

# Investing in the Rich of this World: Family Investment Trusts and their Performance<sup>†</sup>

Philippe Masset<sup>‡</sup>

Jean-Philippe Weiskopf<sup>§</sup>

This version: November 2017

## ABSTRACT

This paper investigates the characteristics and performance of family investment trusts across the world. Their unique combination of family wealth and expertise and investments in stock markets make them a special asset class for retail investors. We find that families are strongly involved in terms of stake and management both in their trusts and the trust's investments. We further document a significant outperformance of family investment trusts globally and especially in Europe and a more contained performance on Asian markets. Trust characteristics and the economic environment appear to have some influence on performance with European multi-holdings displaying a 9% risk-adjusted performance during crises.

**Keywords:** family; holding company; active management; performance;

---

<sup>†</sup> We would like to thank Dusan Isakov, Alexandre Garel and participants at the CIG annual meeting in Lausanne and at the AFFI annual conference in Valence for constructive feedback.

<sup>‡</sup> Ecole hôtelière de Lausanne, HES-SO // University of Applied Sciences Western Switzerland, Route de Cojonnex 18, CH-1000 Lausanne, Switzerland. Email: philippe.masset@ehl.ch. Tel.: +41 21 785 1412.

<sup>§</sup> Corresponding author: Ecole hôtelière de Lausanne, HES-SO // University of Applied Sciences Western Switzerland, Route de Cojonnex 18, CH-1000 Lausanne, Switzerland. Email: jean-philippe.weiskopf@ehl.ch. Tel.: +41 21 785 1478.

## INTRODUCTION

Popular wisdom indicates that rich people get ever richer and that the wealth of middle class households at best stagnates. One of the reasons which may be put forward is that the richest part of the population is continually on the outlook for good investments and thus is able to accumulate capital gains and wealth across time. But what if retail investors could invest, at least partly, just like them? This article looks into this question by analysing family investment trusts (FITs). Through time, mostly European and Asian families or dynasties have started to build up listed trust companies to invest their wealth or at least a large part thereof on capital markets. Retail investors can therefore rather easily participate in these trusts and potentially reap the benefits of investing like the rich families of the world.

Investing in generic trust companies displays several benefits and costs for investors that will also hold for family investment trusts. The latter, however, also display more specific advantages and risks due to their particular ownership structure. The foremost benefit of a trust is the diversification potential it offers to investors. By investing in one single asset investors may indirectly hold a portfolio of companies and asset classes, which will reduce the idiosyncratic risk component and transaction costs. Following literature on diversified companies, these should be able to take on more debt (Lewellen, 1971; Mansi and Reeb, 2002) and lever their returns to profit amongst others from tax benefits due to their lower risk. This should be even more present in trusts as stocks in the listed stakes can be used as collateral. The presence of a family does not appear to hinder the use of debt (Anderson and Reeb, 2003a) and may actually make it more appealing due to a reduction in the cost of debt (Anderson, *et al.*, 2003). Linked to capital structure, the trust structure may further allow it to create an internal capital market or facilitate access to external markets (Gertner, *et al.*, 1994; Stein, 1997; Chang and Hong, 2000).

It could be argued that a trust is similar to a closed-end mutual fund as both invest directly into the equity of companies. From a diversification perspective this is certainly true even though a trust may allow investors to tap into a broader pool of assets. Family trusts may invest in listed and unlisted companies, real estate and be diversified across industries and geographically, whereas mutual funds are mostly specific to one asset class, region or theme. Moreover, in both cases managers will try to identify undervalued companies to generate excess returns. This should have an impact on returns and valuations of both closed-end funds and trusts. Finally, closed-end funds, parent companies and trusts may trade at a discount as compared to their net asset value or the value of their shareholdings (Pontiff, 1996; Cornell and Liu, 2001; Mitchell, *et al.*, 2002). This may lead to a superior performance in the case the discount gap closes. However, there are also some diverging characteristics between these two assets. In the case of trusts ownership should be accompanied by a more active participation and increased monitoring in the companies it holds (Banerjee, *et al.*, 1997). This should be even more the case in FITs with the family's private wealth being at stake. As for classic family corporations this may reduce agency costs between corporate managers and shareholders (Anderson and Reeb, 2003b; Villalonga and Amit, 2006) and further increase corporate and thus the trust's value. Another difference between mutual funds and family trusts consists in the holding period. Fund managers may switch their positions rather frequently (Wermers, 2000; Chordia, *et al.*, 2011). However, in the case of family trusts a long term perspective should be adopted and the management of the company, with the active help and know-how of the family trust, gets to implement a long term strategy which should be beneficial to both the company and the trust (Sirmon and Hitt, 2003; Le Breton-Miller and Miller, 2006).

FITs may, however, also trigger costs to investors. First, the creation of an internal capital market may be detrimental if it leads to suboptimal resource allocations and financing constraints get shifted from an entity to the trust (Scharfstein and Stein, 2000). Second, trusts

may actually trade at a premium if the market knows it invests in undervalued companies. This would lead to a lower performance in the case the premium is reduced across time or the belief on undervaluation does not materialise. Third, as opposed to mutual funds the cost structure of a trust is more complex. For mutual funds investors can a priori analyse fee structures from fact sheets. For trusts the costs are twofold and more onerous. As for any equity investment an investor will have to pay transaction costs but it will indirectly also have to pay for the entire operational structure of the trust. Likewise to a company, there will be management and board compensation, investments in fixed assets and many other expenses. Fourth, family trust companies may suffer from liquidity issues. A family owning a large proportion of the trust's shares will lead to a low free float hindering investors to easily liquidate their positions. Finally, investors may incur relatively large costs due to agency problems between minority and family shareholders. The latter may use their position of strength to extract private benefits of control which may harm non-family investors (Dyck and Zingales, 2004; Doidge, *et al.*, 2009).

In this paper we want to analyse the performance of FITs. Their distinctive features and relative easiness to invest in make them an interesting investment vehicle to study and for which the performance is a priori unclear. We first collect data on the characteristics of these trusts. This, on the one hand, allows us to describe the interaction between the family and its trust and on the other hand the way the trust invests and manages its positions. We then create equally weighted portfolios of FITs to evaluate their performance along different dimensions. Results indicate that FITs display interesting features and on average have a low risk, a strong performance and yield excess returns to investors.

The paper contributes to the literature in several ways. First, it deepens our understanding on family capitalism. While literature on family firms and the effect of families on the different policies and performance of their companies is vast, FITs have to the best of our knowledge not been studied so far. These, however, may offer us new insights on how families work and the

implications they have on companies they may not have founded and in which they do not have their entire wealth tied. It further allows us to get insights in the ways wealthy investors take investment decisions and how important diversification is to them. Second, it contributes in deepening our knowledge in portfolio management. Literature on the performance of funds of any kind (mutual funds, SRI funds, REITs, hedge fund, etc.) is very vast. It has, however, neglected FITs that bear both similarities to classic corporations and closed-end funds. This asset class allows us to gain additional insights on a variety of characteristics that may influence performance.

The following section describes the research design by presenting the sample and methodology used. This is followed by a section exhibiting the empirical results on both the characteristics of the trusts and their risk-performance features. The last section finally draws conclusions.

## **RESEARCH DESIGN**

In this section, we first introduce the sample and its construction. We then explain the methodology used to evaluate the performance of FITs.

