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The Fees of Mutual Funds and Real Estate Funds: Their Determinants in a Small Market [^]

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Abstract

This paper analyses the determinants of expenses from 2007 to 2012 in the Portuguese funds industry. The main contribution is to consider mutual funds and real estate funds simultaneously, particularly the latter, generally created according to customer's needs, usually for tax reasons. The results confirm the specificity of mutual funds and real estate funds. In the first, expenses are higher on funds composed by shares, derivatives and a large number of assets. In the second, expenses are lower on closed-end funds. In this case, it seems that customers are willing to pay a small fee for tax reasons once their management does not require a special skill. We did not find an evident relationship between expenses and the fund net asset value for both categories of collective schemes. The same occurs between expenses and fund's performance.

1. Introduction

The role of expenses charged to the owner of mutual funds has been debated, as well as the analysis of the determinants received by management and related activities (including those from custody, supervision and audit). Expenses are one of the relevant elements to examine the performance of managers and are often seen as a determining factor for the presentation of poor performance by the mutual funds. However, there is no consensus on this topic. For example, Otten and Bams (2002), analyzing Germany, France Italy, the Netherlands and the UK, concluded that the mutual funds presented positive abnormal earnings in most examined countries, after taking expenses into account. Cesari and Panetta (2002) found similar results for the Italian market although with reduced statistical robustness. Wermers (2000) for the US market, concluded that the profitability of mutual funds was only higher than expected if the different fees paid by investors were not considered. These results confirm that fund managers are no more informed than other members of the market (Carhart (1997)), on one hand, and the customers' s skills (Gruber (1996)), on the other hand.

With regard to the determinants of expenses, Korkeamaki and Smythe (2004) studied the Finish market and considered, among other explanatory variables, the fund's size, the fund's category (equity funds, bond funds, balanced funds, etc) and the fund's risk and profitability. One of the most relevant results of this research concerns the relationship between the fund's age and expenses: controlling the risk and return of a fund, older ones charge higher expenses, which indicates agency problems. According to the results of Korpela and Puttonen (2006) and Gil-Bazo and Martinez (2004), when considering the Finish and Spanish markets it showed that banks charge higher expenses than independent mutual funds companies when distributing such security. They attribute the result to customer relationships, bank cross-selling and convenience to fund selection by bank mutual fund customers. The variable size

has been studied as a determinant of the expenses of mutual funds. Several studies conducted for the US market (Luo (2002), Golec (2003), Dellva and Olson (1998), Latzko (1999) and LaPlante (2001)) showed economies of scale in the mutual funds' expenses. Latzko (2003) concluded that economies of scale are observed especially in administrative costs, but not so much on management fees. Luo (2002), on the other hand, also studied the determinants of expenses and found a negative sign for the age and positive one for the variables related to risk and profitability. A similar result was obtained by Ferris and Chance (1987) for the age. Khorana *et al* (2009), considered a sample of mutual funds from 18 countries for the year 2002, and concluded that the fees vary across funds: fees are lower for index funds, funds of funds and funds that require a higher minimum investment. They also conclude that the degree of investor protection is a decisive factor in the fees charged in different countries. However, although generalizations can be made, again it should be noted that the determinants of fees charged are far from being consensual. For example, Malhotra and McLeod (1997) found a positive relationship between fees charged in bond funds and the performance of the respective fund, and the reverse applies with regard to equity funds.

The importance of studying the fees charged by investment funds is particularly relevant at a time when the performance of mutual funds has been low, if not negative, given the recessive behavior of the economy. This has occurred particularly in equity funds; in mutual funds that are based on sovereign bonds and private debt whose credit ratings dropped to investment grade; in money market funds, after significant declines on lending interbank rates; and in real estate funds as a result of adverse developments in housing market after years of strong growth.

