Does Residential Asset Determine the Financial Performance of French SIIC?

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Abstract

This paper contributes to literature by questioning whether the detention of residential property improves the book or market value of the french REITs. We do not detect any significant diversification discount in the market for french REITs. The sensitivity of stock prices to market fluctuations do not appear to differ substantially between diversified and specialized REITs. We test the impact of diversification and the role f residential on the volatility. Our results that firms with a strong balance sheet concentration are more volatile than diversified firms. Indeed, if undiversified firms have more volatile stock market performance, this effect is weaker for firms holding mostly residential mostly for those holding another active form.

1 Introduction

Is there a link between the nature of the assets of French REITs (also called SIIC) and their performance? Very few studies have examined these issues in the case of France, while a vast literature on American or Asian REITs is interested in the relationship between asset mix physical properties and performance of the company. The classification of REITs in the United States by type of real estate investment companies in which the majority greatly facilitates this type of analysis. This typology, completely non-existent in France, makes this type of study difficult.

This paper contributes to literature by questioning whether the detention of residential property by SIIC improves the accounting results or market value of the company? There are indeed significant differences between the legal framework for the U.S. housing market and that of France. These elements peculiar to the French system, lead us to the question of the impact of diversification on the performance

of SIIC. We will use individual accounting data (balance sheet, income statements, cash flows) stock (equity prices since the introduction of the scheme). The question of the role of the residential asset in the French REITs balance sheets requires, first, to use the broader framework of gains/losses related to diversification. Indeed, one can imagine that a REIT invest heavily in housing and specializes in residential because it anticipates higher asset performance than other physical property. Instead, an alternative strategy would be to buy housing to benefit from diversification gains with other assets already held. These two different strategies that we explicitly distinguish in our analysis. When it comes to study investment using mean-variance models, diversification is still valued because it reduces the idiosyncratic component of portfolio risk. Since Markowitz (1952), we have a formal framework in which a rational investor interest is not to hold that actions and complement its portfolio with a risk-free asset [1]. Generalizing this reasoning, hold commodities, corporate bonds, treasury bills and of course the real (physical or financialised) leads to diversification gains. If in addition, the investor diversifies the physical property type in its portfolio, it is also likely to lead to the risk / return superiors.

The U.S. literature on these issues has received much more mixed results. Diversification gains are not automatic: a number of informational problems are grafted to the standard framework for risk analysis in finance[2]. This type of decision can be interpreted by the shareholders as a signal of mismanagement: it is more difficult properly manage a diversified portfolio, requiring more varied skills, a specialized portfolio where the company already has advanced expertise. In addition, a significant number of investors want to manage the diversification of their portfolio themselves. They therefore prefer to invest in several companies specializing in a diverse society. Ceteris paribus, the latter will be less valued in the financial markets. Thus, different mechanisms are making diversification / performance relationship more complex than it seems at first. Empirically, from financial data, the results are very mixed, but it is clear that there are more American studies resulting in significant losses to the diversification of studies showing gains. In the case of real estate and REITs, American literature is oriented mainly to a discount of diversified companies even if it is difficult to obtain reliable results, precisely because of the lack of diversified REITs. Indeed, we find that the majority of U.S. REITs have tended to specialize in one type of property[3]. In the '80s, diversified REITs accounted for approximately 30% of the market. This proportion has fallen dramatically in the space of twenty years. In connection with the financial literature mentioned above, several papers have shown that complex informational mechanisms were at work to explain this massive specialization REITs in the U.S. market.

Several factors suggest that the American example is not directly transposable to France. Firstly, there is no classification according to the specialization of french REITS. Then, a preliminary analysis shows that since 2003, shortly SIIC focused on one type of asset. Finally, the majority of SIIC hold between two and four different types of real estate assets. This clear difference between France and the

United States suggests significant differences in both market structures in the profile of shareholders. In addition, the market for listed property in France is facing a relative concentration of SIIC higher than that observed in the United States. These studies (De Witt, 1996 and Lee, 2001) compare REITs holding simultaneously the four assets with those not holding one of the four. They conclude on the effects of diversification, but that rarely discriminate their results according to the asset. In other words, whether between two specialized REITs, we see a difference in performance between one specializes in residential and one skilled in the office is not always treated. Specifically, while there are many articles on "Apartment REITs" compared to other forms of REITs, these contributions suffer from major methodological shortcoming of this work compare REITS with assets of different types (office against residential , for example) and evaluate stock performance differences without first ensuring that these REITs have the same degree of diversification. The immediate consequence of this type of exercise is a differential observed returns can not reasonably be attributed solely to the difference in nature of its assets: the potentially differential depends on the degree of diversification of the firm. The decisive role played by the type of assets, including residential, performance is a critical issue and the methodological shortcomings mentioned above deserve to be truly corrected. The main interest of this methodological renewal would be to revisit the results of work in the field which are, at least, fragile.