### **Sample**

No readily available list of listed family trust companies exists. We, therefore, use a two-step approach to construct a representative sample. First, a list containing all listed companies worldwide under the SIC code 67 (Holding and other investment offices) was established. We only study listed trusts to ensure that retail investors can effectively invest in them. This yields 4,411 different listed companies. Second, every company was screened manually on its respective website, annual report and ThomsonReuters Eikon along two dimensions. First, is it a true investment trust or merely a company holding which is no different than a normal company? A prime example of the latter would be the Swiss pharmaceutical company Roche

Holding. It appears under Secondary SIC code 67 as it officially is considered a holding but it only holds its different subsidiaries across the world and therefore does not qualify as an investment trust. Second, is a family involved as shareholder in the investment trust? To qualify as a family trust we use a threshold of 20% voting rights as has become common in the literature on classic family firms. This screening process reduces the sample to a total of 76 FITs.

FITs can take many different forms but generally follow two major streams. Some are constructed as a mono-holding trust meaning that its sole purpose is to hold a position in a single company. Solvac is an example of a trust in this category. It is listed on NYSE Euronext Brussels and 77.5% owned by the Solvay family who has founded the eponymous Belgian chemicals group Solvay in 1863. Solvac's sole purpose is to hold a stake of around 30% in Solvay in the name of the 2,300 members of the founding family. However, as both Solvac and Solvay are listed on NYSE Euronext Brussels non-family investors can similarly participate as shareholders.

Other FITs, are multi-holding trusts. In this case, a family, may still own part of the company it founded or just manage its accumulated wealth through investments into entirely independent companies by owning positions in multiple ventures through its trust. This kind of FIT is more widespread and has received some media attention in recent years (Kirchfeld and Ebhardt, 2015). A well-known example is Exor, the Netherlands-based and Milan-listed trust of the Agnelli family. The family, best-known for founding the Fiat automotive group in 1899, has used its wealth to diversify into different ventures. Today, it owns around 53% of Exor, which itself holds positions in Partner Re and Banca Leonardo (financial companies), FCA and Ferrari (automotive companies), CNH (mechanical equipment), The Economist (media), Welltec (energy industry), but also in Juventus Turin (football club).

## **Methodology**

The performance of the FITs is analysed by constructing a time-series of USD-translated returns of equally weighted portfolios. These contain FITs over a 20-year period beginning in November 1996. These portfolios are decomposed across two distinct dimensions and following the characteristics of the different trusts. First, we study geographical differences by analysing family trusts globally. Then, the sample is broken down into regions including Europe and Asia-Pacific. Finally, family trusts are examined on the markets in which they are the most prominent. This includes Belgium, Sweden, France and Hong Kong. We also want to better understand whether mono- or multi-holding FITs differ. For this, we create two equally weighted portfolios containing either mono or multi-holding family trusts and as before run all specifications on a global, regional and national level. In a last step, we want to gauge the effect of boom and bust periods on the performance and risk of family trusts. We consequently split the sample in periods of economic downturns (March 2000 to October 2002 and October 2007 to March 2009) and expansions (November 1996 to February 2000, November 2002 to September 2007 and April 2009 to October 2017).

In order to evaluate the risk and return characteristics of FITs we resort to the use of the CAPM, Carhart four factor model and models with additional factors. We first estimate the CAPM model by regressing the excess returns of each respective equally weighted portfolio on excess returns of the market index. For the Carhart four-factor model the classic SMB, HML and WML factors are added to the market excess returns. The Carhart model is further expanded by combining it with the Fama and French (2017) five factor model which adds a profitability and investment factor to it. Following the model proposed by Frazzini and Pedersen (2014) we add a Betting Against Beta (BAB) factor to the Carhart model. We finally run a model proposed by Asness, *et al.* (2014) which adds a Quality Minus Junk (QMJ) factor to the model of Frazzini and Pedersen (2014).

The regression equation for the market model is represented as

$$(R_{i,t} - R_{f,t}) = \alpha + \beta(R_{m,t} - R_{f,t}) + \varepsilon_t \quad [1]$$

The models proposed by Carhart (1997) and the one by Fama and French (2017) take the form

$$(R_{i,t} - R_{f,t}) = \alpha + \beta_1(R_{m,t} - R_{f,t}) + \beta_2SMB_t + \beta_3HML_t + \beta_4WML_t + \varepsilon_t \quad [2]$$

$$(R_{i,t} - R_{f,t}) = \alpha + \beta_1(R_{m,t} - R_{f,t}) + \beta_2SMB_t + \beta_3HML_t + \beta_4WML_t + \beta_5RMW_t + \beta_6CMA_t + \varepsilon_t \quad [3]$$

Finally the models proposed by Frazzini and Pedersen (2014) and Asness, et al. (2014) can be written as

$$(R_{i,t} - R_{f,t}) = \alpha + \beta_1(R_{m,t} - R_{f,t}) + \beta_2SMB_t + \beta_3HML_t + \beta_4WML_t + \beta_7BAB_t + \varepsilon_t \quad [4]$$

$$(R_{i,t} - R_{f,t}) = \alpha + \beta_1(R_{m,t} - R_{f,t}) + \beta_2SMB_t + \beta_3HML_t + \beta_4WML_t + \beta_7BAB_t + \beta_8QMJ_t + \varepsilon_t \quad [5]$$

where  $R_{i,t}$  represents the returns of the equally-weighted portfolio  $i$  for month  $t$ ;  $R_{f,t}$  the respective risk-free rate for month  $t$  and  $R_{m,t}$  the respective market returns for month  $t$ .  $SMB$  represents the size factor (small minus big market capitalisation),  $HML$  the value factor (high minus low book to market ratio),  $WML$  the momentum factor (winner minus losers),  $RMW$  the profitability factor (robust minus weak),  $CMA$  the investment factor (conservative minus aggressive),  $BAB$  the Betting against Beta factor (low beta minus high beta) and  $QMJ$  the Quality minus Junk (high quality minus low quality stocks) factor. Finally,  $\alpha$  indicates Jensen's alpha (Jensen, 1968),  $\beta_1$  the factor loading on the market portfolio,  $\beta_2$  to  $\beta_8$  the factor loadings on the Fama and French (1993), Carhart (1997), Fama and French (2017), Frazzini and Pedersen (2014) and Asness, et al. (2014) factors and  $\varepsilon_t$  the residual term.

In all cases a positive alpha implies that FITs yield higher than expected risk-adjusted returns and that it constitutes a good investment for investors. All standard errors are calculated



following a Newey–West adjustment with lags of order five to account for autocorrelation and heterogeneity.<sup>1</sup>

The global portfolios all include a global market index and the 3-month US T-bill rate as risk-free proxy. For the regional specifications we benchmark against regional market indices and the 3-month US T-bill rates as risk-free proxy. This data and the SMB, HML, WML, RMW and CMA factors are obtained from Kenneth French website while the BAB and QMJ factors are from the AQR website. Finally, for local specifications we use local market indices including the BEL20 for Belgium, the OMX Stockholm Index for Sweden, the SBF120 for France and the Hang Seng for Hong Kong. These are paired with their respective local 3-month T-bill rates.

## **EMPIRICAL RESULTS**

In this section we first present some descriptive statistics on the different European family trusts and the created portfolios before turning to the different factor model results and concluding by some brief additional tests.

