Mutual fund expenses: Evidence on the effect of distribution channels

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Abstract This paper employs a new set of variables in examining the determinants of fund expenses. The Finnish Association of Mutual Funds requires the industry to disclose new variables such as turnover and tracking error from 2002. Using this information the authors examine whether bank-managed funds are managed more actively than their non-bank competitors, which would explain their higher management fees. Equity and balanced funds distributed through bank offices charge higher expense ratios than funds distributed through independent fund management companies. The results suggest that existing customer relationship, bank cross-selling and convenience rather than operational expenses contribute to fund selection of bank mutual fund customers.
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INTRODUCTION

Mutual funds have received considerable attention in the finance literature. Previous studies have shown that fund size, fund age, fund family size, turnover and external fund growth as well as performance and investment objectives have an effect on mutual fund expenses. Investors choosing a mutual fund should not only consider investment policy, prior performance and risk characteristics, but also the fee structure of the fund. Expenses are worth pointing out since they are one of the few predictable features of fund investing.

It has been suggested that fund managers price superior performance by charging higher operational expenses. However, according to studies such as Gruber[1] and Carhart,[2] higher expenses are associated with inferior rather than superior management and thus investors should prefer to buy funds with low expense ratios. Carhart[2] suggests that wealth-maximising mutual fund investors should become conscious that expense ratio, transaction costs and load fees have a direct and negative impact on fund performance. Moreover, Malkiel[3] suggests that most investors would be considerably better off by purchasing low expense index funds than by trying to select an active fund manager who appears to possess a 'hot hand' since active fund management generally fails to provide excess returns compared to passive approaches.

The objective of this study is to examine variables affecting Finnish mutual fund expenses. Korkeamaki and Smythe[4]analysed the cross-sectional determinants of fund

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expenses during the years 1993 to 2000. Their findings suggested that Finnish fund expenses have decreased over time, consistent with EU membership reducing market segmentation and generating competition. Another key finding of the study was that bank-managed and older funds charge higher expenses but investors are not compensated with higher risk-adjusted returns.

The paper employs a new set of variables in examining the determinants of fund expenses. The Finnish Association of Mutual Funds has required the industry to disclose new variables such as turnover and tracking error since 2002. Using this information the authors examine whether bank-managed funds are managed more actively than their non-bank competitors, which would explain their higher management fees.

PREVIOUS STUDIES

The pioneering study to explain how expense ratios differ in a cross-sectional sample of mutual funds was conducted by Ferris and Chance.[5] They found that large funds charged lower expenses suggesting that there were substantial economies of scale. Furthermore, their findings demonstrated that the existence of a 12b-1 plan increased expenses indicating that the plan was a dead-weight cost to investors.

Dellva and Olson[6] analysed the relationship between fund characteristics and total fund expenses. Their results demonstrated that there were economies of scale in the industry and operational efficiencies experienced by larger funds were passed on to investors in the form of lower costs. Furthermore, they found that higher turnover funds charged higher expenses and US funds with the objective of investing in international securities experienced higher expenses than funds investing in the US securities markets.

Latzko[7] suggests that economies of scale existed in the administration of nearly all types of equity and bond mutual funds. In a follow-up study, Latzko[8] analysed variables influencing mutual fund expenses to evaluate the existence of economies of scale with a panel of 600 funds during the period from 1995 to 2001. According to the findings, however, the average fund did not experience economies of scale.

In order to analyse whether the mutual fund industry showed declining production costs LaPlante[9] examined all stock and bond funds that were available to investors from 1994 through 1998. Based on the findings, fund size, age, fee structure, management style, clientele, distribution network and investment objective had an effect on fund expenses. After controlling for factors influencing mutual fund expenses, LaPlante[9] found that the average fund showed declining shareholder fees.

Korkeamaki and Smythe[4] examined cross-sectional determinants of Finnish mutual fund expenses. They found that expenses charged by Finnish mutual funds were declining over time, emphasising that the Finnish fund market has become more competitive. The findings further indicated that banks charged higher expenses compared to independent fund management companies, older funds charged higher fees and larger funds did not exhibit economies of scale, in contrast with US studies. They also found wide variation in fund expenses based on fund type.

