of the stock market in short term toward performance of the Property Fund. However, the rationale for low volatility of the stock market in the long-term are found to be consistent to other studies because of asset characteristics of behavior like real estate in medium-long term, of income stock rather than growth stock, and long-term investment position of the institutional investor.

Limitation

In some academic studies, they analyze the relationships between the indirect real estate vehicle and not only the stock market but the direct real estate market as well. In Thailand, there are, however, no time series of the income property performance like MSCI Europe Real Estate Index and FTSE NAREIT US Real Estate Index. Therefore, there is a limitation to study the relationship between the indirect and the direct real estate vehicles so that it might explain whether the performance of the indirect vehicle can replicate that of the direct real estate in investment portfolio for diversification benefit.

Areas for Further Studies

Because of the abolishment of the Property Fund regulation and the replacement of new REIT vehicle in 2013, the new Property Funds cannot

be formed, and the existing Property Funds cannot apply the capital increases. As of mid-2014, none of the REITs have been listed in the Stock Exchange of Thailand yet. Compared to the Property Fund, there are some different attributes of the REIT, including a higher leverage, more various types of investable property, and no restriction of the international property investment. More openness for the sponsor to be REIT manager might gain the dissimilar exposures to the stock market. Thus, the effect toward new REIT vehicle is an interesting aspect to comprehend for further study.

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