### **Family Trust Characteristics**

This section aims at providing information on the characteristics of the individual FITs. In order to do so, accounting data was collected from Worldscope and the position and family data from respective annual reports over the period 2010 to 2015. The trusts being the most represented in Europe (close to 70% of the sample), only this region is analysed in this section.

[Insert Table 1 about here]

---

<sup>1</sup> Generally, not adjusting standard errors or using a lower lag value at best slightly improves significance. The reported results can thus be considered conservative.

Table 1 exhibits that the size and value of family trusts, as measured by market capitalisation and total assets, varies strongly and ranges from rather small structures to large multinational operations. This divergence is equally true for the dividend and profitability measures. While some trusts decide not to pay dividends others pay out large amounts and display strong dividend yields. As for a classic company the divergence may emanate from the investment strategy of the trust. If its goal is to hold one or very few positions over longer periods and it does not intend to diversify more it has an incentive to pay out to its family shareholders who oftentimes have their money tied up in the trust and for whom pay outs may constitute the only manner to obtain funds (Isakov and Weisskopf, 2015). On the other hand, a trust which wants to reinvest the dividends it receives from its positions to grow in size may want to keep dividends in the structure. Profitability as measured by return on assets and return on equity is equally variable and stands on average at around 5.9% and 8.1% respectively.

The lower part of Table 1 displays some interesting insights into the characteristics of the family trusts in terms of ownership and positions. It is noticeable that the respective families have a considerable amount of power in their trusts. On average, the family holds around 61% of voting rights in the trust which gives it a majority and therefore the possibility to run the trust in accordance with its needs and desires.<sup>2</sup> This voting power is further enhanced through active management of family members inside the trusts. In close to 95% of the cases one or more family members sit on the board of directors and in around 54% a family member has a position in senior management, mostly as Chief Executive Officer. These numbers are very pronounced compared to prior evidence on family companies in which stakes are often lower and active management less present. Maury (2006), for example, show that for Western Europe family ownership amounts on average to around 30% and active management (as CEO, Chairman or

---

<sup>2</sup> We acknowledge that the minimum stake of 17.20% is under the threshold to be considered a FIT. It has still been used as it emanates from a single trust for which the stake of the family owner dropped below 20% over a one year period.

Vice-Chairman) occurs in 21% of companies. In another study on Western European companies, Barontini and Caprio (2006) confirm that on average family stakes stand at 38% but they find that 85% of family companies have a family member on the board or as CEO. Overall, it appears that families strongly tie their trusts to their needs and do not want to relinquish too much control to external investors.

Looking at the positions of the FITs we find some strong heterogeneity on the investment approaches. On average, FITs invest in around 10 ventures. This number, however, strongly depends on the trust. While few have a significant number of positions of up to 27 stakes, others are entirely constructed to solely hold one position (mono-trusts). It is also interesting to notice that family trusts prefer to invest in a restraint number of stakes to obtain a certain level of diversification but do not invest in a multitude of very small stakes such as some Sovereign Wealth Funds or mutual funds tend to do. The diverging approaches have implications for retail investors wanting to tap into a diversified portfolio of companies and should be kept in mind. More interestingly, investing in a family trust allows external investors to profit from an exposure in both listed and unlisted positions. Investments in listed securities accounts for 55% of positions in the sample, while the remaining 45% occur in unlisted securities. Generally, the listed positions are made via small to medium stakes in classic industrial companies. The unlisted positions are more varied in nature, but can mostly be classified into two broad categories: private equity and real estate. The equity investments are either going directly into private equity funds or into smaller companies that are in their developing phase. In this case, the trust either takes an outright 100% stake or works in conjunction with one or two external partners. For the real estate component trusts for the vast majority invest directly in properties and only very rarely through investments in external real estate companies through an equity stake.

Analysing the positions in more detail it further becomes apparent that families through their trusts once again want to maintain a certain control. In order to do so the average voting rights held by the trust in their positions amount to 41%. While this is not an absolute majority it should be enough to strongly influence voting outcomes at AGM and may even constitute a de facto majority due to generally low AGM attendances. This is once again complemented by an active management approach. In approximately 98% of the positions a member of the trust takes up an active participation. This may be a family member, but is mostly done by a manager or representative of the trust, who is external to the family. We also find that the active management is exclusively done via representation on the board of director in which the family strategy, advisory roles and knowledge transfer should be at its most efficient. This also explains the restricted number of positions of FITs. In order to be able to properly monitor the positions family trusts cannot be present in too many ventures at the same time.

Finally, we find that, similarly to closed-end funds (Lee, *et al.*, 1990; Lee, *et al.*, 1991), the trusts display on average a discount in relation to their net asset value (NAV). On average, it amounts to a discount of approximately 23%. It further very rarely turns into a premium (only 8% of the observations) and does not appear to move in a clear or predictable pattern across the six year period. This characteristic may be of interest to investors looking to participate in undervalued trusts in the hope of the discount gap closing or at the least reducing.

### **Portfolio Descriptive Statistics**

Figure 1 shows the evolution of the Global, European and Asia-Pacific portfolios and their respective benchmark markets which have all been rescaled to a level of 100 in October 1996.

[Insert Figure 1 about here]

The evolution of the Global and European portfolios are the most pronounced with a nine fold increase over the last twenty years. At the same time, it is noticeable that both have seen severe drops of 60 to 70% during the global financial crisis. It, a priori, does not appear that FITs have been more resistant in times of crises, but rather have seen their performance suffer at least as much as equity markets in general. The Global portfolio being predominantly constituted of European trusts it tends to follow the European portfolio, but shows a slightly worse evolution due to the presence of relatively poorly performing Asian family trust companies. The latter perform similarly to the three market benchmarks and overall yield a fourfold increase over the 20-year period. It further appears that Asian trusts performed especially poor over the first half of the sample period. This may be explained by the Asian Crisis in the mid to end 1990s which hit this region more than others and to the relatively low governance standards present in many South-East Asian markets at the time.

Table 2 further presents different descriptive statistics in relation to performance, risk and distributional features of the family trust portfolios and their respective benchmark markets. FITs appear to outperform their benchmarks irrespective of their geographical position or trust structure. All display annualised returns of around 11% to 13% over the period 1996 to 2017, while benchmarks returned around 5% to 8%. For the Asian portfolio the average is driven by some high returns, especially a 43% annualised return in October 1998. Over this month all Asian family trusts performed strongly, while the market equally rallied with an annualised return of 19% over this month due to interest rate cuts by the Federal Reserve to spur economies after the Asian crisis. This is also true to a lesser extent for the local portfolios. Sharpe and Treynor ratios follow the above outperformance findings with FITs displaying higher Sharpe and Treynor ratios than the benchmarks. Only Asian trusts perform poorer than other family trusts and are more in line with Asia-Pacific markets. This is further confirmed by the Hong Kong portfolio which exhibits a similar behaviour to the Asia-pacific market in general.

[Insert Table 2 about here]

At the same time FITs appear equally or slightly more risky than their benchmarks with annual volatilities of around 20% over the period. Mono-holding trusts are slightly riskier than multi-holding companies indicating a limited diversification effect on family trust risk. Once again, Asia and Hong Kong behave slightly differently with higher risk both for the family trusts (27%, respectively 29%) and their benchmark indices (21% respectively 24%). This is surprising given that family shareholder tend to shun risk (Gomez-Mejia, *et al.*, 2010) to minimise their exposure and secure their wealth. Skewness is slightly negative and similar for all trusts and markets except for Asia displaying a positive figure on this variable. Finally, all series exhibit a leptokurtic behaviour with excess kurtosis around two for most.