Our findings can be summarized as follows. We do not detect any significant diversification discount in the market for listed property in France. Similarly, the sensitivity of stock prices to market fluctuations do not appear to differ substantially between diversified and specialized REITs. We also test the effects of diversification on variables summarizing the performance of the company (such as Return on Equity, Return on Asset or rental yields). Again, we do not detect a significant relationship. A sensitivity analysis of segmenting our sample by size (i.e. capitalization) confirms these results. Similarly, we conduct our analysis on several sub-periods to reflect movements in real estate markets since 2003. But to diversify its portfolio seems to have been neither profitable nor significantly penalizing significantly on the different sub-periods.

Failure to obtain a proper diversification of investments on the financial performance effect, then we seek to measure a specific effect of residential real estate. Specifically, we seek to determine, while controlling the "diversification effect" if the listed property companies holding housing tend to "outperform" or "underperform" those who do not. To test the presence of a "residential purpose", we first include this additional variable directly in our CAPM controlling diversification. We find a positive effect of "over-performance", but relatively modest, linked to holding housing assets SIIC. According to the functional form of the estimated model, this effect is statistically significant or is not. We continue to own not detect any effect of diversification, including when it interacts with the share of residential in the balance sheet. Hold residential since 2003 had a slightly positive impact on overall equity performance

SIIC, whether specializing in residential property or land seeking to diversify the composition of their assets. This result is valid considering the share of residential in the balance sheet or its variation (ie, the recent acquisitions of housing). In a second step, we modify our methodological approach and use the so-called "abnormal returns" (abnormal returns) technique. We have a basic listing exhaustively publications listings major operations by the SIIC since 2003. This includes mergers and acquisitions for the SIIC as well (when the SIIC is the acquirer, the target or when both are SIIC) as acquisitions, disposals, making direct lease of real estate. In the latter case, we know the exact date of the announcement, as well as various features of the nature of the property subject of the transaction. We observe changes in the share price of SIIC who bought (or sold) a residential property and compare: a) the overall market movements, b) changes in the stock market value of SIIC who bought (or sold) to other real estate (ie, offices and shopping centers).

We then seek to identify potentially significant gap in market valuation for transactions on residential property. However, given the relatively small operations transfer/acquisition of real estate since 2003 number, we struggle to produce statistically significant results. In particular, very few transactions involve residential (we get 11 in all, having made some assumptions combination with other asset classes). It is therefore excluded to implement a real inferential statistical methodology, but simple descriptive statistics suggest a slightly positive market reaction to the acquisition announcement residential asset by SIIC.

Finally, we test the impact of (1) the diversification of assets SIICs and (2) the role of residential on the volatility of estimated via a GARCH stock prices. This type of model can handle the volatility dynamics and study the impact of different variables on this development. Our results show a pronounced diversification effect: firms with a strong balance sheet concentration (measured by the Herfindahl index) are more volatile than diversified firms. However, it is interesting to note the presence of a crossover effect (residential x diversification). Indeed, if undiversified firms have more volatile stock market performance, this effect is weaker for firms holding mostly residential mostly for those holding another active form. A comparable degree of diversification, investing in residential assets to reduce volatility; knowing that the detention of residential has little impact on the average performance, so this allows us to offer couples markets risk / return more attractive.

The article is as follows. Section 1, presents results on the U.S, European and Asian REITs concerning the gains from diversification and equity effects of merger or acquisition. Section 2 presents the French market SIIC some descriptive statistics. Finally, Section 3, we study successively the presence of diversification gains for SIIC, the presence of an effect related to residential land, the announcement effects associated with the acquisition of residential assets. We conclude in the last section.

2 Related Literature

This part is divided into two subparts. One is devoted to the effects of diversification. We identify the main results for REITs. The second sub-section is devoted to effects related to the type of properties and comparative performance of REITs by type of investment.

2.1 Diversification effects in real estate

Firstenberg, Ross and Zisler (1988) is one of the first contribution that tries to estimate the effects of diversification on the real estate investment companies. Over the period 1974-1987, with a simple cost-benefit analysis-type / risk and distinguishing offices, shops, industrial real estate and housing. The authors show that diversified real estate portfolios are most effective. On British data, Lee (2001) leads to similar results with a significant decrease in portfolio volatility aggregating several classes of real estate assets. Overall, this first wave of research based on data from 70 or 80 (ie, before REITS) finds substantial gains in diversification. However, the degree of diversification of REITs gradually declined in the 1990s. Boer Brounen and Veld (2005) show in particular that within a decade (between the early 90 and the early 2000s) the average number of types of real estate assets in the portfolio of a REIT increased from about 3 to less than 2. Several explanations (similar to those mentioned in finance) have been proposed (Geltner and Miller, 2001): a) the profile of shareholders has changed in 90 years: they are no longer passive holders, they themselves manage the portfolio diversification, b) under the effect of a governance active managers have sought to improve their expertise and therefore chose to specialize, c) investors value the decisions of simple acquisitions, and therefore specialized to reduce information bias.