The objective of this study is to identify and analyze the variables that influence expenses of the funds domiciled in Portugal. In the Portuguese case, the analysis requires a fine contextualization of the investment fund industry. It is divided by mutual funds and real

estate funds, and both present specific characteristics. In general, mutual funds are securities created by fund management companies owned by banks and sold at their branches by way of competing with other financial instruments. Real estate funds, by contrast, are more directed towards institutional investors and demanding individuals who, for tax and/or financial planning reasons, resort to mutual fund companies, not rarely independent of the largest financial groups.

The main contribution of this work lies in the pioneering analysis of expenses' determinants mutual funds and real estate investment funds. The results confirm the specifics of mutual funds and real estate funds, in particular, both at the age of funds as the independence of fund companies.

The paper is organized as follows: section 2 presents the sample, the determinants of expenses of the mutual funds and real estate funds and the methodology; Section 3 discusses the results; Section 4 concludes.

2. Sample, the determinants of expenses and the methodology

The database used in this study refers to mutual funds and real estate funds managed by Portuguese fund companies from 2007 to 2012. We use two balanced panels of 126 and 102 mutual funds and real estate funds respectively, i.e. a sample of 756 and 612 observations.

The expenses are the sum of management fees, custody fees and auditing and supervisory fees divided by fund's net asset value. While mutual fund's expenses have increased since 2008, the real estate ones did not have a significant change.

Table I – Descriptive analysis of Expenses

Panel A- Mutual Funds

	2007	2008	2009	2010	2011	2012
Mean	1,52%	1,49%	1,50%	1,50%	1,54%	1,56%
Median	1,53%	1,48%	1,52%	1,53%	1,54%	1,55%
Maximum	3,77%	3,70%	3,70%	4,06%	3,21%	3,38%
Minimum	0,39%	0,27%	0,24%	0,24%	0,25%	0,25%
Stand. Dev.	0,62%	0,64%	0,62%	0,65%	0,63%	0,60%
N° OBS	126	126	126	126	126	126

Panel B- Real Estate Funds

	2007	2008	2009	2010	2011	2012
Mean	0,85%	0,82%	0,82%	0,83%	0,83%	0,74%
Median	0,66%	0,65%	0,64%	0,63%	0,62%	0,60%
Maximum	4,38%	4,41%	4,40%	5,86%	5,86%	2,86%
Minimum	0,01%	0,01%	0,01%	0,01%	0,07%	0,00%
Stand. Dev.	0,59%	0,59%	0,59%	0,71%	0,70%	0,48%
N° OBS	102	102	102	102	102	102

We do not consider that the determinants of expenses of the mutual funds and the real estate funds are the same. An analyses of the specificity of both financial instruments is required. Such is the case of the following variables: stock funds, funds of local securities, number of assets, derivatives and closed-end funds. If the former two variables are intrinsically related with a mutual fund, the same does not happen with closed-end funds. The closed-end funds are much more related with the real estate funds since the fiscal regime of such funds creates incentives to develop them as a “tailor made” financial product.

The determinants of fund's expenses considered in this research are the following:

- (i) **Turnover (TR)** - This variable is a proxy for activism and it is expected to present a positive sign as a determinant of mutual fund and real estate expenses once the fund managers require a higher remuneration for their activism (see Dellva and Olson (1998), Lesseig et al (2002) and Korpela and Puttonen (2006). It results from the sum of the value acquisitions and sales of a fund during a year divided by the monthly average of its net asset value on the same period;
- (ii) **Size (LN (NAV))** - It is expected to present a negative sign, revealing economies of scale (vd. Ferris and Chance (1991), Sevick and Tufano (1997) and Berkowitz and Kotowitz (2002)). However, we would like to highlight the results obtained, on the one hand, by Lesseig et al. (2002) that indicate the management fees are positively influenced by the value of the managed assets, and on the other hand, by Latzko (1999) and Gao and Livingston (2008) who found a non-monotonic relationship between the two variables since it does not detect the existence of economies of scale for larger funds. Size is measured by the logarithm of fund's net asset value on the end of year;
- (iii) **Sharpe-Ratio (SR)** - This indicator is used as an independent variable for both types of funds, and it is expected to present a positive sign once the expenses should increase with a fund's higher performance. SR is obtained considering the funds' annual profitability from 2006 to 2011; the annualized volatility for the years 2006-11 is obtained considering monthly data for two years; the one-year bonds' yield is the risk-free asset;
- (iv) **Closed-end funds (CED)** - this dummy variable will only be considered for real estate investment funds. It is expected that the coefficient sign of this variable is negative once the portfolio should present greater stability in comparison with open funds, requiring less activity and demand for information by managers. However, Martin et al. (2001) found mixed results whether the closed-end funds and the open funds manage local or international assets;