### **Risk and Return of Family trusts**

Table 3 provides results for the CAPM, Carhart four factor model and the WML-expanded Fama-French 5 factor model for the global, European and Asian portfolios of FITs. The choice between the three specifications does not alter results in a significant manner. All portfolios display beta coefficients which are slightly higher than unity showing a somewhat riskier composition than the market. This is in line with findings reported in the descriptive statistics. Alpha coefficients are more dependent on geographical location with Global and European portfolios showing a significant outperformance of 0.30% to 0.42% on a monthly basis (3.6% to 5.1% annually). This indicates a strong performance of family trusts in contrast to their benchmark markets. For the Asian portfolio, on the other hand, alpha coefficients are positive but lower and not significant showing an equal performance as compared to the benchmark. This may be due to higher expropriation or entrenchment fears by market participants as has been shown by prior literature on Asian family business groups (Claessens, *et al.*, 2002).

[Insert Table 3 about here]

Recent studies have shown that the classic factor models may not be enough in explaining company returns and systematic risks. As such significant risk-adjusted returns may simply be a reflection of missed factors. Frazzini and Pedersen (2014), for example, show that companies with low betas tend to outperform companies with high betas. In other terms a positive loading of the BAB factor hints at the family portfolio to be composed of low beta stocks as opposed to risky high beta stocks. Another paper by Asness, et al. (2014) proposes a QMJ factor which reflects the family portfolio to be composed of quality stocks which are defined as being profitable, growing, save and displaying high pay-outs. We believe these two factors to be particularly interesting in the present context as both appear to fit with the preferences displayed by families. It has been shown that families are risk-averse (Gómez-Mejía, *et al.*, 2007; Hiebl, 2012), display high pay-outs (Isakov and Weisskopf, 2015) and rather conservative in their management approach (Miller, *et al.*, 2008). This is further evidenced by a recent paper by Frazzini, *et al.* (2013) on the investment success of Warren Buffet which can partly be explained by these two factor loadings.

[Insert Table 4 about here]

Table 4 presents results for these two models. Overall, findings are very much in line with those in Table 3. Alpha and market, SMB, HML and WML factor loadings are qualitatively similar to those in the base model. Results on the two additional factors are rarely significant showing that they are not relevant systematic factors in the current context. Only the BAB factor in the global context is significantly positive showing that family trusts are rather save stocks.

Overall, the BAB and QMJ stocks do not appear to be factors that drive the highly significant and positive risk-adjusted return of family trusts.

Family trusts can take different structures. Specifically, it can decide to take stakes in only one venture or in multiple companies. The former may be due to tax reasons, some sort of pyramidal ownership or simply to create a structure that assembles multiple family members under one roof. Multiple stakes can be taken to diversify a family's wealth and create some sort of large, professionally managed listed family office.

[Insert Table 5 about here]

Table 5 examines these two types of family trusts. Findings remain similar to the ones reported in Table 3. Beta is similar for both mono- and multi-holding companies and are as before slightly above unity. It thus do not appear that a specific diversification effect exists if the family trust holds a more diversified portfolio of companies. Both appear to be dependent on similar systematic risks. Considering alpha mono-holdings, however, tend to be less performant as only for the CAPM specification is there a significant outperformance. For the Carhart and Fama-French models it is only the multi-holdings that significantly outperform on a risk-adjusted basis and in line with results found in Table 3.

It may be possible that FITs follow diverging evolutions depending on the economic environment. It is often argued that families are long term investors who do not yield to short term market pressures (Lumpkin and Brigham, 2011). If this were true we would expect to find a more resilient performance in times of crises and coefficients to be more uniform as these trusts should not change their composition based on short term considerations.

[Insert Table 6 about here]



In Table 6 we therefore analyse the performance of FITs during periods of economic expansions and crises. The crises periods include the crash following the dot com bubble and 9/11 (October 2000 to March 2003) and the global financial crisis (October 2007 to March 2009). Expansion periods encompass the remaining time periods.

Beta coefficients remain rather stable through both periods but nonetheless show a slight reduction in coefficients during periods of economic downturns. Alpha coefficients display a more mixed picture dependent on the region considered. Globally, both periods appear to yield insignificant positive alpha coefficients. For European family trusts the outperformance exists throughout both periods. However, it is especially pronounced (around 9% p.a.) during the two market downturns showing a very strong resilience during these times as compared to the overall market. Finally, on the Asian market results are reversed. While family trusts do not outperform their benchmark during expansion periods they display an insignificant underperform during recessions. This may again be due to the specificities of Asian markets in which intra-group flows are more common (Claessens, *et al.*, 2006) and may lead to inefficient resource allocations in internal markets even within family trusts.

In Table 7 we further examine periods of economic up- and downturns in combination with the mono- and multi-holding structures to better understand which type of FIT drives the results.

[Insert Table 7 about here]

Global portfolios on average display lower coefficients for mono- as compared to multi-holdings during all times but all remain insignificant. Turning to the European portfolios it is apparent that it is especially the multi-holdings driving results. In periods of economic booms mono- and multi-holdings tend to perform equally well and yield positive risk-adjusted returns.

However, in times of economic downturns only multi-holdings outperform and yield impressive 8-11% annual alphas. It appears that European FITs with their stable business approach and diversification into multiple asset classes can be considered interesting investments in times when investors are on the lookout for alternatives to falling asset prices.

In Table 8 we explore the performance of FITs on the four markets on which these are the most represented. It includes Belgium, France and Sweden in Europe and Hong Kong for Asia-Pacific.

[Insert Table 8 about here]

Results remain very much in line with those found on a regional basis. For the three European markets alpha is highly positive and significant exhibiting a risk-adjusted excess return of around 6-7% per year. The beta coefficient is below unity at around 0.9 showing a slightly lower systematic risk exposure than the overall market and hinting at a more conservative approach by family trusts on these three markets. The Hong Kong portfolio behaves differently and is also in line with results from the Asia-Pacific region. It does not perform better than its benchmark index, the Hang Seng, as evidenced by the negative albeit insignificant alpha coefficient. It also displays systematic risk which at 1.02 is slightly higher than for the overall market.

### **Additional tests**

Results may be driven by different specificities. Thus all calculations were redone using two different specifications. First, foreign exchange rates may influence results if price translations into USD generate strong returns on itself. We therefore use local currencies and rerun the different specifications. Results remain qualitatively similar and thus do not appear to be driven by the USD exchange rate. Second, it may be argued that using equally-weighted portfolios

may put too much weight on small companies that may be more difficult to invest in or which may exhibit more erratic behaviours. All calculations were thus redone using value-weighted portfolios of family trusts. Findings again remain similar to those presented in the above section. Finally, we have run all specifications without the WML factor proposed by Carhart. Results remain very similar to those reported in this paper.