Thus, early studies including 90 years in their estimation sample tend to highlight an impairment of diversified real estate company. Cronqvist, Högfeldt and Nilsson (2001) study of Swedish real estate companies in the first half of the 90s. They are interested in the effects of diversification according to the class of real estate assets and in internationalization. The authors highlight a "diversification discount" of about 20% for diversified firms. However, the explanatory mechanism at work according to the authors is not a fall in the value due to diversification in itself, but rather the costs anticipated by the market diversification. Indeed, investors expect that firms that choose to diversify are paying too high for their new assets due to lack of expertise price. Specialized firms (and who commit to remain) benefit from gains related to the transparency of their investment choices.

Capozza and Seguin (1999) also examine the impact of diversification on stock returns of U.S. REITs. The authors mention that the transparency of REITs on the underlying real estate assets, allows much more precise distinctions between diversified firms and firms specialized in relation to the financial

literature previously mentioned. Part of the statistical problems concerning data quality and classification of assets or operations not involving REITS. The authors distinguish the impact of diversification on cash flow and market valuation. No reliable relationship is established between the amount of cashflows and diversification. Indeed, if the authors show that diversified firms generate higher rental returns (which rejects the hypothesis of mismanagement because of the disparity in assets), this gain is entirely negated by higher loads. Consequently, the amount of cashflows available for shareholders is not related to the degree of diversification. In a second step, the authors highlight a negative relationship between diversification and development of the firm. The presence of information asymmetries and lack of transparency of diversified firms involve a lesser liquidity of shares and therefore a discount. Subsequently, these results were confirmed by other studies (Eichholtz, Op't Veld and Schweitzer, 2000, for the diversification of asset classes or Campbell, Petrova and Sirmans 2003 for geographical diversification). These studies emphasize the asymmetries of information, greater transparency and less complexity specialized REITs. We do recensons few international studies: Boer, Brounen Op't and Veld (2005) is an exception with a sample of U.S. REITs, British, French, Dutch and Swedish in the 90s Overall, they get. gains of specialization (more pronounced for geographic specialization to specialization by asset class), but also show large differences from one country to another. France in particular is a special case and we return to this point in the next section.

In summary, the results were characterized by a relative homogeneity until the early 2000s: diversification (whatever its definition) then implies a loss of value in the markets. It is interesting to note a parallel with the financial literature and that on REITs can then be established: in the 2000s, many studies have come invalidate the thesis of the "diversification discount" relying heavily on statistical arguments . Many references have shown that specialized REITs diversified and those in previous studies were simply not comparable. Indeed, compare specialized REIT (in housing, for example) and a diversified REIT (with housing, offices, shops, etc..) Can lead to erroneous conclusions if we know (and markets know) that there are large differences in performance from one asset class to another. For example, if housing prices have experienced a sustained higher growth than offices and shops, while the specialized firms (in our example) will outperform diversified firms without it reflects a specific diversification effect. It is just a characteristic of this type of asset (in this case housing) effect.

2.2 Types of investments and REITs performances

The conclusions of the previous sub-section suggest that certain types of assets are better "perceived" by the markets than others. Indeed, they are not specialized REITs as those who are better valued, but some specialized REITs in certain asset classes. The question boils down to what (s) class (s) active (s) make (s)

to maximize the market value of the firm. In particular, residential REITs are they more profitable than others ? As we mentioned in the introduction, the operation of U.S. REITs market with high transparency on specialized REITs facilitates analysis. The U.S. market before the crisis, the share of specialized REITs in the residential was already high (cf. Fischer and Newell, 2009): market capitalization stood at $ 39 billion, or 13.5% of the capitalization of all Equity REITs. More recently (data from December 2013), the number of residential REITs rises to 17 (of 140 Equity REITS) and capitalization of nearly $ 88 billion (or about 14.83% of total Equity REITs). Paradoxically, the subprime crisis did not specifically impacted residential REITs (in contrast, mortgage REITs have them, saw their share relative decrease).

Figure 1 shows the total returns of REITs, especially since the crisis. Residential REITs are historically less volatile than others, have better resisted the crisis of 2008 and have grown more pronounced in 2010 and 2011 noted that the residential sector is divided into two REITs recovery. Apartments the REITS and Manufactured Homes REITS.

Figure 1. Annual total return of REITs by type (Source NAREIT)

In terms of market share, the top 8% of all apartments in the U.S. and the second 5% of the volume of construction of houses. Thus, Capozza and Seguin (1999) is specifically focused analysis on Apartment REITs. The authors identify two financial benefits of this type of REITs: a) the apartment market is very large, active and knowledgeable (in terms of databases). The apartments are more liquid than other properties which allow Apartment REITs a more massive use of debt and therefore to benefit from a higher leverage effect. The average leverage ratio is 7-9% higher for Apartment REITs than for REITs that specialize in another type of real estate assets. In addition, the United State, the lease on the apartment market are short, allowing values to adjust quickly with the market. This further strengthens the liquidity of residential; b) Apartment REITs also have access to two huge mortgage federal agencies Fannie Mae and Freddie Mac. These agencies help finance housing market. These subsidies reduce the costs which indirectly benefits Apartment REITs. In the United States, specialized in residential REITs, in addition to higher leverage ratios, also have much more frequent use of long-term debt as other REITs. Rates are generally fixed. In general, the flexibility enjoyed by Apartment REITs in their capital structure allows them to reach an optimal leverage ratio, which should, in theory, help to maximize their market value. However, expenditures and operating costs can also be higher for specialized residential REITs. According to Capozza and Seguin (1999), all specialized REITs have greater ease of use of debt, but among these, the Apartment REITs are not more valued than others. This study complements other results (see Capozza and Lee, 1995) that compared various specialized REITs in the United States: Office REITs (offices), the Warehouse REITs (warehouses), the Retail REITs (shops), the Apartment REITs

and finally diversified REITs. Over the period 1985-1992, the Apartment REITs have:

- A larger ($ 173 million) and other specialized REITs ($ 162 million for retail, office 102) and diversified REITs ($ 142 million) balance.
- A debt ratio (54%) much higher (39% for warehouses, offices 31% and 32% for diversified REITs).
- The lower operating expenses (0.8% against 0.9% of the balance sheet for businesses, 1.1% for offices and 1.6% for diversified REITs).
- Cash flows in the middle of other REITs (8.2% based on the share price which is higher than the REITs offices and shops, but below warehouses and diversified REITs).

However, if we compare the valuation premium of Apartment REITs to other REITs, they are on average better valued. Thus, in a period where most REITs had negative valuation premiums (ie, haircuts 7.5% for REITs offices, REITs 1.1% for retail and 8.7% for diversified REITs), that of Apartment REITs were still lower (at a discount of 10.7%). Despite a number of benefits to the legislation on the U.S. housing market, investors valued sub-specialized in the residential REITs at that time. These results are qualified by Ambrose and Linneman (2001), capitalization rates are particularly low for residential REITs (8.56% against 8.79% for diversifés REITs and averaged more than 9% for other specialized REITs) while the return on equity (ROE) is most important: 9.07% which is above all other REITS, except those specializing in health institutions.

As shown in Table 1 below, in a more recent period, residential REITs offer couples risk / return safer to investors than other diversified and specialized REITs.

	Industrial	Retail	Residential	Healthcare	Lodging	Self-Storage	Diversified
Mean	13%	13,88%	12,68%	14,36%	11,18%	17,53%	10,26%
Variance	22,28%	22,50%	19,99%	21,21%	33,67%	19,44%	20,51%

Table 1. Volatility and average annual total return, period (1994-2013). Source : NAREIT.

These results confirm those obtained by Fischer and Newell (2007). However, if post-crisis 2009-2013 is isolated in the most recent period, the total performance of residential REITs have improved compared: 18.75% against 13.97% for only industrial / offices, 12 02% for diversified REITs, but still 20.28% for the retail sector. Similarly, ranked TopYields for 2012, the two best performing REITs (ie, with the best rental yields) is a mortgage REIT (American Capital Agency Corp..) And a residential

REIT (Armour Residential REIT). Moreover, Hardin, Hill & Hopper (2009) show that the rental yield of residential buildings owned and managed by REITs is higher than property held by others. Following the theoretical studies of Benjamin Chinloy & Hardin (2006, 2007), the role of "branding strategy" (coordinated management of similar assets on long-term) and scale effects explain this result as opposed to "trading strategy "short-termist conducted on the offices. Whole U.S. literature finds a quadruple interest in investment in residential property: (i) high returns (as defined in ROE, not in the sense total performance), (ii) low volatility and potential for diversification in a mixed portfolio (iii) high liquidity compared to other real estate assets, (iv) favorable legislation on residential leases (short leases and therefore more responsive to market movements as leases on the office market). In these empirical considerations, adds better statistical information for residential versus non-residential because transaction volumes. Broad bases of residential data allow better management of investment choices. However, the list of these benefits does not preclude a significant discount in the valuation of the Residential REITs investors. Some explanations have been made to this fact, if not a less transparent management (residential REITs are among those making less use of external advice, cf. Ambrose and Linneman, 2001) which amplifies the phenomena of asymmetric information and agency costs between managers and shareholders.

3 The French Market

This part is divided into two subparts. One is devoted to a presentation of SIIC: their history and various descriptive statistics. Then, in the second sub-section, we discuss the situation of the French real estate market. In particular, we describe recent developments in the housing market that we then compare with those of other real estate assets.

3.1 French REITs

French REITs also called SIIC (Companies listed property investment companies) were imposed by article 11 of the Finance Act No. 2002 -. 1575 of 30 December 2002 SIIC are listed property companies that acquire, they build and / or operate real estate assets for rental on behalf of their shareholders. Each SIIC must repay at least 85% of rents and half of capital gains to its shareholders, the consideration of these constraints is the exemption from tax on corporations, Only shareholders will be taxed on the basis of dividends received according to the usual diet. Compared to U.S. REITs, the French SIIC has several peculiarities. In particular, there is no French equivalent to the Mortgage REITs. In addition, all the French SIIC are Equity REITs and listed. Moreover, the trans-Atlantic REITs are required to pay at least 90% of their net income to shareholders to benefit from the full exemption on income. In Europe, many