- (v) **Stocks ´ funds (SF)** - this dummy variable will only be taken into consideration for the securities investment funds. It is expected that there is a positive association between a fund ´s expenses and a fund composed of stocks since this requires a greater market monitoring by managers (Latzko (2003) and Korkeami and Smythe (2004));
- (vi) **Number of assets (LN (NA))** – only is used as an independent variable in the case of mutual funds and refers to the number of financial instruments included in the fund´s portfolio. It is expected that the signal is positive given the higher costs associated with the diversification of a portfolio;
- (vii) **Funds of Local Securities (FLS)** – the cost of obtaining information of local securities is lower than for foreign financial instruments (see Dellva and Olson (1998)) and consequently it is expected a positive relationship between fund ´s expenses and a fund of local securities. This dummy variable is characterized by distinguishing funds that hold more than 50% of its value under management in local securities and is used only as a determinant of securities´ s expenses of mutual funds;;
- (viii) **Derivatives (Deriv)** – given the sophistication of using derivatives (as instrument of hedging or speculation) a fund manager will ask higher fund ´s expenses (see Korkeami and Smythe (2004)). This dummy variable distinguishes funds that hold derivatives from those that do not have and will only be used in mutual funds;
- (ix) **Number of participants (LN (Part))** - a fund with few participants is less susceptible of obtaining economies of scale and consequently we expect that such fund requires higher expenses than a fund with a large number of participants. In the Portuguese case, such is of relevant importance, once, for tax reasons, there are many real estate closed-end funds with a small number of participants;
- (x) **Age (LN (Age))** – It is expected that a fund commercialized for more years has been subjected to an expenses´ reduction given the increasing of operating efficiency as a result of the learning curve (vd. Ferris and Chance (1987)). Several authors found a negative relationship between the two variables, namely Dellva and Olson (1998), Lesseig et al. (2002) and Luo (2002).

(xi) **Independence (Indep)** – a fund managed by a management fund company that belongs to a financial group should benefit of lower the marketing and administrative costs, as a result of economies of scale (vd. Frye (2001)): However, the funds company can exploit the relationship between client and the bank (consequence of the clients being “hostages” of the financial group), requiring higher fees. The relationship between fund’ expenses and independence in management is not completely evident.

In table II, panels A and B, we present the coefficient correlation between the independent and dependent variables. In general, the correlation coefficient between the independent variables and the dependent variables presented statistical significance. This conclusion extends to both types of funds under review.

Table II – The Correlation coefficient between the independent and dependent variables.

Panel A – Mutual Funds

EF are fund ’s expenses. TR (turnover) is the total value of acquisitions and sales during a year divided by the average net asset value of the fund. SF is a dummy variable that assumes 1 for stocks ’ funds and 0 for the other ones. NAV is the fund ’ net asset value. NA is the number of assets managed by a mutual fund. FLS is a dummy variable that assumes 1 for a fund mostly composed (more than 50% of the portfolio) by local securities. Deriv is a dummy variable that assumes 1 when a mutual fund has derivatives in its portfolio. SR is the difference between annual return of a mutual fund and one-year bunds yield ’s divided by mutual fund ’s volatility. Part is the number of investors of a mutual fund. Age is the fund ’s number of years since began trading. Indep is a dummy variable that assumes 1 when a fund is managed by a financial group.