## **CONCLUDING REMARKS**

Winston Churchill stated that “there is no doubt that it is around the family and the home that all the greatest virtues, the most dominating virtues of human, are created, strengthened and maintained.” Families can have a strong impact on the corporations they hold and invest in. In this article, we show that FITs display a number of specific characteristics that make them an interesting alternative to mutual fund or classic equity investments. First, families appear very involved not only in the trust itself but also in the holdings in which the trust is invested by owning large stakes and being active in senior management. This certainly allows for better monitoring and probably more importantly for a transfer of knowledge between families and corporations. However, it could be argued that the very influential position of families may lead to both entrenchment and expropriation which may be harmful to external investors. Second, the long term view and positions of family trusts allows to ease off the pressure short term institutional investors tend to put on corporations. This may be beneficial for all shareholders and lead to a more efficient and profitable outcome in the mid- to long-term for both the trusts and the companies these are invested in. Third, family trusts mainly trade at a discount as compared to their NAV which may allow for a profitable investment if the discount closes. Finally, we show that FITs have strongly outperformed their benchmark markets over the last twenty years and this nearly irrespective of the time period, the economic environment and investment strategy considered.

## REFERENCES

- Anderson, R. C., Mansi, S. A. and Reeb, D. M. 2003. Founding family ownership and the agency cost of debt, *Journal of Financial Economics*, 68:2, 263-285.
- Anderson, R. C. and Reeb, D. M. 2003a. Founding-family ownership, corporate diversification, and firm leverage, *Journal of Law and Economics*, 46:2, 653-684.
- Anderson, R. C. and Reeb, D. M. 2003b. Founding-family ownership and firm performance: evidence from the S&P 500, *Journal of Finance*, 58:3, 1301-1328.
- Asness, C. S., Frazzini, A. and Pedersen, L. H. 2014. Quality minus junk, *Working Paper*.
- Banerjee, S., Leleux, B. and Vermaelen, T. 1997. Large Shareholdings and Corporate Control: An Analysis of Stake Purchases by French Holding Companies, *European Financial Management*, 3:1, 23-43.
- Barontini, R. and Caprio, L. 2006. The effect of family control on firm value and performance: Evidence from continental Europe, *European Financial Management*, 12:5, 689-723.
- Carhart, M. M. 1997. On persistence in mutual fund performance, *Journal of Finance*, 52:1, 57-82.
- Chang, S. J. and Hong, J. 2000. Economic Performance of Group-Affiliated Companies in Korea: Intragroup Resource Sharing and Internal Business Transactions, *Academy of Management Journal*, 43:3, 429-448.
- Chordia, T., Roll, R. and Subrahmanyam, A. 2011. Recent trends in trading activity and market quality, *Journal of Financial Economics*, 101:2, 243-263.
- Claessens, S., Djankov, S., Fan, J. P. and Lang, L. H. 2002. Disentangling the incentive and entrenchment effects of large shareholdings, *Journal of Finance*, 57:6, 2741-2771.
- Claessens, S., Fan, J. P. H. and Lang, L. H. P. 2006. The benefits and costs of group affiliation: Evidence from East Asia, *Emerging Markets Review*, 7:1, 1-26.
- Cornell, B. and Liu, Q. 2001. The parent company puzzle: when is the whole worth less than one of the parts?, *Journal of Corporate Finance*, 7:4, 341-366.
- Doidge, C., Karolyi, G. A., Lins, K. V., Miller, D. P. and Stulz, R. M. 2009. Private Benefits of Control, Ownership, and the Cross-listing Decision, *Journal of Finance*, 64:1, 425-466.
- Dyck, A. and Zingales, L. 2004. Private Benefits of Control: An International Comparison, *Journal of Finance*, 59:2, 537-600.
- Fama, E. F. and French, K. R. 1993. Common risk factors in the returns on stocks and bonds, *Journal of Financial Economics*, 33:1, 3-56.

- Fama, E. F. and French, K. R. 2017. International tests of a five-factor asset pricing model, *Journal of Financial Economics*, 123:3, 441-463.
- Frazzini, A., Kabiller, D. and Pedersen, L. H. 2013. Buffett's alpha, *NBER Working Paper*, w19681.
- Frazzini, A. and Pedersen, L. H. 2014. Betting against beta, *Journal of Financial Economics*, 111:1, 1-25.
- Gertner, R. H., Scharfstein, D. S. and Stein, J. C. 1994. Internal versus External Capital Markets, *Quarterly Journal of Economics*, 109:4, 1211-1230.
- Gómez-Mejía, L. R., Haynes, K. T., Núñez-Nickel, M., Jacobson, K. J. L. and Moyano-Fuentes, J. 2007. Socioemotional Wealth and Business Risks in Family-controlled Firms: Evidence from Spanish Olive Oil Mills, *Administrative Science Quarterly*, 52:1, 106-137.
- Gomez-Mejia, L. R., Makri, M. and Kintana, M. L. 2010. Diversification decisions in family-controlled firms, *Journal of Management Studies*, 47:2, 223-252.
- Hiebl, M. 2012. Risk aversion in family firms: what do we really know?, *Journal of Risk Finance*, 14:1, 49-70.
- Isakov, D. and Weisskopf, J.-P. 2015. Pay-out policies in founding family firms, *Journal of Corporate Finance*, 33, 330-344.
- Jensen, M. C. 1968. The performance of mutual funds in the period 1945–1964, *Journal of Finance*, 23:2, 389-416.
- Kirchfeld, A. and Ehardt, T. (2015) From Ferraris to Cement, Europe's Rich Families Turn Dealmakers, *Bloomberg*, September 27, 2015.
- Le Breton-Miller, I. and Miller, D. 2006. Why Do Some Family Businesses Out-Compete? Governance, Long-Term Orientations, and Sustainable Capability, *Entrepreneurship Theory and Practice*, 30:6, 731-746.
- Lee, C., Shleifer, A. and Thaler, R. H. 1991. Investor sentiment and the closed-end fund puzzle, *Journal of Finance*, 46:1, 75-109.
- Lee, C. M., Shleifer, A. and Thaler, R. H. 1990. Anomalies: Closed-end mutual funds, *Journal of Economic Perspectives*, 4:4, 153-164.
- Lewellen, W. G. 1971. A Pure Financial Rationale for the Conglomerate Merger, *Journal of Finance*, 26:2, 521-537.
- Lumpkin, G. T. and Brigham, K. H. 2011. Long-Term Orientation and Intertemporal Choice in Family Firms, *Entrepreneurship Theory and Practice*, 35:6, 1149-1169.
- Mansi, S. A. and Reeb, D. M. 2002. Corporate diversification: what gets discounted?, *Journal of Finance*, 57:5, 2167-2183.

Maury, B. 2006. Family ownership and firm performance: Empirical evidence from Western European corporations, *Journal of Corporate Finance*, 12:2, 321-341.

Miller, D., Le Breton-Miller, I. and Scholnick, B. 2008. Stewardship vs. Stagnation: An Empirical Comparison of Small Family and Non-Family Businesses\*, *Journal of Management Studies*, 45:1, 51-78.

Mitchell, M., Pulvino, T. and Stafford, E. 2002. Limited arbitrage in equity markets, *Journal of Finance*, 57:2, 551-584.

Pontiff, J. 1996. Costly Arbitrage: Evidence from Closed-End Funds, *Quarterly Journal of Economics*, 111:4, 1135-1151.

Scharfstein, D. S. and Stein, J. C. 2000. The dark side of internal capital markets: Divisional rent-seeking and inefficient investment, *Journal of Finance*, 55:6, 2537-2564.