other countries have introduced a neighbor REIT regime or SIICs: from 1969 to the Netherlands (BI) in 1995 in Belgium (real estate investment trusts) and much later in the UK (established in 2006 , UK REITs) or Germany (although there remained anecdotal compared to the unlisted sector). In any case, despite some legislative differences between countries to another, the objective was to reconcile the objective of fiscal transparency - to avoid double taxation more shareholder company - with greater liquidity of the property to shareholders (through its non-or low-fungibility, physical real estate is expensive to hold on its balance sheet assets). Since its inception, the number of French SIIC has risen sharply. They were only 10 in 2003 (with a market capitalization of just over € 13 billion) and 48 at the end of 2007 (nearly 54 billion capitalization). Since the international crisis of 2007/2008 and falling real estate values in 2009, the number fell to 34 SIIC (at 28/02/2014) for a total of just over € 54 billion market capitalization. In the sample used in this study, we observe 7 SIIC in 2003, 13 in 2004, 17 in 2005. Actual grow until 2009 (32) and then decreases up to 30 SIIC in 2012. This study is based on an individual database in which we collect the components of the balance sheet and income statement for each SIIC since 2002 at an annual frequency. We also collect stock variables (price and capitalization), according to a daily frequency. Data on treasury bills one month and three months are also collected. We detail in the following few descriptive statistics to better characterize the data used for econometric modeling. Table 2 presents the evolution of the market capitalization of SIIC from 2002 to 2013. From € 11.3 billion in 2003 it reached $ 37.6 billion in 2006, 43.4 billion in 2010 and 21 billion in 2013. On the period considered there has been a real increase in annual market capitalization of SIIC.

[TABLE 2 HERE]

Table 2. Market Capitalisation of French REITs, billion euros, 2002-2013.

It rose 14% in 2003 to 47% in 2004 to 61% on the eve of the outbreak of the 2007 economic crisis. That same year, a slowdown was observed 22.1%. The phenomenon is growing in 2008 with a decline of about 42%. This movement is great enough to be visible to both the average capitalization, capitalization of the first SIIC for the five largest capitalisations. The following years were marked by very erratic developments certainly related to economic and financial context. Figure 2 shows the history of gross rent (in billion euros). In 2004, gross rents were around $ 22 billion, they reached more than 67 billion in 2008. This level peaked in 2009 with more than 71 billion euros and then regress slightly in subsequent years. Four sub-periods can be distinguished in Figure 2. The first between 2004 and 2006, is characterized by a median growth rate of about 10% from one year to another. The pace picks up (2007-2009) in a very marked: between 2007 and 2006, the median growth rate of gross rents rose 49.2%.

Then the movement fades resulting in median growth rate of -24% in 2009. Starting in 2011, the growth has started with 13.1 and 14.5% growth in 2012. Table 3 summarizes these developments since 2005.

[FIG 2 HERE]

Figure 2. Evolution of gross rent since 2004 (billion of euros)

[TABLE 3 HERE]

Table 3. Annual growth rate of gross rent

To better characterize the behavior of REITs over the period of interest. We are evaluating a number of ratios financiers.Le debt ratio (leverage variable) measured by the ratio (Net debt / Total assets) do not show any clear trend between 2004-2008. From that date, it is characterized by relatively stable around 50%. Solvency indicators deliver interesting lessons. The median rate of credit (preferable in this case the average rate the role of extreme values) remains particularly high throughout the period of observation. In 2004, solvabilité1 is equal to 105% against 126% and 222% for solvabilité2 and solvabilité3. The emergence of the crisis in 2007-08 had only a transient effect on this indicator (57% solvabilité1 in 2009). The analysis of financial profitability is measured through three indicators (TRF1, TRF2 and TR3). The median or average returns have similar behavior. They grew over the period 2003-2006, down from 2007 (11% in 2007 against 17% in 2006). The years 2008-09 were characterized by negative rates of returns, but are restored in 2010 (eg 9.4% for TRF1). A number of players on the real estate and financial markets have highlighted the success of the SIIC regime in terms of overall market performance. Table 5 illustrates this phenomenon after comparing the yields of SIIC (indices gross dividends reinvested, Euronext IEIF SIIC France) with those of the CAC 40 and Euronext IEIF REIT Europe. Individual stock performance SIIC are subject to special treatment. Based on IEIF data are collected daily quotations of SIIC. Data by individual building are characterized by a strong heterogeneity making inane estimate average performance. We choose the average returns to estimate based on truncated distributions. This removes 5% end distribution for each year. So, to account for the quality of the estimate obtained, we report the standard deviation of estimation. Furthermore, Figure 2 reports the confidence intervals at 95%.

[FIG 3 HERE]

Figure 3. Evolution of expected return with confidence interval

[TABLE 5 HERE]

Table 5. Expected return for SIIC, french stock market (CAC40) and Treasury Bill 1 month

[TABLE 6 HERE]

Table 6. Main asset as a part of total asset and Herfindhal Index

With the exception of 2008 where we see negative returns for the French SIIC and the CAC 40, the performance of the SIIC index are higher than the CAC 40 on average. More before the 2008 crisis, the French SIIC comparison vs European REITS showed: a) a very strong correlation (correlation coefficient to calculate) and b) lower volatility of the French index. If we analyze now the SIIC real estate asset class, we note that the share of residential (houses, excluding hotels) is relatively low compared to the U.S. market: about 6% in 2012 against 42% for offices and nearly 29% for retail (including shopping centers). The respective shares of the logistics business premises / warehouses /, mixed or business parks or hotels, restaurants and entertainment, are secondary. Note that the share of "residential" boot net decrease from 2007. Conversely, long stabilized around 20-21% share of the "trade" nearly 30% of the assets of the SIIC in 2012. The number segments held by French SIIC remains relatively stable between 2.3 and 3 segments. The evolution of the number of segments does not seem to follow any particular trend from 2003 to 2012. Moreover, the average Herfindahl index calculated on all SIIC each year shows a clear trend towards concentration. Indeed, the average Herfindahl is equal to 56.5 in 2003 to nearly 71% in 2012.'s Portfolio of assets held by SIIC, was on average very clearly focused.

4 Empirical Results

In this section we detail our original statistical results. In the first sub-section, we begin by estimating the effect of diversification on different variables: the rental yield (or capitalization rate), net income (to-equity ratio, ie, ROE), stock returns or market valuation. We test the presence of cross effect between diversification and share of residential, The effect of these variables on market volatility is also tested. Then, in a second sub-section, we use the technique of abnormal returns ("abnormal returns") to verify the effect of announcements of real estate transactions (purchase and sale of physical property) on stock prices. We then ask whether transactions involving residential assets have a different impact than other assets.

4.1 Asset composition and performance of the SIICs

Before focusing our attention on the specific role of residential, we first test whether the holding of several real estate asset classes rather than focusing on one favored French SIICs performance. In the available data described above, the categorization of real estate assets is very detailed (9 categories): office, retail, residential, business premises, residential real estate services, real estate service outside residential premises with mixed residential, local mixed residential and Others.

From these classes, we construct a Herfindahl index $H_{i,t}$ for the SIIC i at time t. Let $S_{j,i,t}$, the proportion of assets j in the balance sheet of the SIIC i at time t. The Herfindahl index is between 0 and 1 and is calculated as follows:

$$H_{i,t} = \sum_{j=1}^{9} S_{j,i,t}^2$$

Where $H_{i,t}$ is close to zero, this means that to date the SIIC ia distributed relatively evenly among the various heritage property asset classes available. Conversely, if its assets are fully funded on a single active form, then $H_{i,t}$ is equal to 1. Thus, most real estate assets of the SIIC is concentrated, more Herfindahl index is high. To measure the (market initially) firm performance, we use a model type Capital Asset Pricing Model (CAPM) Classic. Let $R_{i,t}$ the performance of the SIIC i in month t, $R_{m,t}$ is the market return (we choose the CAC 40) and $R_{f,t}$ is the risk free rate (we test treasury bonds at different maturities).

The basic CAPM model is written as follows:

$$R_{i,t} - R_{f,t} = \alpha_i + \beta_i(R_{m,t} - R_{f,t}) + \varepsilon_{i,t}$$

$i = 1, ..., n$where $n$is the number of SIICs on the market, ■$_i$ is the Jensen alpha and capture the performance manager of firm i, ■$_i$ is the sensitivity of the SIIC i systematic risk (synthesized the excess return of the market). Finally, ■$_{i,t}$, t is the idiosyncratic component of the profitability of the SIIC. The above model is estimated for each SIIC. We derive estimators ■i, ■i and of ei, t on specific SIIC according to their dates of adoption and possibly loss of SIIC time periods. We then construct a new variable Yi, t:

$$Y_{i,t} = \alpha_i + \varepsilon_{i,t}$$

which corresponds to the excess return of the SIIC i out systemic component. $Y_{i,t}$ summarizes the factors specific to the SIIC: its structural performance (■$_i$) and idiosyncratic risk, $\varepsilon_{i,t}$. We then regressed on several explanatory factors: leverage (debt to assets), the size of the company (balance sheet

size in logarithm), and the Herfindahl index. In a second step, we add the share of residential $Sresid_{i,t}$ among the explanatory variables. We estimate the model by reweighted least squares based on market capitalization. All the results of the estimation are summarized in Table 3.

[Table 7 here]

The first lesson to be drawn from this experience is the lack of proper diversification heritage SIIC on their own profitability effect. This result seems robust to the chosen specification (see Table 3 with removing or adding variables). In other words, the degree of diversification of the assets of the SIIC not significantly determines the rate of return of SIIIC. A second important lesson from this experience is teaching the absence of a clean detention residential purpose. The estimation results indicate that hold a particular asset type (residential assets rather than offices or shops) will have no impact on stock returns of the SIIC. This result is valid, and this is an essential point of out methodology, for a given degree of diversification. This essentially means that, Ceteris Paribus, we do not detect any gap of performance between a SIIC whose asset consists mainly of residential and a SIIC whose asset is essentially composed of other physical assets. This also means that, if we consider two companies holding residential minority way, with one being also more diverse than the other (many other assets in addition to residential), we are not already not financial performance gap between these two SIIC. This result is robust. Indeed, we obtain similar results by replacing the Herfindahl index by the number of segments Ni, t (ie, the number of asset classes in the portfolio)

Some studies (cf. Boer and Brounen Op't Veld) emphasises that the variation of composition of the portfolio may impact the performance. Indeed, when a SIIC has a diversified asset (or highly concentrated) but stable for several years, the information asymmetry between managers and shareholders is reduced. Management has acquired expertise financial analysis, even for a highly diversified asset In this case, the performance may not be affected by the degree of diversification, therefore we modify our two indicators of diversity $H_{i,t}$ and $N_{i,t}$ and replace it with their variation ΔH_i, and $\Delta N_{i,t}$, Also, we study the market impact of a change from residential $\blacksquare Sresid_{i,t}$, we keep the same estimation method as in Table 3. Overall results are summarized in Table 4. Again, we detected no impact of our proxy (s) diversification and share of residential on stock returns.

[Insert Table 8]

The estimated above CAPM suffers from several shortcomings: 1) It is based on strong assumptions (rationality, market portfolio approached here with the CAC 40 index), 2) all of our data are not

available at the same frequency: market data are monthly frequency while other accounting data (including heritage) are available in annual frequency. Moreover, we can test other variables related to the performance of SIIC. The most widely used is Tobin's Q (the ratio between the market value and replacement value/book equity) to estimate if there is a premium or discount valuation for each property listed. This variable is more comprehensive than the previous because changes in market capitalization are compared to the accounting net assets (revalued to take account of movements in the property market physics) which is not the case $R_{i,t} - R_{f,t}$.

Then we test two not directly related to stock market fluctuations variables: return on equity (ROE, Return on Equity) and the capitalization rate (or rental income, gross rents are reported to the value of the asset). Each of these three variables will be alternately exposed on some regressed in Table 3 variables, it is a data model of panel: the sectional size is $N = 45$ and the longitudinal dimension is $T = 10$ (all data here are annual frequency since 2003), Table 5 summarizes the results: some estimates are made by adding fixed effects (a constant term for each SIIC) and others do not. These effects are used to capture the influence of unobserved or unobservable to the specific situation of each firm that we could not explicitly added to the model variables. We use traditional OLS estimators or "within" depending fixed effects are present or not.

The first regression shows no reliable relationship Tobin's Q and diverse heritage SIICs. All the estimated coefficients associated with the indicator concentration-diversity are not significantly different from zero. We fail either to establish a link variable Hi, t with the profitability of SIIC: to balance sheet size data, gross rental income and net income are higher in SIICs having diversified their heritage in SIIC specialized. However, the model clearly shows a positive and statistically significant relationship between the share of residential and Tobin's Q (when nothing seems to bind to rents or profits in operating income). Note that this result is valid only for the model without fixed effects. Indeed, once these last-added, the link is no longer significant. This suggests still a positive investor reaction to the detention of housing by the SIIC, and, whatever its degree of diversification. We detected a significant effect of lever (part of the debt liability) on Tobin's Q (only with fixed effects) as the net income. The balance sheet size of the SIIC seems to have a negative impact on Tobin's Q and (very slightly) positive on the return on equity. Several extensions of the model presented in Table 5 were tested. Particular, additional explanatory variables were included (in the equation on Tobin's Q, see Cronqvist, Högfeldt and Nilsson, 2001.): Market liquidity, cash flow or net income (based on of Figures Affairs). None is significant or not qualitatively alter the estimators already present variables.

Table 9 : Modèles de panel,

cessively: Tobin's Q, profitability equity (ROE) and capitalization rate, the sample includes (up to availability of data) 32 SIICs (N) to 10 years (T) estimators are estimated by OLS (no fixed effect) or Within (fixed effects), dynamic effects are annual dummies from 2004 to 2012 (2003 is the reference) the standard deviations are given in parentheses, * = significance at 10%, ** = significance of 5% and *** = significance of 1%.

4.2 Effect on the return volatility

Previous results do not detect a significant effect of the diversification of the balance of SIIC on various performance measures (stock or accounting). Thus, the relationship between one performance indicator and the degree of diversification of the assets of a SIIC not seem obvious to establish. However, given the specific type of property market behavior (office, retail, and residential) alters the level of risk (perceived or actual). In this context, it is likely that the composition of assets affects more variability expected return of the SIIC. We focus our research on second order moments and test a diversification effect on stock market volatility. We use a classical model of GARCH (1,1) (Generalized Autoregressive Conditional Heteroskedasticity) monthly frequency. Let ■i, t the expected volatility of the profitability of the SIIC i in month t, conditional on the information available in the previous month (t-1):