THE FINNISH MUTUAL FUND MARKET

Mutual funds in Finland were established rather late compared to other developed countries such as other EU member countries and the USA. It was not until the year 1987 that banks introduced the first mutual funds after the formation of the legal framework for mutual funds. However, the industry did not experience growth until the latter part of the 1990s. Assets under management have increased from €626 m in the year 1993 to €19,912 m at the end of June 2003 according to the Mutual Fund Reports.[10]

In addition to tremendous growth in assets under management, the number of mutual funds in the Finnish market has also increased significantly. The number of mutual funds has grown from 25 funds in the year 1993 to 321 funds at the end of June 2003. If all the mutual funds marketed in the Finnish financial market are taken into consideration, the total number of funds amounted to 734 at the end of June 2003 from which 413 funds are in foreign registry. Fund management companies charged together management fees worth €171 m during the year 2002.[11]

Product development has been intense. Since the year-end 1999, hedge funds, fund-of-funds and especially index funds, among others, have established an evident foothold in the Finnish market.[12] Product development has also focused on mutual fund fee structures. For example, the use of performance-based compensation in the form of incentive fees has increased among actively managed funds.

Transparency of pricing is an important issue in fund marketing. Operational expenses, which compensate fund management companies for providing portfolio management, administrative and other related services are deducted daily from the value of a fund, and thus investors do not pay them explicitly. According to Barber *et al.*,[13] investors tend to be more sensitive to salient mutual fund expenses such as load fees than operational expenses, which are ongoing fees that are easily masked by the volatility of returns. Barber *et al.*'s study further implied that investors are more likely to buy funds that attracted their attention through exceptional performance, marketing or advertising than funds with favourable fee structure. Jain and Wu[14] show that advertising performance specifically leads to incremental flows. Gallagher *et al.*[15] also show that investor flows to a family of funds have a piecewise linear relation with a family's relative levels of advertising expenditures as well as the past performance.

In order to increase transparency in the Finnish mutual fund market, the Finnish Association of Mutual Funds recommended in November 2001 that all Finnish fund management companies should announce new statistics with respect to funds under their management. Recommendations for regular reporting of certain fund statistics was prepared in cooperation with the Financial Supervision Authority (FSA) with an aim to create a uniform practice for reporting of mutual fund statistics. The recommendations cover the following mutual fund statistics:[16]

— Tracking error
— Portfolio turnover ratio
— Total expense ratio (TER)
— Brokerage commissions paid to investment service providers under common control with the fund manager
— Standard deviation

These new statistics were reported for the first time in mutual funds' semi-annual reports for 2002, and at the latest in the year 2002 annual reports. As mutual funds have not previously disclosed information concerning total costs, tracking error as well as portfolio turnover rate and trading costs of the development with greater transparency was welcomed.

DATA

The majority of the data analysed in this study were obtained from the Mutual Fund Reports which provide information on fund returns over various investment horizons, risk measures (volatility and beta) and risk-adjusted returns (Sharpe ratio and Jensen's alpha). The Mutual Fund Reports also include information on fund characteristics such as fund age, minimum initial investment and number of investors. Furthermore, the Reports provide information on load fees, existence of incentive fee, expense ratio consisting of management fee and custodian fee as well as assets under management and external fund growth.

Additional fund statistics prepared in compliance with the recommendations of the Finnish Association of Mutual Funds were collected from 2002 mutual fund annual reports. Additional data related to fund characteristics were collected from annual and semi-annual reports and fund prospectuses.

The cross-sectional analysis of Finnish mutual fund expenses was implemented in two stages. First, a general analysis of Finnish mutual fund expenses was conducted with a sample consisting of both Finnish and foreign-registered funds at the end of the year 2002. Out of the 612 mutual funds included in the general analysis, 264 were registered in Finland and 348 were registered in other countries.

Secondly, cross-sectional analysis of Finnish registered mutual funds with the new variables was carried out.[17] At the end of June 2002, there were 189 Finnish registered funds that had at least one year of performance history and disclosed all the new mutual fund ratios in accordance with the recommendations of the Finnish Association of Mutual Funds. The number of funds was 219 at the year end 2002 and 255 at the end of June 2003.

Due to the small number of foreign-registered money market funds, money market funds were analysed together with bond funds. Further, risk and hedge funds (OTHER) were not analysed separately due to the small number of funds included in the samples analysed in this study.

In line with previous research, the dependent variable, ie expense ratio (EXPENSE) is defined as the annual percentage of the total value of the mutual fund. The expense ratio reported in the Mutual Fund Reports consists of a management fee and a custody fee. Correspondingly, TER includes all annual operational expenses of a mutual fund and is calculated according to the Finnish Association of Mutual Funds (2001) as follows:

$$TER = A + B + C + D$$

where,

A = Management fees payable out of fund assets, expressed as an annual percentage of assets under management. Incentive fees are reported separately with the TER figure

B = Possible additional custody fees payable out of fund assets, expressed as an annual percentage

C = Possible account maintenance fees and other bank charges payable out of fund assets

D = Other additional fees and charges that can be subtracted directly from the fund assets based on applicable mutual fund rules. With respect to Finland-domiciled mutual funds, these expenses are covered under the management fee.

If funds-of-funds had all the requisite fund characteristics available, they were also included into analyses although their fee structure may differ significantly from other funds. Total expense ratio (TER) was used for funds-of-funds instead of expense ratio.

The portfolio turnover is calculated according to the Finnish Association of Mutual Funds (2001) as follows:

$$Turnover = \frac{Min(A, B)}{C}$$

where,

A = Total value of securities purchased during the period

B = Total value of securities sold during the period

C = Mean asset value of the fund during the period.

Tracking error is expressed as the percentage tracking error over the previous year. Tracking error is calculated only if a fund has a pre-specified benchmark index and at least twelve months of performance history. The tracking error figures reported by fund management companies are computed according to the Finnish Association of Mutual Funds (2001) as follows:

$$Tracking\ \ error = \sqrt{\frac{\sum_t^T (R_{Pt} - R_{Bt})^2}{T-1}}$$

where,

R_{Pt} = Return of the portfolio in period t

R_{Bt} = Return of the pre-specified benchmark index in period t

T = Number of observations.

Frye[18] examined whether US banks offered competitive products in the mutual fund industry. The findings indicated that expense ratios of non-bank bond funds were generally higher than those of bank-managed funds. According to Frye,[18] banks may have been able to charge fees from other services provided to investors and thus they may not have needed to cover fixed costs with mutual fund fees, or alternatively differences in expense ratios may have reflected less risk taken by bank fund managers. In contrast to Frye,[18] Korkeamaki and Smythe[4] reported that being a bank fund increased expenses by 12 basis points, thus implying that Finnish bank customers as mutual fund investors were more interested in convenience than fund performance.

Finnish financial markets are characterised by strong bank dominance and retail banks have been able to maintain their strong position in the market since the first mutual funds were established. Although the number of bank-managed funds has recently increased in the USA, their role in the mutual fund market differs significantly from that of Finland partly due to the history of the regulatory climate in which they operate. According to Alexander *et al.*,[19] however, the role of banks in the US mutual fund industry is likely to continue to expand.

In order to compare empirical findings with those of Korkeamaki and Smythe,[4] independent variable BANK is included in the analysis. BANK is equal to one if the fund is distributed through the office network of a bank and zero otherwise.

To study the effect of load fees on mutual fund expenses, the variable regarding front-end load (FLFEE) is equal to one if the fund has only a front-end load and zero otherwise and correspondingly, the variable concerning back-end load (BLFEE) is equal to one if the fund has only a back-end load. If the fund has both load fees, the variable (BOTHFEE) is equal to one and otherwise is zero. Due to the fact that the level of load fees in percentage terms may depend on the size of an investment and some funds charge fixed load fees, this study analyses only the existence of load fees. Further, the institutional fund (INSTL) variable equals one if the fund is targeted to institutional or wealthy investors with a minimum initial investment of €100,000 or more and zero otherwise.

Expense ratio includes the management fee and other operational expenses such as administrative expenses, distribution and marketing expenses as well as custody fees. Load fees and transaction costs are not included among these expenses. Thus, the expense ratio includes all annual operational expenses of mutual funds incurred from fund management. As operational expenses are taken into consideration in the fund value on an ongoing basis, investors do not pay expense ratios explicitly.

Total expense ratio includes all annual operational expenses of a mutual fund, and thus load fees and trading costs are excluded. The formula is based on a US Investment Company Institute standard and has also been approved by the US Securities and Exchange Commission.[6]

DESCRIPTIVE STATISTICS

Descriptive statistics of all mutual funds in the Finnish market included in the sample at the end of the year 2002 are reported in Table 1.

The average expense ratio is 1.3 per cent over the sample consisting of 612 funds. Forty-three per cent of funds included in the sample are in the Finnish registry and 40 per cent of funds are distributed through a bank office network.

Sixty-one per cent of funds have both load fees, ie front-end load and back-end load, while 4 per cent of funds charge no load fees at all. The average front-end load and back-end load are 2.1 per cent and 0.56 per cent, respectively. Seven per cent of funds in the sample have a minimum initial investment of €100,000 implying that these funds are targeted to institutional investors.

Descriptive statistics of the Finnish registered mutual funds are presented in Table 2. Variation of expenses charged by Finnish registered mutual funds is extensive. Whereas the lowest expense ratio is 0.10 per cent, the highest expense ratio totals to 3.30 per cent of fund value. The average expense ratio is 1.24 per cent at the end of year 2002, which is slightly lower than that for the whole sample.

Total expense ratios (TER), which are reported in compliance with the recommendations of the Finnish Association of Mutual Funds, are slightly higher than average expense ratios. Furthermore, neither expense ratio nor total expense ratio includes the potential incentive fee.

The average fund was turned over 1.05 times during the year 2002. Average brokerage commissions paid to investment services providers under common control with the fund manager (BROKE) was approximately 18 per cent of total brokerage commissions. Average volatility was 17.35 per cent at year-end 2002. Volatilities vary extensively from 0.12 percent to 54.06 per cent. Six per cent of funds included in the

Table 1 Descriptive statistics of all mutual funds marketed in Finland at the year-end 2002

	Minimum	*Maximum*	*Mean*	*Standard deviation*
Expense ratio	0.00	3.30	1.30	0.53
Size (meur)	0.05	7,980.83	124.51	372.64
Family size (meur)	9.23	22,072.58	5,429.84	6,561.62
Age	1.04	45.18	6.59	5.11
Min investment	0	3,000,000	45,831.93	233,710.94
Finland	0	1	0.43	0.49
Bank	0	1	0.40	0.49
Volatility	0.10	54.30	19.77	10.99
Return	−65.73	65.57	−20.66	18.44
Front-end load	0.00	5.25	2.10	1.80
Back-end load	0.00	2.00	0.56	0.44
FLFEE	0	1	0.27	0.44
BLFEE	0	1	0.07	0.25
BOTHFEE	0	1	0.61	0.48
NOFEE	0	1	0.04	0.20
INSTL	0	1	0.07	0.24
Valid n	**612**			

Note: meor=million euros.

Table 2 Descriptive statistics of Finnish registered mutual funds at the year-end 2002

	Minimum	*Maximum*	*Mean*	*Standard deviation*
Expense ratio	0.10	3.30	1.24	0.68
TER	0.10	3.30	1.25	0.69
Turnover	0.02	6.03	1.05	0.89
Tracking error	0.06	62.40	8.61	8.35
BROKE	0.00	100.00	18.20	28.44
INDEX	0	1	0.07	0.26
INCFEE	0	1	0.06	0.24
Size (meur)	1.93	870.03	61.92	98.99
Family size (meur)	53.11	3,858.38	1,873.60	1,511.97
Age	1.08	15.22	4.83	3.24
No. of investors	51	80,731	4,369.95	9,208.41
Min. investment	0	2,500.000	77,914.23	308,487.90
Bank	0	1	0.54	0.50
Volatility	0.12	54.06	17.35	11.67
Return	−61.82	23.34	16.68	18.29
Growth	−101.32	336.57	8.29	38.26
Front-end load	0.00	2.50	0.74	0.48
Back-end load	0.00	2.00	0.77	0.37
FLFEE	0	1	0.06	0.23
BLFEE	0	1	0.17	0.38
BOTHFEE	0	1	0.73	0.44
NOFEE	0	1	0.05	0.20
INSTL	0	1	0.11	0.31
Valid n	**219**			

Note: meor = million euros.

sample had incentive fees in their fee structures. The relative share of index funds increased from 6 per cent to 8 per cent from end June 2002 to end June 2003.

Fifty-four per cent of funds are distributed through a bank office network. The majority of Finnish registered funds, ie 73 per cent, have both load fees and the average front-end load and back-end load are 0.74 per cent and 0.77 per cent, respectively. Eleven per cent of funds are targeted to institutional or wealthy investors.

RESULTS

The regression results of all mutual fund expenses in the Finnish market are presented in Table 3. The regression model explains approximately 46 per cent of the variation of mutual fund expenses at year-end 2002. The regression presented in Table 3 has the same focus as Korkeamaki and Smythe,[4] who analysed cross-sectional determinants of Finnish mutual fund expenses in general. However, the sample used by Korkeamaki and Smythe[4] was dominated by Finnish registered funds. In general, 68.4 per cent of funds in their sample were in Finnish registry. In the authors' sample from 2002, 43 per cent of funds are registered in Finland.

Korkeamaki and Smythe[4] found the variable FINLAND was positively but not significantly related to Finnish mutual fund expenses. On the basis of results presented in Table 3, however, expenses charged by Finnish registered mutual funds were on the contrary negatively related to expenses, but the coefficient estimate for FINLAND was not statistically significantly different from zero.

Mutual funds distributed through bank office networks charge higher expenses compared to fund management companies, a finding that is consistent with Korkeamaki and Smythe[4] who found that being a bank fund significantly increased expenses by 12 basis points. Also, consistent with Korkeamaki and Smythe[4] being an INSTL fund leads to a negative and statistically significant relationship to mutual fund expenses. Similar

Table 3 Regression results of Finnish mutual fund expenses at the year-end 2002

	Coefficient	*Std. error*	*t-value*
Constant	1.167	0.127	9.165***
FINLAND	−0.054	0.047	−1.154
LNSIZE	0.004	0.012	0.348
LNAGE	0.026	0.021	1.219
LNFAMILY	−0.018	0.012	−1.485
Bank	0.110	0.038	2.917***
Return	−0.0006	0.002	−0.359
FLFEE	0.425	0.102	4.183***
BLFEE	−0.020	0.104	−0.194
BOTHFEE	0.382	0.103	3.713***
INSTL	−0.353	0.070	−5.034***
Equity	0.086	0.102	0.844
Balanced	0.181	0.128	1.418
Eurequity	0.060	0.040	1.542
Intequity	0.061	0.039	1.542
Intbalanced	−0.197	0.074	−2.678***
Bond	−0.658	0.086	−7.629***
Corbond	−0.596	0.109	−5.452***
Intbond	−0.632	0.068	−9.307***
Money	−0.632	0.107	−5.931***
Other	0.433	0.191	2.268**
Adjusted R-square	0.460		
N	**612**		
F-value	28.36		
F-significance	0.000		

*** Significant at 1% level, ** Significant at 5% level, * Significant at 10% level.

results that funds targeted to institutional investors charged lower expenses have also been found in Tufano and Sevick,[20] LaPlante[9]and Lesseig *et al.*[21]

The coefficient estimate for fund size is positive but not statistically significantly different from zero. Thus the average Finnish mutual fund does not appear to experience economies of scale, a finding consistent with Korkeamaki and Smythe.[4] In contrast to their findings, fund age does not explain Finnish mutual fund expenses in this sample. The coefficient is positive but not statistically significant.

Consistent with Latzko,[8] average funds belonging to a larger fund family did not charge lower expenses due to economies of scale at the fund family level, although the variable LNFAMILY was negatively related to expenses. Malhotra and McLeod,[22] Lesseig *et al.*[21] and Korkeamaki and Smythe[4] have found that the amount of fund family assets had a negative and statistically significant affect on individual fund costs. Furthermore, the regression results presented in Table 3 show that previous year return did not explain Finnish mutual fund expenses.

Funds that reported the new fund statistics in their 2002 annual reports were then analysed. The regression results of Finnish registered mutual fund expenses at the end of the year 2002 are presented in Table 4. Regression models explain over 60 per cent of the variation of the mutual fund expenses.

Consistent with prior academic literature and preconceptions, passively managed index funds charge lower expenses than actively managed funds. The coefficient estimate INDEX is statistically significant at the 1 per cent level. Further, turnover has a positive influence on mutual fund expenses emphasising that actively managed mutual funds with higher turnover ratios charge higher expenses. This finding is consistent with previous studies such as Dellva and Olson[6] and Lesseig *et al.*,[21] which have found that higher portfolio turnover rates increase operational expenses. The coefficient

Table 4 Regression results of Finnish registered mutual fund expenses at the year-end 2002

	Coefficient	*Std. error*	*t-value*
Constant	0.906	0.216	4.202***
Turnover	0.077	0.033	2.335**
Trerror	0.019	0.005	3.560***
Incfee	−0.433	0.113	−3.834***
Index	−0.553	0.116	−4.780***
Lnsize	0.001	0.035	0.039
Lnage	0.246	0.060	4.098***
Lnfamily	−0.058	0.033	−1.768*
Bank	0.235	0.074	3.167***
Return	−0.0004	0.004	−0.097
Growth	−0.0006	0.0005	−1.294
Flfee	0.051	0.173	0.297
Blfee	−0.009	0.112	−0.079
Bothfee	0.144	0.137	1.051
Instl	−0.231	0.100	−2.298**
Equity	0.053	0.122	0.436
Balanced	0.235	0.127	1.854*
Eurequity	0.226	0.119	1.905*
Intequity	0.287	0.127	2.270**
Intbalanced	−0.027	0.156	−0.172
Bond	−0.576	0.135	−4.251***
Corbond	−0.235	0.185	−1.268
Money	−0.536	0.137	−3.927***
Other	0.509	0.192	2.648***
Adjusted R-square	0.619		
N	**219**		
F-value	17.08		
F-significance	0.000		

*** Significant at 1% level, ** Significant at 5% level, * Significant at 10% level.

estimates for TRERROR and TURNOVER are positive and statistically significant. Turnover reflects greater trading activity and tracking error reflects active risk relative to a benchmark index. The positive coefficients suggest that fund managers charge for analysis work and trading activity.

Having an incentive fee statistically significantly decreases fixed operational expenses. This finding is consistent with Elton *et al.*,[23] who documented that funds with incentive fees had lower fixed expenses than funds without such a fee. It should be noted that incentive fees will be added to fund expenses on top of fixed expenses, however, and thus the total expenses charged by funds with incentive fees could be considerably higher than those of non-incentive fee funds.

Consistent with previous studies, there are wide variations in fund expenses between different investment objectives with risk, hedge funds (OTHER) having the highest expenses and bond and money market funds having the lowest expenses. Having a front-end load, back-end load or both load fees have no influence on fund expenses, a finding consistent with Korkeamaki and Smythe.[4] Finnish registered funds targeted to institutional investors have lower expenses consistent with the previous studies.

Older Finnish registered funds have higher expenses consistent with the results of Tufano and Sevick[20] and Korkeamaki and Smythe,[4] who found that funds with greater experience charged higher expenses. Funds that are distributed through banks have higher expenses consistent with Korkeamaki and Smythe.[4] External fund growth does not explain Finnish registered fund expenses, a result consistent with Kasanen *et al.*[24] Results related to the previous year's return are inconclusive. Previous year return is significantly negatively related to fund expenses at the end of June 2002 while significantly positively related to expenses at the end of June 2003.[25] Fund size does not have influence on Finnish registered mutual fund expenses whereas results shows that fund family size had statistically significant negative influence on Finnish registered mutual fund expenses at the end of June 2002 and at the year-end 2002 consistent with Malhotra and McLeod,[22] Lesseig *et al.*[21] and Korkeamaki and Smythe.[4]

Correlation analysis

Pearson correlation coefficients between key variables analysed in this study are presented in Table 5. The data included in the correlation analysis consist of 219 Finnish registered funds at the end of the year 2002.

The correlation coefficient between expense ratio and TER is almost one, however, it is not given that expense ratio and TER are the same. First, TER would be higher if the expense ratio of funds-of-funds were considered instead of TER since the expense ratio of funds-of-funds does not usually include management fees of funds in which it invests. Hence, the total expense ratio of funds-of-funds could be higher than the expense ratio. Secondly, if TER included incentive fees in addition to other operational expenses, it would be also higher than the expense ratio.

Consistent with the regression results, passively managed funds INDEX correlate negatively and statistically significantly with expense ratio and TER. Turnover has a positive but insignificant correlation with expense ratio and TER. This finding is consistent with the regression analyses that showed a positive but weak relationship between the portfolio turnover rate and operational expenses of Finnish registered mutual fund expenses.

Interestingly, the incentive fee correlates negatively but not significantly with the expense ratio and TER. Tracking error, on the other hand, correlates positively and statistically significantly with expense ratio and TER implying that funds with higher tracking error and thus more active management style, charge higher operational expenses.

Correlation analysis also demonstrates that variables related to the existence of incentive fee correlate positively with turnover and tracking error indicating that funds with an incentive fee have more active management styles and trade more frequently. Furthermore, correlation analysis illustrates that variable INDEX correlates negatively with turnover and tracking error implying evidently that index funds use passive approaches emphasising low portfolio trading activity and low active risk as measured by the difference between the performance of a fund and the benchmark index.