Sirmon, D. G. and Hitt, M. A. 2003. Managing Resources: Linking Unique Resources, Management, and Wealth Creation in Family Firms, *Entrepreneurship Theory and Practice*, 27:4, 339-358.

Stein, J. C. 1997. Internal Capital Markets and the Competition for Corporate Resources, *Journal of Finance*, 52:1, 111-133.

Villalonga, B. and Amit, R. 2006. How do family ownership, control and management affect firm value?, *Journal of Financial Economics*, 80:2, 385-417.

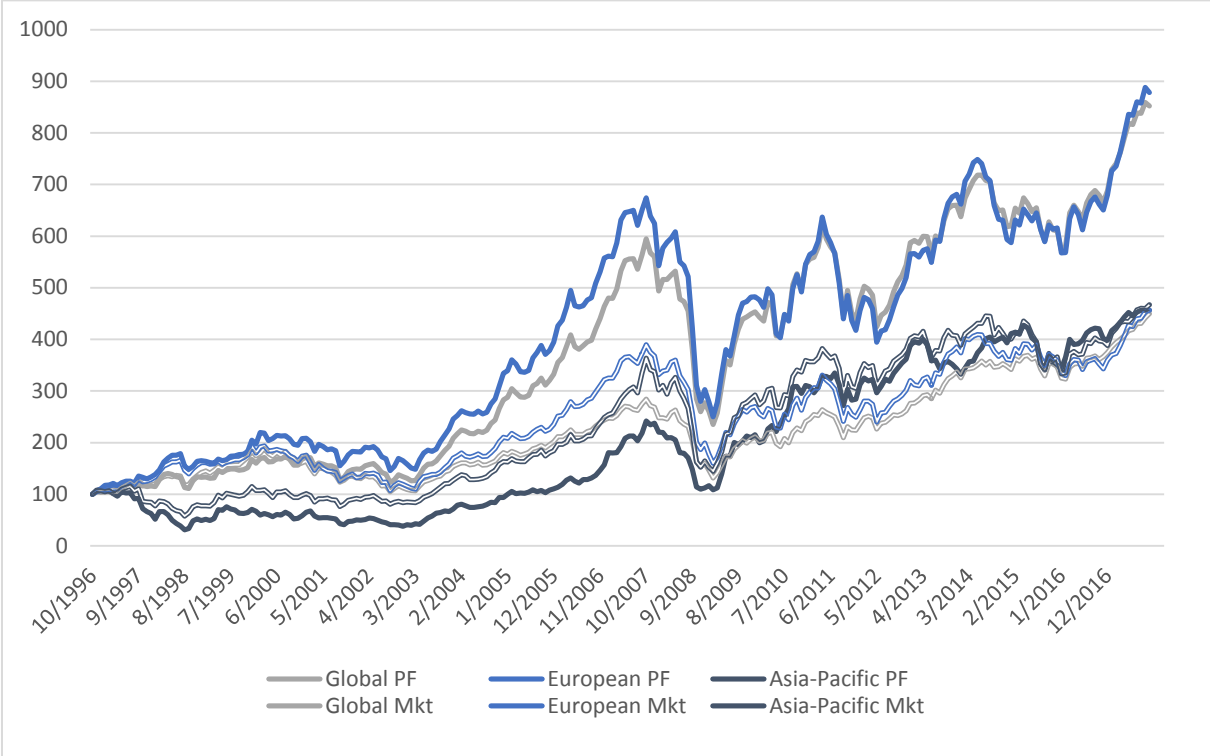
Wermers, R. 2000. Mutual fund performance: An empirical decomposition into stock-picking talent, style, transactions costs, and expenses, *Journal of Finance*, 55:4, 1655-1703.

**Table 1**  
**Family trust characteristics**

	<b>Observations</b>	<b>Mean</b>	<b>Median</b>	<b>Min</b>	<b>Max</b>	<b>Standard deviation</b>
Market Capitalization	310	3'899'615	1'726'435	1'969	31'929'464	5'364'021
Total assets	311	16'445'619	5'928'082	177	177'169'451	27'160'720
Dividend yield	316	3.19%	2.38%	0.00%	59.11%	5.40%
Dividend pay-out	241	25.59%	20.00%	0.00%	94.12%	22.51%
Return on equity	299	8.10%	7.79%	-84.49%	104.42%	15.14%
Return on assets	303	5.87%	3.69%	-38.32%	69.11%	9.45%
Family stake	265	60.97%	58.60%	17.20%	100.00%	21.83%
Family board	275	95.27%	100.00%	0.00%	100.00%	21.26%
Family management	251	53.78%	100.00%	0.00%	100.00%	49.96%
# of positions	266	9.47	8.00	1.00	27.00	7.19
Voting rights in position	2'216	41.09%	30.31%	0.00%	100.00%	32.79%
Listed position	2'102	55.23%	100.00%	0.00%	100.00%	
Active position	1'159	97.33%	100.00%	0.00%	100.00%	
NAV discount	174	-22.97%	-24.13%	-61.50%	26.12%	15.52%

This table presents characteristics of European FITs over the period 2010 to 2015. The top six lines look into different accounting variables. Market capitalisation and total assets are all USD translated at the respective dates and in thousands. The bottom eight lines exhibits the ownership, and positions of the holdings.

**Figure 1**  
**Portfolio and benchmark evolution**





**Table 2**  
**Descriptive statistics**

	Global Portfolio	European Portfolio	Asian Portfolio	Belgian Portfolio	French Portfolio	Swedish Portfolio	Hong Kong Portfolio	Mono-holding Global	Multi-holding Global	Mono-holding Europe	Multi-holding Europe	Global Market	European Market	Asian Market	Belgian Market	French Market	Swedish Market	Hong Kong Market
Mean	11.99	12.40	10.58	11.31	12.26	13.78	6.52	11.63	12.04	12.87	12.33	6.12	6.63	7.40	5.21	6.47	8.75	6.55
Median	13.03	12.85	6.99	17.95	19.30	11.90	3.64	13.92	13.38	17.40	11.22	13.99	8.83	13.33	7.03	9.98	11.35	11.60
Minimum	-25.21	-26.57	-23.25	-33.02	-30.49	-22.32	-29.05	-29.68	-24.47	-31.28	-25.70	-19.53	-22.03	-26.01	-29.07	-22.64	-26.55	-29.37
Maximum	20.78	19.92	43.20	21.35	17.48	22.91	52.69	21.99	20.59	29.01	19.85	11.40	13.66	18.48	17.05	15.53	21.89	28.81
Volatility	19.42	20.69	26.97	20.17	23.88	23.34	29.24	21.22	19.55	22.61	20.83	15.33	17.93	21.21	20.22	20.70	23.26	24.62
Skewness	-0.56	-0.67	0.87	-0.86	-0.69	-0.18	0.96	-0.45	-0.51	-0.38	-0.64	-0.78	-0.62	-0.53	-0.87	-0.50	-0.30	-0.03
Kurtosis	2.58	2.24	5.23	4.87	1.68	1.14	6.79	3.12	2.33	3.36	2.05	1.78	1.55	2.26	2.81	0.82	1.53	2.32
Correlation	0.90	0.95	0.82	0.90	0.82	0.91	0.86	0.81	0.90	0.86	0.94							
Sharpe ratio	0.62	0.60	0.39	0.56	0.51	0.59	0.22	0.55	0.62	0.57	0.59	0.40	0.37	0.35	0.26	0.31	0.38	0.27
Treynor ratio	0.11	0.11	0.10	0.13	0.13	0.15	0.06	0.10	0.11	0.12	0.11	0.06	0.07	0.07	0.05	0.06	0.09	0.07

This table presents summary statistics on the different family trust portfolios and their respective benchmark markets. It includes the annualised mean, median, minimum, maximum returns. The volatility calculated as the standard deviation of the monthly returns skewness and kurtosis, the correlation to the respective market proxy and the Sharpe and Treynor ratio using 3-month T-bill rates as risk-free rate. All price data was taken between November 1996 and October 2017 and was translated into USD.

