

The Financial Performance of Solidarity Investment Funds : the French Case

Yves Jégourel, Samuel Maveyraud

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LAREFI
Université Montesquieu-Bordeaux IV
Bâtiment Recherche Economie
Avenue Léon Duguit – 33 608 Pessac

Abstract

Solidarity finance covers the so-called 90/10 funds, where 10% of resources are invested in government-recognized solidarity companies, and revenue sharing funds, where holders accept that all or part of their remuneration is given to an organization with a social or humanitarian purpose. Still a fringe element compared with socially responsible investment funds but posting rapid growth in recent years, solidarity finance has been given scant consideration by previous academic papers. In this study, we take a close look at the financial performance of solidarity mutual funds and OEICs and, with the help of a Fama-Carhart-French (1997) multi-factor model taking into account conditional heteroscedasticity, have attempted to ascertain whether these funds under- or outperform conventional SRI funds. We show that there is no compelling econometric evidence pointing to the under-performance of solidarity funds.

Code JEL: G11, G15

I. Introduction

While solidarity finance is still a fringe component in the world of collective fund management, it has, over the past several years, achieved considerable success in particular with individual savers. Sums outstanding with solidarity savings have been constantly rising and in 2007 topped €1.685 billion, growth of over 30% in one year. Although forms of raising funds are still varied (savings books, unlisted shares...), the lion's share of this type of saving is concentrated with UCITS (undertakings for collective investment in transferables), whether individual or payroll-related. As at December 31, 2007, outstanding sums with general purpose UCITS and open-end investment companies (OEIC) were respectively €643 and €598 million, versus €445 million for bank savingsaccounts, time deposit accounts and unlisted shares¹. Different to so-called ethical (or socially responsible) finance, which aims to introduce extra-financial criteria into the investment strategy of fund managers, solidarity finance has the purpose of participating directly or indirectly in the financing of a social action.

No empirical study of solidarity investment funds seems to have been conducted, particularly in terms of their financial performance. While the relative confidentiality of these funds explains in part this state of affairs, the assumption whereby such studies would in any case hardly be meaningful given that such investment funds do not set out to offer real financial performance, cannot be totally discarded. Yet solidarity and financial performance can hardly be considered as antithetical within solidarity finance, whatever the type of fund

¹ Source: Finansol.

under consideration. Subscribers to revenue sharing funds show less interest in financial performance only on an individual basis because they do not receive all the income related to holding this type of asset. Collectively, however, the fund's financial performance will be key as it will determine the amount of revenue distributed to beneficiary associations. The "financial disinterest" of the holder of revenue sharing funds is furthermore merely relative, as he or she benefits from a potential gain from the resale of shares². In the case of 90/10 funds, savers are fully looking for financial performance inasmuch as their social involvement stems from the financing of solidarity companies intended to produce profits. Their form of allocation may, particularly in the case of a cooperative, restrict return potential on the 10% invested but not on the remaining 90%³. From this, analysis of the financial performance of solidarity funds would appear legitimate in order to ascertain whether the inclusion of criteria of solidarity is a factor of under-performance or over-performance for both revenue sharing funds and for 90/10 funds.

To conduct this analysis, we will proceed with the estimation of a Fama-French-Carhart [1997] type multi-factor model, taking account of conditional heteroscedasticity, a traditional characteristic of financial time series. More precisely we will use E-GARCH modelling in order to take on board the asymmetries of the volatility of excess return.

In the first section we give a detailed run-down of the reality of the French market for solidarity UCITS, then secondly we present a review of literature on the measurement of the performance of so-called ethical funds. This is useful to get a better understanding of the link that may exist between social or environmental capital gain and the financial performance of an investment fund. The data and methodology adopted in this study to measure the financial

² This may nonetheless be reduced through a donation for social mission organizations.

³ Cooperatives are effectively subjected to three tight legal constraints: (1) 51% of company shares must be held by employees; (2) the value of the company's shares remains frozen, meaning that no capital gain may be made; (3) the split of profits is subjected to a specific control system.

performance of solidarity funds is given in detail in a third section. Finally we present and analyse our findings.

II. The French market for solidarity investment funds

With sums outstanding of €200 million in 2002 versus €1.6 billion in 2007, the expansion of the solidarity savings movement in France is considerable. While the Act 2001-152 ruling on employee saving schemes has fostered this growth, there is no denying that the solidarity mechanisms offered by these savings products, and their returns, meet the ambitions of investors: 38% of the French population feel that they might invest in this type of product on the condition that returns are the same as those from a traditional investment, while 19% are ready to accept a lower return⁴.

There are two types of solidarity fund in France, geared to the nature of the solidarity mechanisms implemented. The so-called 90/10 funds, thus labelled owing to the form of resource allocation; 10% of invested sums is placed with companies recognized as, or similar to, solidarity concerns⁵, while the remaining 90% is invested in traditional companies, respecting in principle the social, environmental and good governance criteria (known as ESG criteria) peculiar to ethical finance⁶. Revenue-sharing funds, for their part, are not necessarily designed to be invested in solidarity companies, but they offer redistribution mechanisms in favour of institutions with a social or humanitarian calling. These redistribution mechanisms

⁴ According to an Ipsos/Finansol poll presented in the solidarity finance indicator 2008.

⁵ Considered as solidarity companies are companies whose capital stock, if any, is not open to negotiations in a regulated market and one-third of whose employees have been recruited in the framework of "integration" contracts of employment, or which are incorporated in the form of associations, cooperatives, friendly societies, welfare insurance institutions or companies whose managers are elected directly or indirectly by employees, members or stakeholders, providing that all sums received from the company do not exceed a certain threshold. Assumed equivalent to these companies are organizations at least 40% of whose assets are composed of stock issued by solidarity companies or credit institutions, and where 80% of all loans and investments are made in favour of solidarity companies.

⁶ By virtue of the act 2001-152 relative to employee saving schemes, the assets of these solidarity funds are composed: a) for one part, of between 5 and 10%, of securities issued by registered solidarity companies pursuant to article L. 443-3-1 of the labour code or by venture capital companies referred to under article 1-1 of act N° 85-695 of July 11, 1985 comprising various provisions of an economic and financial order, or by venture investment mutual funds referred to under article L. 214-36, subject to at least 40% of their assets consisting of stock issued by solidarity companies mentioned under article L. 443-3-1 of the labour code; b) for the remainder, of marketable securities open to negotiations on a regulated market and, accessorially, of liquidities.

come from either the management company, which retrocedes a share of any custodial, entry or exit costs levied on savers, or the saver him/herself, who pays a fraction (25 to 75%) of the distributable revenue from UCITS⁷ stock in the form of donations. The remaining fraction is capitalized. Out of the €1.5 billion invested in solidarity savings products in 2007⁸, €133 million were allocated to solidarity activities.

Today⁹ there are 26 solidarity UCITS (or UCITS compartments) in France recognized as such by Finansol, the association charged with promoting solidarity financing and labelling savings products¹⁰. The solidarity activities financed by these funds are manifold, ranging from international solidarity activities (fair trading, microcredit) to integration activities that include economic activity and housing. While eight funds have the mission of capturing employee savings schemes, a very large majority are still accessible to individual investors.

⁷ Two mechanisms are once more possible; the share of returns for the benefit of associations with a social purpose may be geared to either the dividend or the latent capital gain with UCITS shares or securities defined as the difference between the initial market value and the end-of-period market value.

⁸ To which should be added the €187 million invested directly with solidarity financiers.

⁹ As at July 22, 2008. Other solidarity funds exist but have been created only recently, have not yet been labelled as such by Finansol and so are not included in this study.

¹⁰ It should be pointed out that the existence of nurses, funds of funds or compartmented funds make it more difficult to evaluate with any real precision the exact number of solidarity funds.

Table 1: General purpose UCITS labelled in France

Name of UCITS	Date of creation	Form	Bank	Invest.	Type
Habitat et humanisme	1991	OEIC	LCL	diversified	Shared Rev.
Insertion emplois	1994	OEIC	Natixis	shares	90/10
Insertion emplois equilibre	2006	OEIC	Natixis	shares	90/10
Faim et développement horizon	2000	OEIC	Crédit coop.	bonds	Shared Rev.
Faim et développement equil.	2000	OEIC	Crédit coop	diversified	Shared Rev.
Faim et développement trésor.	1983	OEIC	Crédit coop	bonds/TCN	Shared Rev.
France emploi	1994	OEIC	Crédit mut.	€ monetary	Shared Rev.
Nord-Sud Développement	1984	CEIC	Natixis	bonds	90/10
Choix solidaire	2000	CEIC	Crédit coop	diversified	Shared Rev.
Natixis solidaire	2006	VOEIC	Natixis	unlisted	-
Ethique et partage	2000	OEIC	Meeschaert	shares	Shared Rev.
Pacte vert Tiers Monde	1987	OEIC	Crédit agri.	bonds/TCN	Shared Rev.
Croissance durable et solidaire	2002	OEIC	Macif	shares	90/10
Crédit municipal solidaire	2004	OEIC	Dexia	diversified	90/10
Pacte solidarité logement	1997	OEIC	Crédit agri.	bonds/TCN	Shared Rev.
Epargne solidaire	1987	OEIC	Crédit coop	bonds/TCN	Shared Rev.
Eurco solidarité	1992	CEIC	LCL	bonds	Shared Rev.
Liberté et solidarité	2001	CEIC	LBP	diversified	Shared Rev.

Source: Finansol, AMF (Finance Market Authority) (base GECCO)

Like traditional UCITS, a significant proportion (70%) of solidarity investment funds are general purpose open-end investment companies (OEIC) invested in shares, fixed-rate instruments (bonds or negotiable credit instruments) or in a diversified manner according to the classification adopted by the AMF (Finance Market Authority). Offering the traditional C shares (revenue capitalization) and/or D shares (distribution), shared revenue funds have in some cases the peculiarity of specific shares linked to the identity of the beneficiary organization¹¹. Some funds are, in the same way, nurses or compartmented funds. Structured as a venture OEIC (VOEIC), only one solidarity fund in France today invests in unlisted securities. The net assets of solidarity funds reveal particularly disparate sums, ranging from €3 million to over €180 million¹².

¹¹ As an example, the “Choix Solidaire” CEIC disposes of four types of specific shares, besides shares C and D: the AU share (Agir-Unicef), the FCS share (Fructi Choix Solidaire), the FAU share (Fructi-Agir-Unicef) distributed within the Crédit Coopératif network, and the FRM share (Fondation pour la recherche médicale).

¹² As at July 22, 2008.

Table 2: How shared revenue funds function

Name of UCITS	N° of compartments/type of shares	% of distributed revenue
Habitat et humanisme	1	25%
Faim et développement	3	50 or 75%
France emploi	1	50%
Choix solidaire	6	0 to 50%
Ethique et partage	1	100%
Pacte vert Tiers Monde	1	50%
Pacte solidarité logement	1	50%
Epargne solidaire	1	50%
Eurco solidarité	1	50%
Liberté et solidarité	1	50%

Source: AMF (Finance Market Authority) (base GECCO)

III. Financial performance or solidarity commitment?

There are no theoretical or empirical studies of solidarity finance or, more particularly, of their relative financial performance. Yet financial performance and social or environmental gain are not antithetical; a study conducted by Derwall et al. (2004) particularly evidences the fact that the performance of a corporate portfolio with high environmental standards could be significantly higher than that of a corporate portfolio that neglects these same standards. Furthermore, the assumption whereby certain investors might have a multi-attribute utility function, based certainly on the optimization of the return-risk gearing of their portfolio but also on the societal feedback of their investment strategy, cannot be excluded (Bollen (2007)).

A sizeable number of research articles have endeavoured to measure the performance of ethical or socially responsible funds (SRI) to determine whether the integration of extra-financial criteria, both positive (best-in-class approach) and negative (exclusion criteria), into the allocation strategy of funds, is a factor of over-performance or under-performance compared with investment funds that adopt purely financial criteria. In this sense there are two opposing assumptions (Renneboog et al. (2008a)): by introducing additional criteria for the selection of securities, particularly exclusion criteria, SRI funds are, on the face of it, working with a more restricted sphere of investment than traditional investment funds. Faced with lower potential for diversification, these funds are thus supposed to offer lower financial

performances. The second hypothesis suggests inversely that in taking on board extra-financial criteria, fund managers are able to identify companies operating with a high level of social and environmental responsibility, itself a source of creation of value. A number of studies thus highlight the fact that if ethical funds tend to under-perform with their reference portfolios, their risk-adjusted returns are by contrast not significantly different to those from traditional funds (Bauer et al. (2005), Renneboog (2008b)).¹³ A similar analysis may be made for solidarity funds in order to better understand the motivations of holders of shares: are their financial performances in particular significantly lower than those from conventional investment funds, thus marking the arbitrage of investors in favour of social gain?

IV. Data and Methodology

Based on all the funds labelled by Finansol, we have formed two portfolios of solidarity funds under French law, one assembling shared revenue funds, the other 90/10 funds and both belonging to the AMF classification of “shares” and “diversified”.¹⁴ Only distribution or mixed – combining capitalization and distribution – shares have been considered to avoid any bias in the analysis of performance. A total of nine funds have thus been taken into account and studied using weekly data for the period from January 1999 to July 2008. To measure financial performance relative to solidarity funds, we have considered, over this same period, an equally-weighted reference portfolio composed of 14 French-law SRI funds¹⁵ the size and age characteristics of which are similar to those of the solidarity funds. We have proceeded in two stages to build the reference portfolio: first of all, for each solidarity fund, we have selected the 6 SRI funds whose date of creation is closest to that of

¹³ For a complete review of literature on the financial performance of ethical funds, see Renneboog et al (2008b), particularly the tables pp. 1736-37.

¹⁴ By contrast, with diversified UCITS no distinction is made between share-dominant and bond-dominant funds.

¹⁵ Here we have adopted the methodology used by Renneboog et al (2008a). The selected SRI funds are funds whose title includes the words “sustainable” or “ethical”.

the solidarity fund. Once these funds were selected, we chose the 3 SRI funds whose net assets as at July 22, 2008, were the closest to that of the solidarity fund. In all, the reference portfolio associated with the shared revenue fund is composed of 15 (5 x 3) SRI funds, while the reference portfolio relative to 90/10 funds comprises 12 SRI funds. Additionally we have considered two market indices in the framework of this analysis: the Morgan Stanley Capital International, France (MSCI France), representative of developments in the share market in France, and the Advanced Sustainable Performance Index, Eurozone (ASPI Eurozone), representative of the evolution of socially responsible companies within the euro zone¹⁶. Lastly, the risk-free rate considered is the Euribor 3 month rate.

To date, two methods have been used to analyse the performance of SRI funds: CAPM (Capital Asset Pricing Model) and multi-factor models with which to measure the relative performance of these funds, and flow models with which to test the reaction of subscribers¹⁷ to variations in the performance of funds. Given the issue considered in this article, we have adopted the first method.

Originally based on CAPM type models, the analysis of the financial performance of mutual funds was gradually extended to Fama-French-Carhart [1997] type multi-factor models on account of the many biases existing in an econometric analysis that does not take account of the investment strategies of fund managers. In conformity with existing work on ethical finance, we have thus estimated the following relation for the shared revenue portfolio, the 90/10 fund portfolio and the reference SRI portfolio:

$$R_i = \alpha_i + \beta_{1,i}R_i^* + \beta_{2,i}SMB + \beta_{3,i}HML + \beta_{4,i}UMD + \varepsilon_i \quad \varepsilon_i \sim (0, h_i^2)$$

¹⁶ To our knowledge, no French index for ethical values is currently available.

¹⁷ In terms of variations in the mutual fund's net assets.

where R_i , defined by $R_i = (r_i - r_f)$ represents the excess return of the considered portfolio (r_i) in relation to the risk-free rate (r_f). R_i^* , represents the excess return of the market portfolio (r_i^*) in relation to the risk-free rate (r_f). The SMB factor (“small minus big”) captures the bias linked to the excess returns of small companies in relation to large companies, while the HML factor (“High minus Low”) helps account for excess return from growth companies over mature companies. Lastly, the UMD factor (“Up minus Down) aims to account for momentum strategies. As opposed to empirical studies of the performance of SRI funds that suppose the normality of residuals, we have considered the hypothesis of conditional heteroscedasticity of residuals, traditionally adopted in the analysis of financial time series.¹⁸ Thus, to take account of this property, we have introduced EGARCH(1,1) type modelling such as:

$$e_{i,t} | I_{t-1} \sim N(0, h_t)$$

$$\text{avec } h_t = a_0 + a_1 \left| \frac{e_{i,t-1}}{\sqrt{h_{i,t-1}}} \right| + b_1 \log(h_{i,t-1}) + c_1 \frac{e_{i,t-1}}{\sqrt{h_{i,t-1}}}$$

In the following section, we have implemented this modelling considering that r_i is the return from the solidarity fund portfolio and r_i^* the return from the MSCO France or ASPI Eurozone portfolio, and have thus measured the relative performance (in terms of alphas) of solidarity funds.

V. Results and Interpretations

We have addressed the analysis of time series by studying their stationary value. To do this we have adopted the ADF and DF-GLS tests. In each case, the optimal number of lags is ascertained along the Akaike information criterion. Table 3 evidences the fact that series

¹⁸ We will test the validity of such an assumption in the next section.

under study are all stationary level-wise in a model with an intercept with no deterministic trend.

Table 3: Unit root tests (with intercept but with no deterministic trend)

Variables	ADF	DF-GLS
Ret. Sh-Rev. Conv. Port.	-22.28***	-22.23***
Ret. 90/10 Conv. Port.	-22.08***	-22.01***
Ret. 90/10 Port.	-6.08***	-6.06***
Ret. Sh. Rev. Port.	-25.47***	-25.48***
Ret. MSCI	-26.31***	-25.81***
Ret. ASPI	-25.29***	-25.21***
HML	-8.04***	-2.80***
SMB	-11.58***	-2.38**
UMD	-4.19***	-2.84***

Note: ***, **, * denote respectively a rejection of the null hypothesis at risk levels of 1%, 5% and 10%. Ret. 90/10 Port. is return from 90/10 portfolio, Ret. Sh. Rev. Port. is return from the shared-revenue fund portfolio. Ret. Sh. Rev. Conv. Port. is return from the conventional portfolio associated with shared revenue funds. Ret. 90/10 Conv. Port. is return from the conventional portfolio founded using size and date characteristics of 90/10 solidarity funds. Ret. MSCI and ret. ASPI are returns from the reference portfolios. Finally, HML, SMB and UMD are the three variables calculated using the work of Fama & French (1993) & Carhart (1997). Note that the returns considered in this study are gross returns where the distribution of dividends is not considered.

A study of the statistical properties of portfolio gross returns highlights the absence of any normality of return series with regards SK and EK values and the Jarque-Bera test (table 4).

Table 4: descriptive statistics of gross returns

Portfolio	Number of funds	Av.	S.D.	SK	EK	JB stat	Max	Min	Qstat(5)	ARCH(5)
90/10 Funds	4	-0.0411	1.813	-0.18	10.3	1459.60*	12.03	-9.42	6.82	23.50*
Conventional funds (90/10)	12	0.00302	2.226	-0.2	5.49	138.88*	10.61	-9.63	2.82	17.90*
Shared revenue funds	5	-0.0008	0.472	-0.53	5.8	245.56*	2.26	-2.3	2.31	8.71*
Conventional funds (shared revenue)	15	0.00177	2.166	-0.23	5.54	145.25*	10.66	-10.1	2.74	15.10*

Note: SK is the skewness coefficient. EK is the Kurtosis excess. JB stat is the Jarque-Bera statistic. Max is the highest return. Min is the lowest return. Qstat(5) is the Ljung-Box statistic, calculated with 5 lags. ARCH(5) is an ARCH test conducted with 5 lags, on the residuals of an autoregressive model of gross returns (AR(5)). * Denotes rejection of the null hypothesis at a risk level of 5%.

The Ljung-Box statistics (Qstat(5)) suggest no autocorrelation in returns while the ARCH test evidences conditional heteroscedasticity, justifying our econometric model.

To choose the most appropriate type of GARCH model, we have tested for asymmetry in conditional volatility. More precisely, we have applied the so-called Engle-Ng tests (1993) to reveal any bias in sign or size. Sign bias denotes that a negative shock (or news) will not have the same impact on conditional volatility as a positive shock. Size bias means that the extent of shocks may differ depending on whether positive or negative. These tests applied to our portfolios reveal a size bias and thus justify the use of an EGARCH(1,1) model, where the volatility of residuals is asymmetrical.

In table 5, we have studied for each solidarity, shared revenue or 90/10 portfolio the excess return related to the risk-free rate compared with the excess return from the two reference portfolios (benchmarks), i.e. one composed of MSCI France index shares and the other whose shares form the ASPI Eurozone index. In the same way as with solidarity portfolios, we have considered for each solidarity portfolio and each benchmark the excess return from the conventional portfolio. Lastly, we have analysed under the heading “difference” portfolio the performance of the solidarity portfolio corrected with the conventional portfolio performance, in relation to excess returns from the reference portfolios at the risk-free rate.

Table 5: the relative performance of solidarity funds

Type of portfolio	Benchmark	A	β_1	β_2 (HML)	β_3 (SMB)	β_4 (UMD)	
Shared revenue	MSCI France	-3.65E-04	0.16***	0.02	0.02	-0.01	
		(-0.01)	(27.14)	(1.34)	(1.17)	(-1.61)	
		0.05	0.76***	0.01	-0.04	-0.01	
Conventional		(0.60)	(53.80)	(0.38)	(-0.88)	(-0.55)	
		Difference	-0.07	-0.58***	0.00	0.02	0.00
		(-1.20)	(-45.58)	(0.15)	(0.60)	(0.33)	
Shared revenue	ASPI Eurozone	-0.01	0.16***	0.01	0.01	-0.01	
		(-0.14)	(27.39)	(1.15)	(0.79)	(-1.24)	
		0.02	0.76***	0.04	-0.06	-0.01	
Conventional		(0.18)	(53.20)	(1.22)	(-1.29)	(-0.28)	
		Difference	-0.05	-0.57***	-0.03	0.04	0.00
		(-0.65)	(-42.95)	(-1.40)	(0.84)	(0.08)	
90/10	MSCI_France	-0.17	0.51***	0.03	-0.04	0.02	
		(-1.24)	(22.95)	(0.69)	(-0.63)	(0.78)	
		Conventional	-0.02	0.77***	0.01	-0.04	0.01
Difference		(-0.24)	(43.63)	(0.22)	(-0.67)	(0.34)	
		Difference	-0.20***	-0.20***	0.07*	-0.11***	0.03***
		(-2.88)	(-13.56)	(1.89)	(-2.66)	(2.34)	
90/10	ASPI Eurozone	-0.24*	0.53***	-0.01	0.01	0.03	
		(-1.72)	(24.00)	(-0.27)	(0.15)	(1.18)	
		Conventional	-0.01	0.76***	0.04	-0.09*	0.00
Difference		(-0.15)	(39.07)	(1.20)	(-1.88)	(0.05)	
		Difference	-0.22***	-0.18***	0.09***	-0.10***	0.03***
		(-3.92)	(-11.90)	(2.99)	(-2.95)	(3.11)	

Note: ***, **, * denote respectively rejection of the null hypothesis at risk levels of 1%, 5% and 10%.

The results show that the performance of solidarity funds is not significantly different to the performance of the MSCI market portfolio. Whether with the shared revenue portfolio or the 90/10 portfolio, the alphas are not significantly different to zero. As a result, solidarity funds do not under-perform with regards a portfolio of French stock. Our results also show that conventional socially responsible investment funds yield performance that is equivalent to that of solidarity funds. This observation is given added weight by the “difference” portfolio for shared revenue funds: the value taken by α , not significantly different to zero, suggests excess return from the shared revenue fund portfolio in relation to the corresponding SRI portfolio, comparable to the excess return from the MSCI portfolio in relation to the risk-free rate. By contrast, the “difference” portfolio associated with 90/10 funds seems to perform less well than the excess return from the MSCI portfolio.

There are likely to be two explanations for this result. Firstly, we can highlight the fact that the degree of solidarity is directly proportional to performance for shared revenue funds, whereas this holds little sway with 90/10 funds. Indeed, the solidarity objective is relatively independent from fund performance inasmuch as 10% is immediately invested with companies recognized as solidarity concerns or similar thereto; in the case of C shares, where dividends are capitalized, it is dependent upon fund performance inasmuch as a portion of returns obtained is reinvested in solidarity companies. By contrast, shared revenue funds need to produce the highest performance in order to optimize solidarity because only a part of dividends (and possibly a fraction of administrative costs) is paid to solidarity institutions: to be attractive to savers whose aim is to invest in solidarity schemes, these funds must produce the highest possible performances. A second explanation lies with the weaker performance of the “solidarity” component of 90/10 funds compared with the “traditional” component. To the extent that “solidarity” companies are not intended to produce high returns on capital, return from the assets associated with these companies may, on average, be lower than that prevailing in traditional business companies, most notably in cases of cooperative type solidarity companies in which remuneration from the capital share is by nature lower than that from the labour share.

Compared with the relative performances of the ASPI Eurozone portfolio, our findings highlight the fact that shared revenue funds provide more or less equivalent returns. By contrast, the 90/10 fund portfolio performs less well than the ASPI Eurozone portfolio at the threshold of 10%. This result is confirmed by the value of the coefficient with the associated “difference” portfolio. Risk analysis clearly evidences the fact that the latter is lower with solidarity portfolios than with market portfolios. In every case, the β_1 coefficient is below 1. Furthermore, the HML, SMB and UMD factors emerge as being of little significance except when studying the “difference” portfolio associated with the 90/10 portfolio.

On the whole, our results show that the performance of solidarity funds is sensitive to the type of fund under consideration: shared revenue funds produce relatively identical performance to that seen with traditional and SRI funds, while 90/10 funds appear to record relative performances that are slightly lower.

VI. Conclusion

In an original way this article casts light on a little-known aspect of intermediated finance: in measuring the performance of French-law share- and diversified-type UCITS with a solidarity function, we have shown that solidarity and financial performance are not necessarily antithetical. While solidarity UCITS offer financial performance that is lower than market indices, there is no econometric evidence of these solidarity funds underperforming, particularly with shared revenue funds, compared with traditional ethical funds. While the holders of shared revenue fund titles accept a lower rate of return individually, the managers of these funds can hope for the same performance objectives as conventional fund managers. In a context of relative suspicion linked to the ongoing financial crisis, these investment products, combining financial performance, solidarity mechanisms and, in the case of 90/10 funds, respect for social and environmental criteria, could be a lever in any bid to win back savers.

Focusing on share-based and diversified UCITS, this study offers only a part-vision of the solidarity fund market. It would be useful to extend our analysis to monetary- and bond-type solidarity funds with modelling along the lines of Ferson and Schadt (1996) in order to reach a global conclusion over the link that exists between solidarity and return. Furthermore it would be of interest to draw up an internationally-scaled comparison of the performance of solidarity funds, but the regulatory specifics of this type of UCITS make such an analysis difficult to implement. Lastly, we feel it would be relevant to extend the study by Benson & Humphrey (2008) in order to get a clearer understanding of the link between flows (measured

by the variation in sums outstanding) and solidarity UCITS and their returns. We could then consider measuring the sensitivity of subscribers holding shares in solidarity funds to variations in the remuneration of their investments.

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