$$■^2_{i,t} = ■ + ■R^2_{i,t-1} + ■■^2_{i,t-1}$$

where $R_{i,t}$ profitability (centered) of SIIC i in month t. ■, ■ and ■ are parameters. This model is estimated in a standard way, by mobilizing the usual techniques for maximizing the log-likelihood for each SIIC separately. Then, a time series of conditional volatilities advance is built for each SIIC and regressed on all the variables presented in Table 6. We get a very pronounced diversification effect: all else being equal, the difference in volatility between a firm not holding a single asset class ($H = 1$) and a fully diversified firm ($H = 0$) is the around 2% annual rate. As expected, the diversification of the balance sheet therefore reduces the uncertainty for investors in the markets. In addition, if the share of residential does not seem significant by itself, we find a very pronounced crossover effect (residential x diversification). In our benchmark regression (including the dynamic effects, the last column of Table 6), the presence of residential seems to mitigate the negative effect of concentration in the ownership of assets on the market volatility. Within SIIC "concentrated" (with a Herfindahl index close to 1), those holding almost exclusively residential are less volatile than those holding almost exclusively another asset class. This result indicates that intuitively, in the subset of SIIC concentrated on a particular asset, those that focuses on residential, are characterized by lower volatility of their dung yields. The risk can be

considered weaker.

Table 10 : GARCH model -

Notes: The estimated model is a GARCH. The explanatory variables and fixed effects are included in the variance equation (ie, not in the first order). The sample consists of (up to availability of data) 32 SIICs (N) 120 months (T), estimators are estimated by maximum likelihood (with or without fixed effect), Dynamic effects are annual dummies from 2004 to 2012 (2003 is the reference) the standard deviations are given in parentheses, * = significance at 10%, ** = significance at 5% and *** = significance at 1%.

4.3 Abnormal returns

Previous analyzes using accounting data which requires making time combinations (monthly or annual frequency). These groups generate particularly damaging loss of information if the market reaction to an event or announcement is observed at a finer time scale (day or week). We conduct an analysis of "cumulative abnormal return" category. We collect all announcements of acquisitions or dispositions of real estate assets by SIIC and test the reaction of the markets in a very short period of time framing the announcement date (typically 2 days before the announcement to 2 days after the announcement). Over this period, we construct the abnormal return of the SIIC has acquired, that is to say the difference between the stock return of the SIIC and the return on the overall market SIIC. Then we cumulate the abnormal returns over the entire period (typically we cumulate returns 5 if the considered time window is j-2 +2 j where j is the day of the announcement of the transaction). We thus obtain cumulative abnormal return. If it is positive, this implies a positive reaction (yield above the market) investors in this ad. Table 7 shows the results obtained for different time slots. Since 2003, the number of transactions of sale or purchase is too low to conduct an inferential statistical analysis. We simply reproduce the average cumulative abnormal returns. We focus on the acquisition transactions (repos even fewer). Averages are weighted by the size of the operation.

Following the announcement of a residential asset acquisition of a transaction (or more), market reaction seems slightly positive and that, whatever the considered time window. These results should be viewed with caution, because we counted only 11 residential transactions. We can also note the positive market reaction to the acquisition of businesses and offices that negative (in both cases, the results are a little more robust given the somewhat larger volumes of observation, 26 and 41 respectively).

Table 11 Abnormal cumulative Return 5 days around date of the event

5 Conclusion

This study questions the existence of a link between the nature of the active French listed real estate companies and their performance. This issue very poorly studied in France requires, to be placed in the broader context gains-losses on the diversification-concentration of assets. Well documented in the Anglo-Saxon literature, analysis of the relationship between the composition of the active physical and performance properties of the company has been facilitated by the existence of a classification of REITs in the United States depending on the type real estate investment companies in which the majority. In sum, American literature is oriented mainly to a discount of diversified companies. It should however remain measure because it is difficult to obtain reliable results, precisely because of the lack of diversified REITs. The situation is very different in France: the question of the comparative liquidity of residential and non-residential should be specifically studied, because some property (offices and shops) Non-residential may be relatively liquid. In addition, the legislation regarding residential leases is not as advantageous as in the United States. The decisive role played by the type of assets, including residential, performance is a critical issue and methodological shortcomings identified in earlier contributions deserve to be corrected. This is the first contribution of this study: the methodology to renew renew results for the less fragile. The major lesson of this study can be stated as follows: residential detention has little impact on the average performance of the SIIC. In contrast, the level of diversification given a SIIC have invested in residential assets will be reduce the volatility of the stock market performance. In total, the overall result makes evident the possibility offered by residential assets offer investors the possibility to achieve the risk / return more attractive.

In detail, our different results are summarized as follows. On the question of the impact degree of diversity of assets held on the individual performance of SIIC, the results contrast with those of American literature. The French listed property not seem to suffer any significant premium discount. The sensitivity of stock prices to market fluctuations do not appear to differ substantially between diversified and specialized SIIC SIIC. On the question of the existence of a "residential purpose". The results show a positive but modest effect, related to the ownership of housing. In sum, hold residential since 2003 had a slightly positive impact on overall equity performance SIIC, whether specializing in residential property or land seeking to diversify the composition of their assets.

Finally, on the question of the effect of asset diversification and the presence of residential on the volatility of market prices of SIIC. The results support a marked diversification effect. Indeed, firms characterized by a high concentration of the balance sheet are characterized by more volatile than diversified firms stock market performance. A major conclusion to be drawn. A comparable degree of diversification, SIIC has invested in residential assets will be reduce the volatility of the stock market

performance.

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