**Table 3**  
**Family investment trust performance**

	Global Portfolio			European Portfolio			Asian Portfolio		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Alpha	0.415** (2.386)	0.296** (2.035)	0.168 (1.090)	0.428*** (3.459)	0.336*** (3.100)	0.313*** (2.657)	0.236 (0.943)	0.053 (0.245)	0.186 (0.810)
MKT Global	1.141*** (23.260)	1.159*** (37.182)	1.193*** (33.144)						
SMB Global		0.463*** (7.408)	0.547*** (7.460)						
HML Global		0.282*** (3.264)	0.296*** (3.052)						
WML Global		-0.072 (-1.485)	-0.094* (-1.953)						
RMW Global			0.384*** (3.389)						
CMA Global			-0.115 (-0.940)						
MKT Europe				1.093*** (38.739)	1.106*** (49.514)	1.070*** (52.544)			
SMB Europe					0.469*** (12.725)	0.459*** (11.605)			
HML Europe					0.105* (1.674)	0.263*** (4.210)			
WML Europe					-0.040 (-1.239)	-0.046* (-1.743)			
RMW Europe						0.132 (1.597)			
CMA Europe						-0.249*** (-3.564)			
MKT Asia							1.047*** (12.459)	0.958*** (30.935)	0.963*** (24.972)
SMB Asia								0.052 (0.748)	0.052 (0.655)
HML Asia								0.647*** (11.434)	0.438*** (5.440)
WML Asia								-0.260*** (-4.243)	-0.290*** (-5.067)
RMW Asia									-0.263* (-1.947)
CMA Asia									0.243 (1.628)
Observations	252	252	252	252	252	252	252	252	252
R-squared	0.814	0.866	0.873	0.897	0.930	0.934	0.679	0.808	0.814

This table presents results based on the CAPM, the Carhart four-factor model and the Fama-French 5 factor model enhanced by the WML factor for equally weighted family trust portfolios around the World, in Europe and in the Asia-Pacific region. The returns of the portfolios are in USD, with a global or regional stock index and a 3-month T-Bill rate used as risk-free rate. The  $\alpha$  estimates are on a monthly basis and in percentage terms. T-statistics are calculated with Newey–West standard errors and lags of order five. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively.

**Table 4**  
**Family investment trust performance**

	Global PF		European PF		Asian PF	
	(1)	(2)	(3)	(4)	(5)	(6)
Alpha	0.221 (1.451)	0.297* (1.853)	0.357*** (3.109)	0.346*** (2.803)	0.080 (0.325)	0.118 (0.482)
MKT Global	1.169*** (40.453)	1.117*** (19.967)				
SMB Global	0.433*** (6.072)	0.361*** (3.691)				
HML Global	0.203** (2.230)	0.205** (2.204)				
WML Global	-0.105* (-1.826)	-0.096* (-1.699)				
BAB Global	0.137* (1.855)	0.167** (2.179)				
QMJ Global		-0.144 (-1.131)				
MKT Europe			1.107*** (50.785)	1.115*** (38.618)		
SMB Europe			0.502*** (10.216)	0.512*** (8.074)		
HML Europe			0.121* (1.948)	0.127* (1.798)		
WML Europe			-0.026 (-0.858)	-0.029 (-0.882)		
BAB Europe			-0.048 (-1.184)	-0.057 (-1.193)		
QMJ Europe				0.030 (0.318)		
MKT Asia					0.958*** (30.286)	0.935*** (26.778)
SMB Asia					0.057 (0.780)	0.021 (0.291)
HML Asia					0.649*** (11.542)	0.642*** (11.072)
WML Asia					-0.256*** (-4.159)	-0.253*** (-4.053)
BAB Asia					-0.033 (-0.353)	0.002 (0.025)
QMJ Asia						-0.117 (-1.236)
Observations	252	252	252	252	252	252
R-squared	0.863	0.864	0.930	0.930	0.804	0.805

This table presents results based on the Frazzini and Pedersen (2014) (odd numbered columns) and Asness et al. (2014) models (even numbered columns) for equally weighted family trust portfolios around the world, in Europe and in the Asia-Pacific region. The returns of the portfolios are in USD, with a global or regional stock index and a 3-month T-Bill rate used as risk-free rate. The  $\alpha$  estimates are on a monthly basis and in percentage terms. T-statistics are calculated with Newey–West standard errors and lags of order five. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively.

**Table 5**  
**Mono- versus multi-holding companies**

	Mono-holding Global			Multi-holding Global			Mono-holding Europe			Multi-holding Europe		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Alpha	0.399*	0.078	-0.072	0.416**	0.331**	0.208	0.470**	0.175	0.075	0.421***	0.367***	0.361***
	(1.679)	(0.344)	(-0.278)	(2.337)	(2.210)	(1.337)	(2.294)	(0.864)	(0.339)	(3.246)	(3.112)	(2.822)
MKT Global	1.114***	1.191***	1.221***	1.147***	1.155***	1.189***						
	(13.496)	(23.601)	(21.242)	(25.028)	(35.259)	(31.384)						
SMB Global		0.562***	0.664***		0.446***	0.527***						
		(3.234)	(3.997)		(7.846)	(7.760)						
HML Global		0.422***	0.481***		0.259***	0.266***						
		(2.978)	(3.007)		(3.106)	(2.642)						
WML Global		0.109	0.084		-0.102**	-0.123***						
		(1.224)	(0.971)		(-2.273)	(-2.719)						
RMW Global			0.481**			0.366***						
			(2.022)			(3.455)						
CMA Global			-0.219			-0.098						
			(-1.360)			(-0.755)						
MKT Europe							1.086***	1.122***	1.088***	1.095***	1.103***	1.067***
							(18.728)	(19.081)	(25.516)	(42.060)	(54.475)	(48.080)
SMB Europe								0.477***	0.475***		0.467***	0.455***
								(5.268)	(5.432)		(11.845)	(10.388)
HML Europe								0.280*	0.524***		0.072	0.214***
								(1.875)	(4.210)		(1.344)	(3.257)
WML Europe								0.091	0.066		-0.065**	-0.066**
								(1.294)	(1.032)		(-2.008)	(-2.524)
RMW Europe									0.350***			0.087
									(2.743)			(0.926)
CMA Europe									-0.311*			-0.239***
									(-1.752)			(-3.346)
Observations	252	252	252	252	252	252	252	252	252	252	252	252
R-squared	0.653	0.724	0.734	0.811	0.861	0.867	0.741	0.781	0.790	0.889	0.921	0.925

This table presents results based on the CAPM, the Carhart four-factor model and the Fama-French 5 factor model enhanced by the WML factor for equally weighted family trust portfolios around the world and in Europe. It breaks down family trusts into mono-holding and multi-holding companies. The returns of the portfolios are in USD, with a global or regional stock index and a 3-month T-Bill rate used as risk-free rate. The  $\alpha$  estimates are on a monthly basis and in percentage terms. T-statistics are calculated with Newey–West standard errors and lags of order five. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively.