Correlation p-value	FE	TR	SF	LN (NAV)	FLS	LN (NA)	Deriv.	SR	LN (Part.)	LN (Age)	Indep
FE	1.00										
TR	0.05 0.14	1.00									
SF	0.50 0.00	0.00 0.97	1.00								
LN (NAV)	-0.07 0.05	-0.09 0.01	-0.18 0.00	1.00							
FLS	0.07 0.05	0.13 0.00	0.30 0.00	-0.11 0.00	1.00						
LN (NA)	0.13 0.00	-0.02 0.52	0.16 0.00	0.30 0.00	-0.22 0.00	1.00					
Deriv	0.17 0.00	0.22 0.00	0.08 0.03	-0.01 0.74	0.19 0.00	0.05 0.18	1.00				
SR	-0.24 0.00	-0.06 0.12	-0.19 0.00	0.23 0.00	0.04 0.28	0.03 0.34	-0.19 0.00	1.00			
LN (Part.)	-0.04 0.27	0.01 0.85	-0.03 0.35	0.66 0.00	-0.02 0.64	0.33 0.00	-0.07 0.05	0.20 0.00	1.00		
LN (Age)	-0.21 0.00	-0.01 0.86	0.18 0.00	0.12 0.00	0.16 0.00	0.31 0.00	-0.03 0.37	0.05 0.18	0.35 0.00	1.00	
Indep	-0.14 0.00	-0.03 0.38	-0.01 0.75	-0.12 0.00	-0.09 0.02	0.14 0.00	0.04 0.33	0.04 0.28	-0.40 0.00	-0.17 0.00	1.00

Panel B –Real Estate Funds

EF are fund 's expenses. TR (turnover) is the total value of acquisitions and sales during a year divided by the average net asset value of the fund. CEF (closed-end fund) is a dummy variable that assumes 1 for a closed-end fund. NAV is the fund 's net asset value. SR is the difference between annual return of a mutual fund and one-year bunds yield 's divided by mutual fund 's volatility. Part is the number of investors of a mutual fund. Age is the fund 's number of years since began trading. Indep is a dummy variable that assumes 1 when a fund is managed by a financial group.

Correlation p-value	FE	TR	CEF	LN (NAV)	SR	LN (Part)	LN (Age)	Indep
FE	1.00							
TR	0.07	1.00						
CEF	-0.28	0.03	1.00					
LN (NAV)	-0.04	-0.14	-0.51	1.00				
SR	-0.02	0.00	-0.13	0.11	1.00			
LN (Part)	0.22	-0.08	-0.81	0.52	0.14	1.00		
LN (Age)	0.06	-0.13	-0.31	0.59	0.08	0.35	1.00	
Indep	0.09	0.17	-0.02	0.08	0.00	0.01	0.19	1.00
	0.02	0.00	0.64	0.06	0.95	0.77	0.00	

For the analysis of the expenses ' determinants are used three alternative specifications:
 (i) a pooled OLS, (ii) a panel with year fixed effects and (iii) a panel with year random effects:

$$(i) \quad EF_{i,t} = \beta_1 + \beta_2 X_{i,t-1} + \dots + \beta_n X_{i,t-1} + u_{i,t}$$

$$(ii) \quad EF_{i,t} = \beta_{i,t-1} + \beta_2 X_{i,t-1} + \dots + \beta_n X_{i,t-1} + u_{i,t}$$

$$(iii) \quad EF_{i,t} = \beta_{i,t-1} + \beta_2 X_{i,t-1} + \dots + \beta_n X_{i,t-1} + u_{i,t}$$

where $\beta_{i,t-1} = \beta_1 + \varepsilon_{i,t-1}$ and $t = 1, \dots, 6$

Where $X_{i,t-1}$ represents the different independent variables (with one year lag) used for the estimation e $u_{i,t}$ e $\varepsilon_{i,t-1}$ random disturbances.

3. Results

In Table III, panels A and B, the results of the multivariate analysis are presented. In Table III, panels A and B, the results of the multivariate analysis are presented. In both categories of funds the same result is obtained: Pooled OLS is sufficient to analyze both situations, once the models with fixed effects and random effects add no statistical robustness (see redundant fixed effects tests, the LM tests and Hausman tests).

The results of the three econometric approaches lead to similar conclusions, particularly in terms of the value and sign of the estimates. In mutual funds, the expenses are higher in stock funds, in mutual funds that includes derivatives and in mutual funds with a large number of different assets (see panel A). Korkeami and Smythe (2004) conclude the same for the two former variables. The demand for information, the greater sophistication of investments and a diversified portfolio of assets help to explain the impact of three variables in the expenses charged by mutual funds companies. On the contrary, mutual funds whose portfolios are primarily composed by local securities seem to require a lower remuneration, although without statistical significance. Dellva and Olson (1998) found identical results although with statistical significance. The analysis risk vs. return, measured by the Sharpe ratio, does not mean a higher compensation for mutual funds companies, as a result of its meritorious performance, on the contrarian (vd. Haslen et al. (2008)). There are also no obvious signs of economies of scale (measured by the NAV and the number of investors in mutual fund) in the

management of securities investment funds. In fact, if on the one hand, greater amounts under management are associated with higher mutual funds' expenses (relationship without statistical significance), on the other hand, the relationship between the mutual funds's and the number of participants is negative (also without statistical significance).¹ As regards the age of the funds, the results confirm that the expenses charged a mutual fund is negatively influenced by that variable. One explanation given in the finance literature points to the increase in operational efficiency as a result of the learning curve (vd. Ferris and Chance (1987)). Finally, the results indicate that mutual funds' expenses is lower in the case where the management of a mutual fund is in charge of an independent company of mutual funds. This result is consistent with the existence of low levels of information by investors and with the close links between a financial institution that owns a mutual fund company, and its customers.

As the real estate investment funds is concerned, the mutual funds' expenses is lower in closed-end funds (Panel B). Such as for mutual fund, there are also some signs on the non-existence of economies of scale in the management of real estate funds. However, contrary to that observed in mutual funds, the expenses of real estate investment funds increases with age, which may be related to the characteristics of the financial instrument. The majority of cases of real estate funds are made to the customer (taylor-made) and it is expected that those who were created more times, have higher fees and that the new real estate funds which arise in adverse economic environment and competitive, present lower expenses. Finally, the expenses of real estate funds is higher in the case of independent management companies. It is plausible that this happens because such companies have higher operating costs, in particular because they work in a more personalized environment, contrarily to real estate fund companies integrated on financial groups that manage mutual funds and real estate funds.

¹ The exclusion of number of participants does not alter the conclusion drawn in the text.

Table III – Multivariate analysis on mutual funds

Panel A – Mutual Funds

EF are fund 's expenses. TR (turnover) is the total value of acquisitions and sales during a year divided by the average net asset value of the fund. SF is a dummy variable that assumes 1 for stocks ' funds and 0 for the other ones. NAV is the fund ' net asset value. NA is the number of assets managed by a mutual fund. FLS is a dummy variable that assumes 1 for a fund mostly composed (more than 50% of the portfolio) by local securities. Deriv is a dummy variable that assumes 1 when a mutual fund has derivatives in its portfolio. SR is the difference between annual return of a mutual fund and one-year bunds yield 's divided by mutual fund 's volatility. Part is the number of investors of a mutual fund. Age is the fund 's number of years since began trading. Indep is a dummy variable that assumes 1 when a fund is managed by a financial group. White heteroskedasticity-consistent standard errors & covariance.

	Pooled OLS	Year Fixed Effects	Year Random Effects
TR	0.00008	0.00007	0.00007
p-value	0.26	0.30	0.28
SF	0.00648	0.00646	0.00648
p-value	0.00	0.00	0.00
LN (NAV)	0.00012	0.00012	0.00012
p-value	0.48	0.47	0.46
FLS	-0.00020	-0.00016	-0.00020
p-value	0.73	0.78	0.73
LN (NA)	0.00174	0.00173	0.00174
p-value	0.00	0.00	0.00
Deriv	0.00114	0.00113	0.00114
p-value	0.00	0.00	0.00
SR	-0.00017	-0.00019	-0.00017
p-value	0.00	0.00	0.00
LN (Part)	-0.00018	-0.00016	-0.00018
p-value	0.29	0.29	0.23
LN (Age)	-0.00238	-0.00238	-0.00238
p-value	0.00	0.00	0.00
Indep	-0.00638	-0.00633	-0.00638
p-value	0.00	0.00	0.00
Redundant Fixed Effects Test			
F (5, 743)		0.45	
Prob > F		0.81	
LM Test			
χ^2 (1)		1.17	
Prob > χ^2 (1)		0.28	
Hausman Test			
χ^2 (10)		1.49	
Prob > χ^2 (10)		1.00	
Adj. R ²	0.43	0.43	0.43
N° OBS	756	756	756

Panel B –Real Estate Funds

	Pooled OLS	Year Fixed Effects	Year Random Effects
TR	0.00024	0.00023	0.00024
p-value	0.50	0.29	0.25
CEF	-0.00763	-0.00765	-0.00763
p-value	0.00	0.00	0.00
LN (NAV)	-0.00136	-0.00136	-0.00136
p-value	0.00	0.00	0.00
SR	-0.00002	-0.00001	-0.00002
p-value	0.60	0.20	0.17
LN (Part)	0.00015	0.00014	0.00015
p-value	0.45	0.43	0.42
LN (Age)	0.00022	0.00022	0.00022
p-value	0.07	0.05	0.05
Indep	0.00114	0.00115	0.00114
p-value	0.03	0.03	0.03
Redundant Fixed Effects Test			
F (5, 743)		0.34	
Prob > F		0.89	
LM Test			
χ^2 (1)		1.53	
Prob >		0.22	
Hausman Test			
χ^2 (7)		0.89	
Prob > χ^2 (7)		1.00	
Adj. R ²	0.14	0.14	0.14
N° OBS	602	602	602

4. Conclusion

In this paper we analyze the determinants of mutual funds' and real estate domiciled in Portugal. The determinants of expenses' of real estate funds reflect the characteristics of the two categories of funds in Portugal. The mutual funds are sold massively and real estate are more targeted to a particular audience, and often tailored "to the customer." In this context, it is not expected that both categories of funds have the same determinants.

For mutual funds, the expenses depend positively on having stocks, derivatives and the number of years since the constitution of the fund. The complexity of portfolio analysis with those financial instruments and concerns in terms of its diversification justify the existence of an additional cost to the participants of the mutual fund. On the other hand, the expenses of

mutual funds depends negatively on the age of the fund, which will be related to the increase of operational efficiency as a result of the learning curve. Finally, the results indicate that expenses are higher in cases where the management of a fund is in charge of an integrated company in a financial group. This result is consistent with the existence of low levels of information by investors, reduced distribution channels of independent management companies and close links between each financial institution and its customers.

Concerning real estate funds the results show that funds' expenses are higher for closed-end funds and for funds managed by an independent company. Finally, real estate funds show signs of the existence of economies of scale in its management, something that does not happen in mutual funds. But the fund performance is not linked to the level of commissioning, which is an indicator the existence of commissions (management) predominantly fixed and ??? with the performance of the fund.

References

- Berkowitz, M., Kotowitz, Y., 2002. Managerial Quality and the Structure of Management Expenses in The US Mutual Fund Industry. *International Review of Economics and Finance*, 11, 315-330.
- Carhart, M., 1997. On Persistence in Mutual Fund Performance. *Journal of Finance*, 52, 57-82.
- Cesari, R., Panetta, F., 2002. The Performance of Italian Equity Funds. *Journal of Banking & Finance*, 26, 99-126.
- Chance, M., Ferris, S., 1991. Mutual Fund Distribution Fees: An Empirical Analysis of the Impact of Deregulation. *Journal of Financial Services Research*, 45, 24-42.
- Dellva, W., Olson, G., 1998. The Relationship Between Mutual Fund Fees and Expenses and Their Effects on Performance. *Financial Review*, 33, 85-104.
- Ferris, S., Chance, M., 1987. "The effect of 12b-1 Plans on Mutual Fund Expense Ratios: A Note. *Journal of Finance*, 42, 1077-1082.
- Frye, M., 2001. The Performance of Bank-Managed Mutual Funds. *Journal of Financial Research*, 24, 419-442.
- Gao, X., e Livingston, M., 2008. The Components of Mutual Fund Fees, *Financial Markets, Institutions & Instruments*, 17, 197-223.
- Gil-Bazo, J., Martinez, M., 2004. The Black Box of Mutual Fund Fees. *Spanish Review of Financial Economics*, 4, 54-82.
- Golec, J., 2003. Regulation and the Rise in Asset-Based Mutual fund Management Fees. *Journal of Financial Research*, 1, 19-30.
- Gruber, M., 1996. Another Puzzle: The Growth in Actively Managed Mutual Funds. *Journal of Finance*, 51, 783-810.
- Haslem, J., Baker, H., Smith, D., 2008. Performance and Characteristics of Actively Managed Retail Equity Mutual Funds with Diverse Expense ratios. *Financial Services Review*, 17, 49-68.
- Khorana, A., Servaes, H., Tufano, P., 2009. Mutual Fund Fees Around the World. *The Review of Financial Studies*, 22, 1279-1310.
- Korkeamaki, T., Smythe, T., 2004. Effects of Market Segmentation and Bank Concentration on Mutual Fund Expenses and Returns: Evidence from Finland. *European Financial Management*, 10, 413-438.
- Korpela, M., Puttonen, V., 2006. Mutual Fund Expenses: Evidence on the Effect of Distribution Channels. *Journal of Financial Services Marketing*, 11, 17-29.

- LaPlante, M., 2001. Influences and Trends in Mutual Fund Expense Ratios. *Journal of Financial Research*, 24, 45-63.
- Latzko, D., 1999. Economies of Scale in Mutual Fund Administration. *Journal of Financial Research*, 22, 331-339.
- Latzko, D., 2003. Mutual Fund Expenses: An Econometric Investigation. Working Paper, Pennsylvania State University, York Campus.
- Lessig, V., Long, M., Smythe, T., 2002, Gains to Mutual Fund Sponsors Offering Multiple Share Class Funds. *Journal of Financial Research*, 25, 81-98.
- Luo, G., 2002. Mutual Fund Fee-setting. Market Structure and Mark-ups. *Economica*, 69, 245-271.
- Malhotra, D., McLeod, R., 1997. An empirical Analysis of Mutual Fund Expenses. *Journal of Financial Research*, 20, 175-190.
- Martin, R., Malhotra, D., McLeod, R., 2001. A Comparative Analysis of the Expense Ratios of Domestic and International Open-End and Closed-End Equity Funds. *Financial Counseling and Planning*, 12, 61-73.
- Newey, W., West, K., 1987. A Simple, Positive Semi-Definite, Heteroskedasticity and Autocorrelation Consistent Covariance Matrix. *Econometrica*, 55, 703-708.
- Otten, R., Bams, D., 2002. European Mutual Fund Performance. *European Financial Management*, 8, 75-101.
- Tufano, P., Sevick, M., 1997. Board Structure and Fee-setting in The US Mutual Fund Industry. *Journal of Financial Economics*, 53, 1589-1622.
- Wermers. R., 2000. Mutual Fund Performance: An Empirical Decomposition into Stock-Picking Talent, Style, Transaction Costs, and Expenses. *Journal of Finance*, 55, 1655–1695.