INVESTIGACIÓN / RESEARCH

Are the Spanish Ethical Fund Managers Skilful?

¿Son Diestros los Administradores Españoles de Fondos Éticos?

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ABSTRACT. In this paper we first analyse the recent and considerable development of the American and European social responsible investment industry. The second objective consists of evaluating the presence of an ability to time the market (market timing) and to select securities (stock picking) in Spanish ethical mutual funds management. Finally, we intend to analyse whether the size of these socially responsible mutual funds exerts an influence on both management abilities. We have observed that the presence of these abilities is not significant but the greater the size of this type of fund, the greater the manager's ability to be ahead of the market movements.

Keywords: Fund size effect, market timing ability, social responsible mutual funds, stock, picking ability.

RESUMEN. En este estudio se analiza, en primer lugar, el desarrollo reciente y considerable de la industria norteamericana y europea de inversiones socialmente responsables. El segundo objetivo consiste en evaluar la presencia de la habilidad para adelantarse al mercado (*market timing*) y para seleccionar valores (*stock picking*) en administradoras españolas de Fondos Mutuos éticos. Finalmente, se analiza si acaso el tamaño de estos Fondos Mutuos socialmente responsables ejercen alguna influencia en ambas habilidades de gestión. Se observa que la presencia de estas habilidades no es significativa, pero mientras más grande es el tamaño de este tipo de fondos, mayor es la habilidad del administrador para adelantarse a los movimientos del mercado.

Palabras clave: Efecto tamaño del fondo, habilidad para adelantarse al mercado, Fondos Mutuos socialmente responsables, valores, habilidad de selección.

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INTRODUCTION

Socially responsible investment constitutes one of the thematic areas that have been experiencing the greatest boom in recent years in Europe, to the extent of having become a leading trend for research. Several studies (Hockerts and Moir, 2004; Hummels and Timmer, 2004; Krumsiek, 2003; Mill, 2006) support this statement.

We can highlight some papers about socially responsible investment and management: Laufer (2003) reviews the latest studies about the debate generated by this type of investment; Ryan and Dennis (2003) analyse the ethical undercurrents of pension fund management; Michelson et al. (2004) analyse the selection processes of ethical portfolios as well as the financial profitability of these investments; Hudson (2005) analyses ethical investing and focuses his study on investors and managers; or Hellsten and Mallin (2006), who investigate into whether ethical investments really do reduce the conflict between obtaining benefits and social responsibility.

From a more general view, several studies focus on ethics in Business, such as Michael (2006), who suggests how regulations and corporate ethics programs should be able to improve the ethical culture of business, or Smith et al. (2007), who carry out an empirical study of unethical and illegal conduct of U.S. managers. In the Spanish environment, Lozano et al. (2006) carry out a detailed study on the development of the socially responsible investment industry in the Spanish financial market. Within these socially responsible investments, the socially responsible mutual funds stand out. These are based on a new investment philosophy which incorporates environmental, ethical and socially responsible criteria into the conventional objectives based on the returnrisk binomial. That is, they combine the conventional financial objectives of mutual funds with new explicit and determined ethical objectives.

These funds intend to channel the surplus resources of socially responsible savers towards organisations that are concerned about creating not just economic value, but also social and environmental value. Socially responsible mutual funds include ethical, solidarity and ecological funds.

Solidarity mutual funds are characterised by dedicating one part of their management fee to nonprofit organisations or to development projects, but they do not apply an ethical filter when selecting companies to which they address their funds. Ecological funds eliminate the contaminating companies from their investment portfolios and promote investment especially in organisations that develop ecological technology.

The ethical mutual funds, on which we focus our empirical study, construct their portfolios with selected companies that have passed through an ethical filter. In this way, an Ethical Committee is in charge of analysing negative criteria which prevent the financing of certain activities (companies which do not violate certain ethical principles, such as Human Rights...) or positive criteria which advise investment in certain activities (active companies which go further and carry out socially responsible activities).

There have been a lot of academics who have tried to study, value and compare the performance of socially responsible mutual funds with conventional mutual funds but the results have not been conclusive. In this sense, Cummings (2000) concludes that socially responsible investment does not give worse returns than conventional investment; Bauer et al. (2002, 2005) do not find significant differences between the results of ethical mutual funds and conventional ones. Similar conclusions are obtained by Kreander et al. (2005).

However, in this paper, we are not going to carry out a comparison between the results obtained for ethical funds and those obtained for conventional funds – a very common analysis amongst academics who focus their research on ethical mutual funds – instead, we are going to focus our attention on the evaluation of the possible presence of "stock picking" and "market timing" abilities in the management of Spanish ethical funds. A very interesting and innovative topic which, as far as we know, has still not been evaluated in the context of socially responsible mutual funds.

In addition, we are going to go beyond the mere analysis of the presence of these abilities and we are going to analyse the impact that the size of the ethical fund can have on stock picking and market timing abilities. The "stock picking" ability refers to the skill the manager shows in the selection of securities which compose a fund portfolio, while the "market timing" ability refers to the manager's ability to time the market, that is, to predict the market returns and to anticipate its movements. The "stock picking" and "market timing" abilities are the two fundamental components of a fund's performance and empirical evidence finds that it is difficult to differentiate between both categories, which are usually observed to be negatively correlated. In addition, it is hard to find some evidence that significantly supports the "market timing" ability hypothesis.

Many different studies have been carried out on the analysis of market timing; the majority denies the existence of such ability (see Knigge et al., 2004 or Christensen, 2005). However, there are also studies which prove the existence of this ability, such Glassman and Riddick (2003), Chen and Liang (2005) or Jiang et al. (2005).

However, all of these results have been obtained for conventional (not ethical) fund samples. Our objective is to analyse the "stock picking" and "market timing" abilities in a sample which includes all the existing Spanish ethical mutual funds in the period that goes from January 2000 to February 2007. In this way, in section 2 we reflect the growing importance of the socially responsible investment industry in recent years in Europe; in section 3 we describe the database used in the empirical analysis; in section 4 we show the methodology applied; in section 5 the results of the empirical analysis are compiled and, finally, in section 6 we show the main conclusions of our paper.

EVOLUTION OF SOCIALLY RESPONSIBLE INVESTMENT

The ethical mutual fund industry has developed spectacularly over recent years. On a European level, the evolution of the number of mutual funds that use ethical, social and ecological criteria when carrying out the portfolio selection, and which are from European countries, are included in **figure 1**.



Figure 1. Number of Socially Responsible Mutual Funds in Europe

¹Figure 1 shows the evolution of the number of socially responsible mutual funds in Europe from 1980 to 2006. A considerable increase in the number of ethical mutual funds in Europe over the last few decades can be observed. This growth has slowed down over recent years. The data related to 2003, 2004, 2005 and 2006 refers to June 30th. This is not the case with the previous data. This figure has been obtained from Avanzi SRI Research (2005 and 2006).



Figure 2. Total assets invested in Socially Responsible Mutual Funds in Europe (millions of Euros)¹

¹Figure 2 shows the evolution of the total net assets invested in Europe in ethical mutual funds from 1999 to 2006, in millions of Euros. A growing trend can be observed, with the exception of 2003, a year in which there was a profit reduction in the financial markets. The source of this figure is Avanzi SRI Research (2006).

Figure 1 shows that there has been a considerable increase in the number of ethical mutual funds in Europe over the last decades, starting from 159 funds on December 31st, 1999 and reaching 388 socially responsible mutual funds on June 30th, 2006. An increase of 76.10 percent can be observed between December 1999 and December 2001, which continued in the following years, although increasing by continually smaller amounts, the lowest being 3.47 percent from 2005 to 2006. The total net assets invested in Europe in ethical mutual funds from 1999 to 2006 are shown in figure 2 in millions of Euros.

It can be observed that the trend is growing, from the point of view of the total investment in ethical funds in Europe, although there was a fall in the year 2003 due to the reduction of benefits of the financial markets, which had a direct impact on equities and mixed income assets, accounting for, approximately, 83 percent of the ethical mutual fund portfolio that year. In the same way, the 56.66 percent growth experienced from 2003 to 2004 is related to the benefit recovery in the financial markets and the presence of numerous socially responsible mutual funds investing in equities in the Nordic countries which, then, experienced a dramatic increase.

Therefore, the evolution of investment in ethical mutual funds during the analysed period shows an evident growth although linked to the financial results in the different markets, as a consequence of the high rate of equities or mixed income assets composing said fund portfolios (between 70 and 80 percent of the total).

In June 2006, the most outstanding figures of assets correspond to the United Kingdom with 9,483 million Euros, followed by France (6,539 million) and Belgium and Sweden whose investment amounted to 3,764 and 3,085 million Euros respectively. Regarding the

development of this collective investment industry in Spain, it is worth stating that only 165 of the total 34,009 million Euros are accounted for the Spanish socially responsible fund net assets at the end of June 2006, which identifies Spain as the European country with the lowest investment in this kind of financial products.

Nevertheless, the European market is still emerging to these socially responsible funds, as in the United States this industry presents greater development and tradition, (Schueth, 2003). Therefore, around mid 2001, whereas the European country with the most financial products of this kind was the United Kingdom with 62 funds, 181 were being traded in the United States. It is also true that the growth rate is lower in the U.S.A. than in Europe, because this type of socially responsible investment is more consolidated.

Graphically, the evolution of socially responsible funds in the U.S.A. from 1995 to 2005, regarding both number of funds and invested net assets, is shown in **figure 3**.



Figure 3. Socially Responsible Mutual Funds in the USA (1995-2005)1

¹Figure 3 shows the evolution of socially responsible mutual funds in the USA from 1995 to 2005, both in number of funds and net assets volume. In general, a growing trend is observed, except in the year 2001. This figure was drawn from a report by Social Investment Forum Foundation (2006).

DATABASE

Our analysis will be focused on the eight Spanish ethical mutual funds existing at a certain time in our analysis period (from January 2000 to February 2007).

The mutual funds considered in this analysis meet the requirements of E.E.C. (European Economic Community) Directive 85/611 dated on December 20th, 1985 and of the Spanish Newsletter issued by the Ethical Commission of INVERCO dated on November 15th, 1999 on the use of the designations "ethical", "ecological" or any other involving social responsibility aspects by Collective Investment Institutions. Amongst all the ethical mutual funds existing in Spain (it should be remembered that this is an emerging market in this field and that the first Spanish ethical mutual fund appeared in 1997), those investing in international equities have been selected and data has been compiled on a monthly basis, exclusively during the lifespan when they were ethical mutual funds.

As a representative benchmark, we have considered the MSCI World index, because our ethical fund sample invests in international assets. Alternatively, we have repeated our analysis but using the FTSE All- World Index as the benchmark, in order to check if our results are robust to the selected benchmark. The reason is that, as some authors have appointed such as Cummings (2000), it is very important to select the appropriate benchmark when analysing the financial performance.

In addition, as a risk-free asset we have taken into account the monthly return obtained by one-month repos on Treasury Bills within the time horizon considered (from January 2000 to February 2007). Moreover, as a robustness analysis, we consider the 1 month-Euribor rate as the risk-free asset return. The consideration of a European rate of return as the riskfree asset is motivated by the great portion of European investments of the funds analysed in this study.

Our sample is free of survivorship bias as we have considered all the Spanish ethical mutual funds, both surviving and terminated, which were "alive" at any given time in the analysed period. The ethical mutual funds analysed are shown in the table below, differentiating between their lifespan and the part of it that we have selected in our analysis:

Although some of the funds were created before January 2000, the first data of these funds taken into account is January 2000, as our analysis period covers January 2000 to February 2007. The BBVA's Bolsa Desarrollo Sostenible fund is analysed from October 2004, as this is when it acquires the designation of ethical fund. The Santander's Dividendo Solidario fund is taken into account from December 2005, as it was a domestic mix-fixed-income fund before. The Renta 4 Ecofondo fund is only considered until June 2004, in spite of remaining "alive" at present as, from that date on, it is no longer an ethical fund. The same happens with the Ahorro Corporación Arco Iris fund which is only considered until October 2003 in spite of remaining "alive" at present.

Table 1. Analysed soci	ially responsable mutual fun	ds'
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Fund Designation	Register Nº (CNMV)	Lifespan	Analysed Period
Foncaixa 133 Socialmente Responsable	3269	September 2005 / Present	September 2005 / February 2007
Caixa Catalunya Europa Valor	1993	January 2000 / Present	January 2000 / February 2007
BBVA Bolsa Desarrollo Sostenible	1172	September 2007 / Present	October 2004 / February 2007
Santander Dividendo Solidario	1836	June 1999 / Present	December 2005 / February 2007
Morgan Stanley, Fondo Activo Ético	1783	April 1999 / Present	January 2000 / February 2007
Foncaixa Cooperación	1787	April 1999 / Present	January 2000 / February 2008
Renta 4 Ecofondo	1846	April 1999 / Present	January 2000 / June 2004
Ahorro Coporación Arco Iris	1289	November 1997 / Present	January 2000 / October 2003

¹Table 1 includes the eight Spanish socially responsible mutual funds existing at any given time of the period from January 2000 to February 2007, and investing in international equities. All of these funds maintain the ethical criteria when selecting their portfolios. In this sense, some funds are analysed for a shorter period of time than that of their life, because they have either modified their investment allocation or, in some part of their life, they have not maintained the ethical criteria for stock picking.

Mean	-0.013%
Median	0.603%
Maximum	4.173%
Minimum	-6.577%
Standard Deviation	0.026%
Asimmetry	-0.709%
Kurtosis	3.004%
Jarque-Bera Test	0.027%

Table 2. Summarised statistics of the equally-weighted portfolio'

¹Table 2 shows the summarised statistics of the monthly returns on the equally-weighted portfolio composed of the eight Spanish socially responsible mutual funds existing at any given moment of the analysed period. Next, we will show the summarised statistics of monthly returns (the monthly returns are computed in excess of the risk-free asset return) on the equallyweighted portfolio composed by eight Spanish ethical funds considered in our analysis throughout the period from January 2000 to February 2007:

MATERIALS AND METHODOLOGIES

The methodology applied in this paper, in order to evaluate the ability to time the market (market timing) and the ability of securities selection (stock picking) that Spanish managers of international ethical equities have, consists of the Treynor and Mazuy model (1966) and the Merton and Henriksson model (1981). In addition, we analyse the effect the fund size may have on both abilities.

Treynor and Mazuy's Model (1966)

Treynor and Mazuy's model (1966) is built upon the idea that managers continuously try to anticipate the market by fluctuating between two lines –one with a high volatility and another one with a low volatility –.

When the manager chooses high volatility the market rises and, when low volatility is chosen, the market falls. The net resulting line from a fund that continuously beats the market is not a straight line. Considering that no fund can anticipate the market correctly, a gradual transition from flat slope to steep slope is taken. Consequently, with the slope more or less continuously varying between the extreme points of both lines, the resulting line is convex, which is better specified with the inclusion of a quadratic term:

$$r_{p,t+1} = \alpha_p + b_p r_{m,t+1} + \gamma_{tm} (r_{m,t+1})^2 + v_{p,t+1}$$
(1)

Where $r_{p,t+1} = R_{p,t+1} - R_{f,t+1}$ is the excess return on the portfolio p, and $R_{p,t+1}$ is the return on the portfolio p between t and t+1, and $R_{t,t+1}$ is risk-free asset return; $r_{m,t+1}$ is the excess return on the market factor during the same period; $\boldsymbol{b}_{_{\!\!\boldsymbol{D}}}$ is the systematic risk of portfolio p (the market's b_p is equal to 1 so if the portfolio beta is superior than 1, it indicates that the portfolio is riskier than the market and if it has a beta lower than 1, then the portfolio is less risky than the market); and $\upsilon_{_{\!\!D,t+1}}$ is the error term in the period t+1; γ_{tm} measures a manager's market timing ability, so if it is positive and significant, it indicates a successful manager's ability to time the market, and if it is negative and significant, it indicates the opposite. And α_{n} his/her stock picking ability, so when alpha is positive and significant, it indicates a manager's ability to choose the appropriate assets to be included in the portfolio, and when it is negative and significant, it indicates the opposite.

Merton and Henriksson's Model (1981)

Merton and Henriksson (1981) and Henriksson (1984) propose a different market timing model. This model assumes that, for each period, the manager will try to predict whether the market will have positive or negative excess returns ($r_{m,t+1}$ >0 or $r_{m,t+1}$ <0). A manager who for ecasts a positive value for $r_{m,t+1}$ will probably take more systematic risk compared with their risk position when they expect the value of $r_{m,t+1}$ to be negative, that is, the portfolio's beta is lower in the case of a bear market prediction and the market beta is higher for a bull market prediction. For Merton and Henriksson, if the manager can anticipate the market, then the γ_{mh} coefficient of the following regression will be positive and significant. When gamma is negative and significant, it indicates a perverse manager's ability to time the market:

$$r_{p,t+1} = \alpha_p + b_p r_{m,t+1} + \gamma_{mh} (r_{m,t+1})^* + \varepsilon_{p,t+1}$$
(2)

Where $(r_{m,t+1})^* = Max(0, r_{m,t+1})$ and $\varepsilon_{p,t+1}$ is the error term in period t+1. Merton and Henriksson (1981) interpret this term as the payoff of an option on the market portfolio whose exercise price is equal to the risk-free asset return. And γ_{mh} measures the managers' market timing ability.

Fund Size Effect

Does the size of Spanish ethical funds have a positive impact on the manager's ability to select securities and anticipate the market? To answer this question, we consider the total net assets of the mutual funds as a proxy for the fund size. From this point, we proceed to analyse the null hypothesis of economies of scale, comparing, on the one hand, the estimated stock picking ability of an equally-weighted portfolio with that obtained by a size-weighted portfolio.

Hypothesis 1. $\alpha_{_{SW}}$ > $\alpha_{_{EW}}$ (size does have an effect on the stock picking ability)

Where α_{SW} (α_{EW}) represents the estimated stock picking ability of an equally-weighted portfolio (size-weighted). Both portfolios include all of the ethical funds, surviving and terminated, during the analysed period. Additionally, we compare the market timing ability of an equally-weighted portfolio with that obtained by a size-weighted portfolio:

Hypothesis 2. $\gamma_{_{SW}}$ > $\gamma_{_{EW}}$ (size does have an effect on the market timing ability)

Where γ_{SW} (γ_{EW}) represents the estimated market timing ability of the equally-weighted portfolio (size-weighted). Both portfolios include all of the ethical funds, surviving and terminated, during the analysed period.

RESULTS AND DISCUSSION

In this section we only discuss and report the results found when the MSCI-World index is used as the benchmark. Because the results reached for the FTSE-All World index are quite similar, confirming the robustness of the analysis, we don't show them. However, these results are available from the authors upon request. Moreover, we have repeated the analysis considering the MSCI-World Index as the benchmark, but the 1 month-Euribor rate as the riskfree assets, however the results hasn't changed significantly. For this reason, we have not included these results, but the interested readers can request them from the authors.

Firstly, we form an equally-weighted portfolio that includes all of the existing ethical funds in Spain, which invest in international equities, during the analysed period to appropriately evaluate the "market timing" and "stock picking" abilities of these funds. We include both the funds that have survived the whole analysed period and those that have only survived part of it, in this way we avoid survivorship bias.

The use of this equally-weighted portfolio instead of an individual analysis of each ethical mutual fund is justified by the impact that the survivorship bias could have on the average stock picking or market timing ability of the estimates of the individual ability of surviving ethical funds. Additionally, we create a sizeweighted portfolio, in such a way that each fund is weighted by the volume of assets that it manages in each of the considered monthly observations.

Results from Treynor and Mazuy's Model (1966)

Table 3 shows the results from Treynor and Mazuy model (1966). Based on table 3 we can see that the stock picking ability of Spanish ethical fund managers is very close to zero; actually, it is not significantly different to zero. On the other hand, they show a negative market timing ability, although this ability is not significantly different to zero either. Furthermore, we observe that exists a positive size effect on both abilities, although it is much higher on the market timing ability (16.16 against 0.06 percent), that is, that the biggest funds show greater market timing ability than the rest of the ethical funds. With regard to stock picking ability, it does not seem to be very dependent on the fund size, although a slight improvement can be seen in the case of large funds. If we observe coefficient b,, we conclude that ethical funds are conservative, in general, especially the smallest ones. The adjusted R-square coefficients are high, which proves the significance of the regression.

Results from Merton and Henriksson's Model (1981)

Table 4 shows the Merton and Henriksson model results. Based on Merton and Henriksson's model (1981), and as with Treynor and Mazuy's model (1966), we obtain estimates very close to zero from the stock picking ability, which are not significantly

different to zero. The results obtained for the market timing ability estimates are also very similar to those obtained from the previous model (negative and not significantly different to zero), although we observe a slight improvement in the results shown by the second model analysed.

A positive impact can also be observed from this model, very small in this case, in terms of the fund size on both abilities which is again higher for market timing ability. The fund size impact on stock picking ability is greater than that obtained from the previous model (0.08 percent). However, the impact that the fund size has on market timing ability is less than that obtained from the previous model (0.69 percent). Therefore, we can confirm, from Merton and Henriksson's model (1981), that a fund size effect is hardly detected on both management abilities. In this case, conservative behaviour amongst Spanish ethical funds is also detected, given the low values of their betas. The high adjusted R-square coefficients again denote the great significance of regressions.

	α _p	bp	Yun	Ajusted R2 (%)
Equally-weighted portfolio	5.59E-05	0.505901***	-0.658716	78.03
Size.meighted portfolio	0.000648	0.445602***	-0.497154	72.52
Fund Size Effect	0.0005885		0.161562	1000 (Sector 1

¹The table 3 shows the Market Timing (γ_{tn}) and stock picking (α_p) ability estimates, as well as the

systematic risk estimate (b_p) obtained from Treynor and Mazuy's model (1966). Additionally, the adjusted determination coefficient is shown. The comparison of the equally-weighted portfolio alpha with that of the size-weighted portfolios allows us to contrast the null hypothesis (3). The comparison of the equally-weighted portfolio gamma with that of the size-weighted portfolios allows us to evaluate the hypothesis (4). *** p<.01.

Table 4. Fund size effect. Merton and Henriksson s model (1981	Table	4. Fund	size effect.	Merton	and Henriksson	's model	(1981)
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	ap	b _p	Ϋ́m	Ajusted R2 (%)
Equally-weighted portfolio	0.000605	0.567610***	-0.107163	77,93
Size.meighted portfolio	0.001381	0.499527***	-0.100207	7255
Fund Size Effect	0.000776	100 M. OX C 100 G 1111	0.006956	

The table shows the Market Timing (γ_{mh}) and stock picking (α_p) ability estimates, as well as the

systematic risk estimate (b_p) obtained from Merton and Henriksson's model (1981). Additionally, the adjusted determination coefficient is shown. The comparison of the equally-weighted portfolio alpha with that of the size-weighted portfolio's allows us to contrast the null hypothesis (3). The comparison of the equally-weighted portfolio gamma with that of the size-weighted portfolio's allows us to evaluate the hypothesis (4). *** p<.01.

CONCLUSIONS

This paper is focused on analysing socially responsible mutual funds, an investment sector which has generated great interest over recent years all over the world. The evolution of this sector in Europe is very important; however, its state is still embryonic in Spain. Nevertheless, it is expected to respond to the shown trend at a European level. More specifically, this paper analyses the subset of Spanish ethical mutual funds of international equities that existed in certain periods from January 2000 to February 2007. This kind of funds introduces ethical criteria in the selection of securities which compose their portfolios. These criteria are positive (they promote investment in certain activities) and negative (they prevent investment in certain activities).

Nevertheless, the aim of our analysis is not to determine whether ethical funds show a better or a worse performance than conventional ones, our objective is to determine the possible presence of stock picking and market timing abilities in the management of these funds, which are especially concerned about the social and environmental implication of the companies in which they invest.

We have observed that this presence is not significant but the greater the size of this type of fund, the greater the manager's ability to correctly anticipate the market movements. In concrete, the alpha parameter is very close to zero for both models (0.0000559 for Treynor & Mazuy model and 0.000605 for Merton & Henriksson model) but is not significant, and the timing parameter is negative (-0.6587 for Treynor & Mazuy model and -0.107 for Merton & Henriksson) but is also not significant. We, therefore, can not draw conclusions about these managers' abilities. However, the fund size effect is positive for both abilities (0.0588% for the Treynor & Mazuy model and 0.0776% for the Merton & Henriksson model) indicating that the larger the fund, the better the stock picking and market timing abilities of the manager.

ABBREVIATIONS

E.E.C.: European Economic Community

INVERCO: INVERCO is the Association of Collective Investment and Pension Funds Institutions, and includes, as associate members, practically all of the Spanish Collective Investment Institutions (Mutual Funds and Companies), Spanish Pension Funds, and foreign Collective Investment Institutions registered in the C.N.M.V. (the Spanish supervisor of financial markets) for the purpose of trading in Spain.

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