**Table 6**  
**Boom versus bust periods**

	Boom						Bust					
	Global PF		European PF		Asian PF		Global PF		European PF		Asian PF	
	(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)	(4)	(5)	(6)
Alpha	0.230 (1.376)	0.151 (0.929)	0.348*** (2.609)	0.156 (1.246)	0.104 (0.343)	0.376 (1.449)	0.659 (1.428)	0.061 (0.161)	0.721* (2.009)	0.733** (2.593)	-0.219 (-0.309)	-0.283 (-0.389)
MKT Global	1.208*** (28.268)	1.209*** (25.139)					1.071*** (14.228)	1.149*** (14.798)				
SMB Global		0.453*** (5.339)						0.760*** (5.293)				
HML Global		0.304*** (2.997)						0.150 (0.808)				
WML Global		-0.126*** (-2.860)						-0.129* (-1.931)				
RMW Global		0.358*** (2.731)						0.348* (1.681)				
CMA Global		-0.254* (-1.822)						0.097 (0.417)				
MKT Europe			1.102*** (38.906)	1.105*** (36.702)					1.101*** (20.861)	1.044*** (22.404)		
SMB Europe				0.465*** (8.498)						0.563*** (6.158)		
HML Europe				0.192** (2.504)						0.287*** (2.747)		
WML Europe				-0.033 (-1.034)						-0.100* (-1.785)		
RMW Europe				0.134 (1.251)						-0.014 (-0.093)		
CMA Europe				-0.271*** (-3.188)						-0.224 (-1.648)		
MKT Asia					1.149*** (21.693)	0.950*** (19.099)					0.803*** (8.564)	0.996*** (9.356)
SMB Asia						0.030 (0.347)						-0.011 (-0.049)
HML Asia						0.466*** (4.034)						0.193 (0.691)
WML Asia						-0.309*** (-5.373)						-0.166 (-1.177)
RMW Asia						-0.191 (-1.419)						-0.373* (-1.765)
CMA Asia						-0.049 (-0.322)						0.707** (2.434)
Observations	202	202	202	202	202	202	50	50	50	50	50	50
R-squared	0.800	0.846	0.883	0.920	0.702	0.829	0.808	0.905	0.901	0.958	0.604	0.756

This table presents results based on the CAPM (odd numbered columns) and the Fama-French 5 factor model enhanced for the WML factor (even numbered columns) for equally weighted family trust portfolios around the world, in Europe and in the Asia-Pacific region. The six left specifications analyse boom periods and the last 6 columns bust periods (defined as the periods March 2000 to October 2002 and October 2007 to March 2009). The returns of the portfolios are in USD, with a global or regional stock index and a 3-month T-Bill rate used as risk-free rate. The  $\alpha$  estimates are on a monthly basis and in percentage terms. T-statistics are calculated with Newey–West standard errors and lags of order five. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively.

**Table 7**  
**Boom vs. bust periods for mono- and multi-holdings**

	Boom								Bust							
	Mono Global		Multi Global		Mono Europe		Multi Europe		Mono Global		Multi Global		Mono Europe		Multi Europe	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Alpha	0.215 (0.880)	0.021 (0.082)	0.232 (1.342)	0.173 (1.027)	0.384* (1.731)	0.161 (0.670)	0.342** (2.409)	0.158* (1.169)	0.322 (0.445)	-0.518 (-0.932)	0.713 (1.577)	0.156 (0.396)	0.477 (0.716)	-0.266 (-0.505)	0.764** (2.125)	0.920*** (2.921)
MKT Global	1.212*** (19.402)	1.209*** (15.912)	1.209*** (27.401)	1.210*** (24.396)					0.973*** (8.257)	1.160*** (10.122)	1.087*** (14.746)	1.147*** (14.124)				
SMB Global		0.467*** (3.483)		0.450*** (5.145)						1.040*** (4.904)		0.713*** (4.744)				
HML Global		0.360** (2.248)		0.294*** (2.816)						0.479* (1.750)		0.098 (0.503)				
WML Global		0.009 (0.128)		-0.148*** (-3.264)						0.016 (0.158)		-0.153** (-2.188)				
RMW Global		0.336 (1.621)		0.361*** (2.668)						0.340 (1.112)		0.346 (1.595)				
CMA Global		-0.497** (-2.258)		-0.214 (-1.486)						0.046 (0.133)		0.105 (0.429)				
MKT Europe					1.122*** (23.821)	1.119*** (19.344)	1.099*** (36.446)	1.103*** (33.979)					1.028*** (10.487)	1.048*** (12.092)	1.114*** (21.079)	1.042*** (20.069)
SMB Europe						0.360*** (3.426)		0.483*** (8.186)						0.782*** (4.598)		0.521*** (5.117)
HML Europe						0.214 (1.456)		0.185** (2.240)						0.830*** (4.271)		0.189 (1.621)
WML Europe						0.020 (0.323)		-0.042 (-1.238)						0.032 (0.309)		-0.125* (-2.001)
RMW Europe						0.164 (0.800)		0.123 (1.069)						0.134 (0.492)		-0.047 (-0.288)
CMA Europe						-0.373** (-2.287)		-0.251*** (-2.745)						-0.290 (-1.145)		-0.218 (-1.434)
Observations	202	202	202	202	202	202	202	202	50	50	50	50	50	50	50	50
R-squared	0.653	0.688	0.790	0.838	0.739	0.761	0.869	0.908	0.587	0.819	0.819	0.898	0.696	0.870	0.903	0.949

This table presents results based on the CAPM (odd numbered columns) and the Fama-French 5 factor model enhanced for the WML factor (even numbered columns) for equally weighted family trust portfolios around the world and in Europe. It breaks down family trusts into mono-holding and multi-holding companies. The eight left specifications analyse boom periods and the last eight columns bust periods (defined as the periods March 2000 to October 2002 and October 2007 to March 2009). The returns of the portfolios are in USD, with a global or regional stock index and a 3-month T-Bill rate used as risk-free rate. The  $\alpha$  estimates are on a monthly basis and in percentage terms. T-statistics are calculated with Newey–West standard errors and lags of order five. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively.

**Table 8**  
**Family investment trust local performance**

	Belgium Portfolio (1)	French Portfolio (2)	Swedish Portfolio (3)	Hong Kong Portfolio (4)
Alpha	0.553*** (4.182)	0.510* (1.851)	0.480*** (2.714)	-0.015 (-0.063)
MKT Belgium	0.901*** (23.320)			
MKT France		0.951*** (14.076)		
MKT Sweden			0.917*** (21.897)	
MKT Hong Kong				1.021*** (12.551)
Observations	252	252	252	252
R-squared	0.815	0.679	0.836	0.739

This table presents results based on the CAPM for equally weighted family trust portfolios on the Belgian, French, Swedish and Hong Kong market. The returns of the portfolios are in USD, with the respective local benchmark market index and 3-month T-Bill rate used as risk-free rate. The  $\alpha$  estimates are on a monthly basis and in percentage terms. T-statistics are calculated with Newey–West standard errors and lags of order five. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively.