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Price reaction, volatility timing and funds' performance during Covid-19



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ABSTRACT

In this paper we assess the price reaction, performance and volatility timing of European investment funds during the outbreak of Covid-19. We analyze the time period between January and June 2020 and demonstrate that while most of the investment funds exhibit stressed performance, social entrepreneurship funds endured resilience. This performance remained robust during the various stages of evolution of this contagion. The social funds also demonstrated volatility timing that was absent for most of their counterparts. We attribute the overall stability of these funds to their niche investments in social enterprises that specialize in providing innovative solutions for social issues.

1. Introduction

Pandemics are an unfortunate but unique natural phenomenon that offer a rare opportunity to gauge pricing and reaction dynamics of funds. There are only a few studies that have reflected on the economic and social repercussions of a viral disease. Earliest among such studies include Almond (2006) and Kelly et al. (2011) emphasizing on the threats that viruses impose on the society due to an increased mortality rate and health related costs. These costs however, are strongly correlated with economic activities and can have a significant long term impact on growth. Gong et al. (2020) noted that the flu pandemic (H1N1) prompted financial intermediation inefficiency with an increase in loan spreads.

Given the widespread impact of Covid-19, this unfortunate outbreak has become akin to an economic crisis (Sharif et al., 2020). A natural recourse for investments during market instability are treasury securities (Baele et al., 2019). However, Covid-19's pressure on public finances has also resulted in a decline in yields on treasury instruments. The ripple effect of this can also be seen in commodities as well as crypto currencies (Corbet et al., 2020).

Investment funds that are actively managed are expected to perform better than individual securities or market indices especially in declining markets (Chevalier & Ellison, 1999). Given that NAVs are more dynamic in nature as they represent an actively managed portfolio that can be rebalanced, a variation in fund returns is likely to echo the impact of a global shock (like Covid-19) better than raw equity prices (or returns). This has been documented by Bubeck et al. (2018) who suggested that returns on portfolios and funds with active management reflect the influence of monetary shocks more than individual stocks or passive indices. Similar findings have been reported by Wang and Young (2020) for non-monetary adverse events. Furthermore, as these funds differ in their

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Table 1
Sample of Investment Funds (Category wise).

Fund Type	Sub Category	No of Funds
Capital Market	Equities	52
	Debt	41
Money Market	Treasury	25
	Corporates	41
Alternative Investments	Private Equity	20
	Real Estate	24
	Venture Capital	20
	Social Entrepreneurship	23
	Infrastructure	20
Total		266

investment composition, assessing funds' returns could also help shed light on the impact of a pandemic across various investment categories (Naqvi et al., 2018).

The motivation for this study stems from a number of factors. Firstly, the spread of Covid-19 in Europe has been very astounding. What started with a lax response in terms of health care and general awareness quickly spiraled into an exponential growth in cases. This resulted in a shift in the epicenter of the pandemic from China to Europe. Consequently, the European Union (EU) was forced to take very stringent and unprecedented measures in an attempt to curb the spread of the virus. Therefore, it is interesting to study how the evolution of the information and response conundrum of this disease impacted the funds across Europe.

The second motivation behind this study was to evaluate the impact of Covid-19 across a wide categories of funds that are available in Europe. The most notable of these are Social Entrepreneurship funds which were introduced not long ago. These funds usually invest in social enterprises that are nonprofit and operate for social missions. This makes it interesting to explore the response of these funds to the outbreak. Lastly, as the pandemic resulted in extreme market turbulence, it provides a logical case to test for volatility timing. The rest of the paper is organized as follows. Section II illustrates Data and Methodology, Results are presented in Section III while Section IV concludes.

2. Data and methodology

For this research, we classify mutual funds into three categories, namely, capital market funds, money market funds and alternative investment funds. We consider funds that were created prior to January 2019 and have daily Net Asset Value data available until June 2nd, 2020. Table 1 represents our sample distribution across different funds categories.

2.1. Timeline of events

The disease was formally reported to World Health Organization (WHO) on December 31st. On January 8th, the first infection outside China was confirmed and the first casualty was recorded on January 11th. In the beginning of March, a sharp surge in confirmed cases was witnessed in Europe and it was declared as the new epicenter of this disease. We segregate the evolution of this epidemic into four different time periods that we mark as stage 1, 2, 3 and 4. Table 2 presents our timeline for each stage along with the relevant news and information pertaining to each event.

Table 2
Timeline of events.

Stage	Event	Date	News Information
Stage 1	A	Dec 31/Jan 1	Flu reported to WHO, Wuhan Market identified as source
	B	January 11	First coronavirus death reported
	C	January 26	US, France to evacuate nationals from Wuhan; WHO changes risk to 'high'.
Stage 2	D	January 31	WHO declares global emergency
	E	Feb 11	WHO gives name to new coronavirus disease
	F	Feb 15	France reports first covid-19 death
Stage 3	G	Feb 23	Italy records cases surge
	H	March 3	WHO states Covid-19 mortality rate increased to 3.4%
	I	March 11	Death toll in Italy increases by 36%, WHO declares the outbreak to be pandemic, US Restricts travel from Europe
	J	March 14	Europe now epicenter of outbreak, says WHO
	K	March 17	EU suspends all non-European travels
Stage 4	L	March 29	More than 100,000 cases in Netherlands
	M	April 14th	The lock down is extended in France
	N	May 11	France Lifts lockdown
	O	May 19	EU adopts temporary scheme to support workers
	P	May 20	Ministers discuss recovery measures for EU tourism sector
	Q	June 2nd	France adopts Phase 2 of easing lockdown

Table 3
Results of ARCH LM Test.

Fund Type	Sub Category	No of Funds	Estimate	Test Statistic	Distribution	Prob.
Capital Market	Equities	52	F-statistic	8.474901***	Prob. F(1249)	0.0001
	Debt	41	Obs*R-squared	8.400141***	Prob. Chi-Square(1)	0.0001
			F-statistic	5.583193**	Prob. F(1249)	0.0189
Money Market	Treasury	25	Obs*R-squared	5.504611**	Prob. Chi-Square(1)	0.0190
	Corporates	41	F-statistic	5.27596**	Prob. F(1249)	0.0195
			Obs*R-squared	5.18427**	Prob. Chi-Square(1)	0.0199
Alternative Investments	Private Equity	20	F-statistic	6.28364**	Prob. F(1249)	0.0112
			Obs*R-squared	6.24887**	Prob. Chi-Square(1)	0.0115
			F-statistic	7.706211***	Prob. F(1249)	0.0027
	Real Estate	24	Obs*R-squared	7.64542***	Prob. Chi-Square(1)	0.0029
			F-statistic	10.55721***	Prob. F(1249)	0.0005
			Obs*R-squared	10.13469***	Prob. Chi-Square(1)	0.0006
	Venture Capital	20	F-statistic	8.6231***	Prob. F(1249)	0.0003
			Obs*R-squared	8.4925***	Prob. Chi-Square(1)	0.0004
			F-statistic	6.605913**	Prob. F(1249)	0.0107
Infrastructure	20	Obs*R-squared	6.486877**	Prob. Chi-Square(1)	0.0109	
		F-statistic	11.79439***	Prob. F(1249)	0.0007	
		Obs*R-squared	11.35144***	Prob. Chi-Square(1)	0.0008	

*** represents significance at 99%, ** at 95% and * at 90%.

2.2. Covid-19 and funds' price reaction

We use an event study approach to evaluate the price reaction for each fund. To account for possible volatility clustering, we employ a GARCH based event study as proposed by Balaban and Constantinou (2006) and Goddard et al. (2012). In order to confirm for ARCH effects, we employ ARCH LM test of Engle (1982). The results reported in Table 3 confirm the presence of ARCH effects on funds data between June 2019 and June 2020, hence the decision to choose GARCH (1,1) over ARCH (N) is straightforward as the former is not only more parsimonious but also less likely to breach the non-negativity constraints (Hansen and Lunde, 2005; Rizvi and Naqvi, 2008; Rizvi et al., 2014).

The results indicate a strong presence of ARCH effects in all sub-categories of funds and provide strong justification to assume conditionality of variance on lagged residual terms. This is most often accompanied by a volatility clustering phenomenon also known as GARCH effect. Therefore, by looking at the results and data properties, GARCH (1,1) is more efficient to estimate conditional variance of returns, hence justifying the choice of model in Eqs. (1) and (2). Since excess returns can directly be dependent upon the additional risk exposure of volatility clustering, we decided to modify our returns equation by adopting a GARCH-in-Mean approach following the same stance initially taken by Bollerslev et al. (1988), Engle (1982) and further followed and endorsed by Anyfantaki and Demos (2016), Dias (2017), Ng (1991) and others. Our GARCH-in-mean (1,1) model for CAPM based returns and variance specifications are as follows

$$R_{it} = \alpha_i + \beta_i(R_{mt} - R_{ft}) + \tau_i D_{it} + \varphi_i h_{it} + e_{it} \text{ with } e_{it} \sim t_n(0, h_i) \tag{1}$$

$$h_{it} = c_i + a_i e_{it-1}^2 + b_i h_{it-1} + \delta_i D_{it} \tag{2}$$

Where R_{it} is the logarithmic return based on intraday Net Asset Value (NAV) for each fund, R_{mt} is the daily market return on S&P Europe 350, R_{ft} represents Euro area 5-year government benchmark bond yield, D_{it} is the dummy with $t = 1$, if t is in the event window, h_{it} reflects the conditional variance of Fund i on day t , while e_{it} is random error. The estimated parameters are represented by $\alpha_b, \beta_b, \phi_b, c_b, a_b, b_i$ and δ_i (errors in variables).

The coefficient τ_i reflects the cumulative abnormal returns (CARs) for each fund. We estimate these for each of the four stages as well as every individual event. We use an estimation window of one year starting from 1st January 2019. The event windows for stage 1, 2, 3 and 4 correspond to the total days defined for each stage, while for specific events the CARs are estimated for $[0, +1]$. Once individual CARs are estimated, we calculate value weighted averages across each category.

2.3. Funds' performance during epidemic

To assess the comparative performance, we analyze the complete period and then each of the four stages separately. We use adjusted Sharpe ratio (\mathfrak{R}) as proposed by Pezier and White (2006). The adjusted Sharpe ratio is calculated as

$$\mathfrak{R}_i = SR_i \left(1 + \frac{\Gamma_k}{6} \times SR_i - \left(\frac{\kappa_r - 3}{24} \right) \right) \times SR_i^2 \tag{3}$$

where SR_i represent Sharpe ratio for each fund, Γ_k is skewness and κ_r is kurtosis.

The second metric we use is return to Value at Risk (VaR) ratio as advocated by Assaf (2015), Iglesias (2015) and Su (2015). Reddy et al. (2017) documented that VaR based performance evaluation methods are more appropriate to study returns based on

NAVs. Once the ratio for each fund is calculated, we estimate value weighted averages for each category. In order to establish that our results are specific to the Covid-19 outbreak, we also report these measures for six months from June to November 2019 (pre Covid-19).

2.4. Covid-19 and volatility timing

For a robust investment strategy, the fund managers time the volatility and adjust their exposures accordingly (Hsu and Chen, 2017). Moreira and Muir (2019) noted that ignoring volatility timing leads to a reduction in funds' value. We employ (Busse, 1999) framework as adopted by Shen et al. (2019) to analyze the volatility timing of our sample funds during this period of extreme volatility. Consistent with our GARCH specification, the functional form of our volatility timing assessment will be as follows

$$R_{it} = \alpha_i + \beta_i R_{xt} + \gamma_{im}(\sigma_{mt} - \bar{\sigma}_m)R_{xt} + \varepsilon_{it}, \text{ with } R_{xt} = R_{mt} - R_{ft} \tag{4}$$

$$R_{xt} = \phi_0 + \sum_{p=1}^n \phi_p R_{x,t-p} + \varepsilon_t - \sum_{p=1}^q \psi_p \varepsilon_{t-p}$$

and

$$\sigma_{mt}^2 = a_0 + \sum_{p=1}^m a_p \varepsilon_{m,t-p}^2 + \sum_{j=1}^s b_j \sigma_{m,t-j}^2$$

If funds managers exhibit volatility timing in their strategy, the coefficient γ_{im} will be negative. To be consistent with performance analysis, we assess the volatility timing for the complete period as well as for the four stages.

3. Results and discussion

Table 4 presents the price reaction of funds during the four stages of Covid-19. The capital market funds have negative CARs that deteriorate as the pandemic evolved. A similar pattern is observed for money market funds with a regression in CARs with an exception of treasury funds where we observe positive CARs for stage 1. As the impact of Covid-19 deepened, the governments announced intervention plans aimed at absorbing fiscal and economic pressures. These dynamics could possibly explain the negative CARs for treasury funds during stage 2 and 3. However, as the curve flattened we see a marginal improvement across all funds in stage 4.

In stage 2 and 3, the estimated CARs for most alternative investment funds were negative with the exception of social entrepreneurship funds. This is interesting because these funds usually invest in socially oriented businesses that are mostly nonprofit and therefore deemed unattractive. However, it seems that during the Covid-19 break out, investors are placing additional value in the social concept of providing the needy with reasonable health care, access to food, hygiene products, etc. Therefore, as the pandemic deepens, we can observe increasing CARs for social entrepreneurship funds.

The results on CARs for the selected events are presented in Table 5. The strongest reaction is observed for March 14 (Event J, Stage 3) when Europe was declared as the new epicenter of the disease. We also observe very high negative CARs on February 23 (Event G, Stage 2) when Italy reported an exponential surge in mortality due to Covid-19. The only exception to negative CARs has been the social entrepreneurship funds where we observe a consistent positive reaction across all events. This reiterates the fact that as more and more uncertainty is sinking in, investors are putting more confidence in social missions. The price reaction for various events in stage 4 represent optimism with mostly positive CARs across all funds. However, social entrepreneurship funds continue to dominate their counterparts in other categories.

The results for risk adjusted performance are reported in Table 6. Panel A presents the performance for the full period. Apart from social entrepreneurship funds, all other funds have a negative adjusted Sharpe and return to VaR ratios. The social entrepreneurship

Table 4
Price reaction of funds during each of the four stages of outbreak.

Fund Type	Sub Category	Average Cumulative Abnormal Returns using GARCH (1, 1) CAPM Specification			
		Stage 1	Stage 2	Stage 3	Stage 4
Capital Market	Equities	-0,99%***	-3,67%***	-8,33%***	1,81%**
	Debt	-0,17%**	-4,86%***	-5,47%***	0,14%**
Money Market	Treasury	0,92%***	-1,13%**	-1,99%***	0,23%**
	Corporates	-0,17%***	-1,40%**	-1,60%**	-1,01%
Alternative Investments	Private Equity	2,30%	-3,27%	-3,05%	1,87%
	Real Estate	0,81%**	-1,40%***	-2,99%***	1,82%
	Venture Capital	5,29%**	-6,13%**	-6,61%	4,17%
	Social Entrepreneurship	1,37%***	4,33%***	6,06%***	6,19%***
	Infrastructure	0,86%**	-2,67%***	-3,07%	-2,17%

*** represents significance at 99%, ** at 95% and * at 90%.

Table 5
Price reaction of funds for individual events.

Panel A: Stage 1		Average Cumulative Abnormal Returns using GARCH (1, 1) CAPM Specification					
Fund Type	Sub Category	Event A	Event B	Event C			
Capital Market	Equities	0,71%**	0,17%**	-2,36%***			
	Debt	1,50%***	-0,22%	-0,95%***			
Money Market	Treasury	0,89%**	-0,33%*	0,82%**			
	Corporates	-0,04%	-0,01%	-0,20%**			
Alternative Investments	Private Equity	1,74%	0,85%*	0,86%*			
	Real Estate	0,19%**	0,56%**	0,47%**			
	Venture Capital	2,90%**	2,45%*	2,58%**			
	Social	0,92%**	0,34%**	0,79%**			
	Entrepreneurship Infrastructure	0,65%**	0,58%**	0,06%*			
Panel B: Stage 2		Average Cumulative Abnormal Returns using GARCH (1, 1) CAPM Specification					
Fund Type	Sub Category	Event D	Event E	Event F	Event G		
Capital Market	Equities	-0,71%**	-0,53%***	-0,45%**	-3,72%***		
	Debt	-1,38%**	-0,23%***	-3,70%***	-2,67%**		
Money Market	Treasury	-0,13%***	-0,50%**	-0,48%	-0,58%***		
	Corporates	-0,06%	-0,39%**	-0,41%***	-1,52%***		
Alternative Investments	Private Equity	-0,83%	-0,27%	-0,31%	-3,42%		
	Real Estate	-0,19%***	-0,18%**	-0,19%***	-1,54%**		
	Venture Capital	-2,51%*	-1,80%**	-1,55%	-3,15%*		
	Social	0,62%***	1,19%***	0,33%**	4,17%***		
	Entrepreneurship Infrastructure	-2,12%*	-0,23%**	0,58%	-2,12%*		
Panel C: Stage 3		Average Cumulative Abnormal Returns using GARCH (1, 1) CAPM Specification					
Fund Type	Sub Category	Event H	Event I	Event J	Event K	Event L	Event M
Capital Market	Equities	-1,03%**	-6,68%***	-13,12%***	-8,12%**	-7,52%**	-12,61%***
	Debt	-0,23%**	-1,47%***	-10,45%***	-7,13%**	-7,23%**	-8,14%**
Money Market	Treasury	-0,90%***	-2,69%**	-1,39%***	-1,27%**	-1,38%***	-1,54%**
	Corporates	-0,60%*	-1,37%**	-1,54%***	-1,30%**	-1,25%**	-1,23%**
Alternative Investments	Private Equity	-0,12%	-1,85%	-5,66%	-5,14%	-3,19%	-3,21%
	Real Estate	-0,55%**	-0,45%***	-6,47%***	-3,18%	-2,07%	-2,11%**
	Venture Capital	-2,30%*	-0,47%**	-13,76%*	-8,12%**	-7,60%	-5,03%**
	Social	3,57%***	3,49%***	8,09%***	6,34%***	5,07%***	5,85%***
	Entrepreneurship Infrastructure	-1,42%**	-2,71%***	-3,54%	-3,09%	-2,84%**	-4,19%**
Panel D: Stage 4		Average Cumulative Abnormal Returns using GARCH (1, 1) CAPM Specification					
Fund Type	Sub Category	Event N	Event O	Event P	Event Q		
Capital Market	Equities	0,15%**	0,04%**	0,28%***	0,16%**		
	Debt	0,08%**	0,04%**	0,35%	0,21%**		
Money Market	Treasury	0,05%**	0,17%**	0,09%**	0,03%**		
	Corporates	-0,11%	-0,01%	-0,19%	-0,21%		
Alternative Investments	Private Equity	0,07%	0,91%	0,55%	0,07%		
	Real Estate	0,62%	0,67%	0,41%	0,18%		
	Venture Capital	0,09%	0,08%	0,61%	0,71%		
	Social	1,21%***	1,09%**	1,03%***	1,01%**		
	Entrepreneurship Infrastructure	-0,66%	-0,86%**	-0,89%	-0,73%		

*** represents significance at 99%, ** at 95% and * at 90%.

funds are an exception with a consistent overall performance as well as for each stage. It is worth noting that during the pre Covid-19 period, all funds had positive risk adjusted performance and many of them performed better than social funds. The resilience of the later only became obvious during the stress imposed by the pandemic. The results metrics for each stage are reported in Panel B, C, D and E.

For stages 2, 3 and 4 social entrepreneurship funds continued to outperform all other funds for both metrics. These findings are interesting especially from the perspective of social entrepreneurship funds. Given the composition of these funds, the returns are a blend of social benefits and financial performance. Woolley et al. (2013) posits that social enterprises try to optimize the mix of social and financial benefits through strategic and managerial capabilities. These enterprises also find it difficult to raise capital due to lesser liquidity, constrained return on capital or inadequate capital (Doherty et al. 2014, Vickers et al. 2017). We believe that, at least in part, the positive price reaction and performance of social entrepreneurship funds during the Covid-19 pandemic should be

Table 6
Performance evaluation of funds.

Panel A:		Covid-19 Period (Jan - June 2020)		Pre Covid-19 Period (June - Nov 2019)	
		Adjusted Sharpe Ratio	Return to VaR	Adjusted Sharpe Ratio	Return to VaR
Capital Market	Equities	-0,081**	-0,070***	0,117***	0,098***
	Debt	-0,103**	-0,081**	0,074**	0,065**
Money Market	Treasury	-0,106***	-0,052**	0,050***	0,045**
	Corporates	-0,089**	-0,073**	0,082**	0,078**
Alternative Investments	Private Equity	-0,096**	-0,081**	0,061*	0,048*
	Real Estate	-0,059***	-0,034**	0,066**	0,064*
	Venture Capital	-0,008	-0,033	0,098**	0,096**
	Social Entrepreneurship	0,129***	0,118***	0,064***	0,060***
	Infrastructure	-0,009**	-0,006**	0,053*	0,046*
Panel B: Stage 1					
		Adjusted Sharpe Ratio	Return to VaR		
Capital Market	Equities	0,114***	0,111***		
	Debt	0,085**	0,020***		
Money Market	Treasury	0,072**	0,008**		
	Corporates	-0,015	-0,010		
Alternative Investments	Private Equity	0,131**	0,059		
	Real Estate	0,151***	0,120***		
	Venture Capital	0,115	0,013		
	Social Entrepreneurship	0,159***	0,158***		
	Infrastructure	0,112	0,095**		
Panel C: Stage 2					
		Adjusted Sharpe Ratio	Return to VaR		
Capital Market	Equities	-0,032**	-0,015***		
	Debt	-0,065**	-0,015**		
Money Market	Treasury	-0,032**	-0,020**		
	Corporates	0,012	0,006		
Alternative Investments	Private Equity	-0,005**	0,000***		
	Real Estate	-0,136**	-0,010**		
	Venture Capital	-0,107	-0,077		
	Social Entrepreneurship	0,146***	0,117***		
	Infrastructure	-0,036	-0,025		
Panel D: Stage 3					
		Adjusted Sharpe Ratio	Return to VaR		
Capital Market	Equities	-0,047***	-0,013***		
	Debt	-0,080**	-0,062**		
Money Market	Treasury	-0,052**	-0,023**		
	Corporates	0,018	0,014		
Alternative Investments	Private Equity	-0,005**	0,000**		
	Real Estate	-0,146**	-0,131**		
	Venture Capital	-0,184	-0,171		
	Social Entrepreneurship	0,079***	0,072***		
	Infrastructure	-0,061*	-0,020		
Panel E Stage 4					
		Adjusted Sharpe Ratio	Return to VaR		
Capital Market	Equities	0,124**	0,097**		
	Debt	0,060**	0,021**		
Money Market	Treasury	0,070**	0,051**		
	Corporates	-0,015	-0,011		
Alternative Investments	Private Equity	0,097*	0,073*		
	Real Estate	0,079	0,071		
	Venture Capital	0,099	0,015		
	Social Entrepreneurship	0,147***	0,121***		
	Infrastructure	0,050*	0,074*		

*** represents significance at 99%, ** at 95% and * at 90%.

attributed to the fact that such investment opportunities help boost innovative solutions to social issues. The need for these innovations have never been greater to support the recovery in terms of social and economic issues amid Covid-19 outbreak. Whether it is poverty, inequality, education, employment, affordable energy or climate, social investments are likely to have a central role in the post pandemic period. This relevance is reflected in the value of the social funds.

The results on volatility timing are presented in Table 7. The coefficient has been negative for social funds during the complete period as well as for the four stages. This signifies that through this period of high turbulence, these funds were able to time the volatility. This is plausible as given the niche investment, these funds can easily modify their market exposure compared to other capital, money market and alternative investment funds. This further validates the robust dominance of social entrepreneurship funds. The treasury funds are the only other category that shows consistent volatility timing during Covid-19 outbreak.

Table 7
Volatility Timing during the outbreak.

		γ_{im} Full Period	γ_{im} Stage 1	γ_{im} Stage 2	γ_{im} Stage 3	γ_{im} Stage 4
Capital Market	Equities	0,0799*	-0,0213**	0,0302*	0,0936*	0,0802
	Debt	0,0190	0,0382	0,0865	0,2501	0,1257
Money Market	Treasury	-0,0499**	-0,0205**	0,0569*	-0,0819**	-0,0709***
	Corporates	0,3984	0,0371	0,0575	0,0418	0,0306
Alternative Investments	Private Equity	0,0508*	0,0705*	0,0647*	0,07,953*	0,0597*
	Real Estate	0,0131**	0,0950**	0,2695	0,0799**	0,0167
	Venture Capital	0,0585	0,0681	0,0428	0,05,764	0,0407
	Social Entrepreneurship	-0,0315***	-0,0912**	-0,0219***	-0,03,675***	-0,0218***
	Infrastructure	0,1022*	0,1687	0,0857	0,2901	0,186

*** represents significance at 99%, ** at 95% and * at 90%.

4. Conclusion

Over the last six months, the global economies have faced a series of exceptional circumstances. With the emergence of a novel coronavirus that has taken the world by a storm, the economies and governments have had to face a landslide of challenges demanding immediate action. This combined crunch in the enterprise, health and fiscal sector has resulted in investors facing unique challenges.

This study was aimed at evaluating the impact of Covid-19 on different types of actively managed funds in Europe. Given the staggered global response in terms of severity of procedures, with periods of mass speculation preceding an actual government response, we sought to trace how the evolution of information dissemination of this disease impacted the funds across Europe. Our findings indicate that social entrepreneurship funds outperformed their counterparts during the outbreak. The results remained robust for volatility timing with evidence of this phenomenon for social funds. The treasury funds were positive during the first stage but as the epidemic escalated, the CARs became negative. Additionally, we believe this transition in treasury fund performance has resulted in even higher CARs for social funds in the later stages.

Pandemics have been very rare and therefore this study provides a unique evidence on what impact a global infection can have on investment funds. Our findings highlight the importance of previously overlooked investment alternatives that can provide a safe haven for investors during times of immense global and financial stress. We conclude that social entrepreneurial funds have emerged as a viable contender in investment portfolios especially during periods of high volatility.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:[10.1016/j.frl.2020.101657](https://doi.org/10.1016/j.frl.2020.101657).

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