The three new variables (TER, turnover Mutual fund expenses: Evidence on the effect of distribution channels and tracking error) are also analysed separately for bank-managed funds and independent funds. The findings are reported in Table 6. Panel A shows all Finnish registered funds and Panel B shows Finnish registered equity funds only. The findings are similar in both panels suggesting

Table 5 Correlation analysis of key variables used in expense analysis of Finnish registered funds

	Expense	*TER*	*Turnover*	*TRERROR*	*INCFEE*	*INDEX*
EXPENSE	1.00					
TER	0.999***	1.00				
TURNOVER	0.071	0.072	1.00			
TRERROR	0.548***	0.552***	0.052	1.00		
INCFEE	−0.093	−0.079	0.141**	0.167***	1.00	
INDEX	−0.338***	−0.341***	−0,139**	−0.164**	−0.073	1.00

*** Significant at 1% level, ** Significant at 5% level, * Significant at 10% level.

Table 6 Differences in TER, turnover and tracking error by distribution channel (bank vs non-bank)

Panel A. All Finnish registered funds 12/02				
	Bank	*Non-bank*	*t-statistics*	*p value*
TER	1.4053	1.2126	−2.050	0.042
Turnover	0.8589	1.3357	3.826	0.000
Tracking error	8.3794	9.6867	1.101	0.272
Panel B. Finnish registered equity funds 12/02				
	Bank	*Non-bank*	*t-statistics*	*p value*
TER	1.7128	1.5195	−1.930	0.057
Turnover	0.7106	1.2246	3.332	0.001
Tracking error	11.6228	14.8991	2.203	0.030

that bank-managed funds charge higher expenses. This is not explained by greater portfolio management activity since both turnover and tracking errors are higher for funds managed by independent fund managers. The finding is further evidence for the hypothesis that customers of bank-managed funds are not interested in fund performance and the portfolio manager's activity but rather they appreciate convenience.

MARKETING IMPLICATIONS

It was found that bank-managed funds are not more active than their independent competitors, rather the opposite, but they charge higher management fees. One might assume that independent funds are much more popular than those managed by banks. But the three largest fund management companies in Finland are owned by banks (Nordea, Sampo and OP) and they held a noteworthy 66 per cent market share of all assets under management at the end of March 2005.[25]

Therefore, it is quite obvious that existing customer relationship and convenience play a major role in mutual fund customer behaviour. The major banks are able to use their customer loyalty efficiently to cross-sell mutual fund shares to existing retail and institutional customers. Banks are efficiently using their extensive branch networks to retain their clients.[26]

Marketers of independent funds may try to point out the higher fees in bank-managed funds. Also, they may refer to the new transparent activity statistics which show that portfolio management in bank-managed funds is rather passive. Meanwhile, banks may utilise their customer loyalty and branch networks to retain the existing customer base.

CONCLUSIONS

Given the general empirical evidence that average active mutual funds have not been able to outperform passively managed funds or market indices net of expenses, expenses should have an impact on investors' fund selection. The objective of this study was to examine the cross-sectional determinants of fund expenses. Finnish registered mutual funds were of particular interest in this study as fund management companies have disclosed new mutual fund statistics including portfolio turnover rate and tracking error figures in compliance with the recommendations of the Finnish Association of Mutual Funds for the first time in their semi-annual reports of 2002. The purpose was to evaluate whether turnover and tracking error explained the level of Finnish registered mutual fund expenses. Additionally, the aim was to analyse whether passively managed mutual funds charged lower expenses than actively managed mutual funds and whether operational expenses of funds with incentive fees differed from expenses charged by funds without incentive fees.

There was positive but weak evidence that turnover increases the operational expenses of the average Finnish registered mutual fund. This is consistent with previous studies, which have found that higher turnover increases operational expenses because of active trading. Equity funds that deliver higher tracking error values and thus more active management styles, charge higher operational expenses. But bank-managed funds charge higher expenses even though they have lower tracking error and lower turnover. Consistent with the previous studies, Finnish registered equity funds with incentive fees charge lower operational expenses than funds without incentive fees.

In general, Finnish registered equity and balanced funds distributed through bank offices charge higher expense ratios than funds distributed through independent fund management companies. The results suggest that existing customer relationship, bank cross-selling and convenience contribute to fund selection of bank mutual fund customers rather than operational expenses.

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