

Examining the Effect of Gender Leadership and Workforce Equality on Thematic Mutual Funds Financial Performance

Carmen-Pilar Martí-Ballester

Business Department, Universitat Autònoma de Barcelona, Cerdanyola del Vallès, Spain

CarmenPilar.Marti@gmail.com

Abstract: This study examines the relationship between gender equality scores for leadership and workforce dimension and financial performance of 554 US thematic mutual funds and 2,140 US conventional mutual funds investing globally or in the United States stock markets from January 2015 to May 2021. To this end, we implement the new Fama and French six-factor model and the Student's t-parametric tests for the independent samples. Our results indicate that, in general, gender equality for leadership and workforce does not affect the financial performance of mutual funds focused on one sector related to sustainable development goals that invest in the United States market. However, we find that infrastructure mutual funds with higher levels of gender leadership and workforce equality that invest in the global market perform better than their counterparts with lower levels of gender equality. On the contrary, healthcare, water, information technology and gold and precious metals mutual funds with higher levels of gender equality for leadership and workforce dimension that invest in the global market underperform their counterparts with lower levels of gender leadership and workforce equality. Similarly, we find a negative relationship between gender equality level for leadership and workforce dimension and the financial performance of mutual funds diversified across sectors such as conventional and ethical mutual funds investing globally or in the United States market.

Keywords: thematic mutual funds, financial performance, sustainable development goals, gender equality

1. Introduction

Achieving gender equality and women's empowerment across all sectors related to United Nations Sustainable Development Goals favours an economic growth respectful with the environment (UN Women, 2021; Martí-Ballester, 2020a). This is a leading priority for some investors who demand financial products which promote gender equality and advance the socioeconomic standing of women and girls. Mutual funds could satisfy the preferences of these investors pressing firms in which they invest to adopt gender equality policies if mutual fund managers are able to fulfil their fiduciary duties with prudence.

Previous literature has examined the financial performance of mutual funds focused on one specific sector related to sustainable development goals such as energy (Ibikunle and Steffen, 2017; Reboredo et al., 2017; Martí-Ballester, 2019a, 2019b; Naqvi et al., 2021), water (Álvarez and Rodríguez, 2015; Ibikunle and Martí-Ballester, 2020), healthcare (Martí-Ballester, 2020b), green (Climent and Soriano, 2011; Silva and Cortez, 2016) or social (Ielasi et al., 2019; Lesser et al., 2016; Badia et al., 2021), reaching different findings, indicating that thematic mutual fund financial performance could be led by sector in which mutual funds invest (Martí-Ballester, 2021; Jin and Han, 2018). However, the effect that gender equality level achieved by firms in which mutual funds invest has on the financial performance of their portfolios has received little attention despite the importance of ending all discrimination against women and girls have to economic growth and sustainable development.

Specifically, Chapple and Humphrey (2014) compare the financial performance of portfolios integrated by Australian firms with gender-diverse boards to that of portfolios composed of firms without gender diversity on boards, and find a positive correlation between diversity and performance of portfolios investing only in basic materials or consumer goods industries but no evidence of this relationship for portfolios investing in other industries. Extending this research line, this study examines the relationship between gender leadership and workforce equality and fund financial performance by sector related to one sustainable development goal for the United States market.

2. Literature review and hypothesis development

The board of directors plays an important role in corporate governance process. They are responsible for supervising firm management to safeguard the interests of shareholders, provide advice and counsel to managers, monitor legal compliance and link corporations to the external environment. The fulfilment of these duties could be influenced by the participation of women on the corporate board, allowing firms to enhance their organizational efficiency, legitimacy and reputation, and consequently, to improve their financial performance according to several theoretical arguments (Fama and Jensen, 1983; Carter et al., 2010; Provasi

and Harasheh, 2021). According to agency theory, board gender diversity allows firms to align the interest of managers and shareholders because women provide new perspectives on strategy formulation and problem solving, are less tolerant of management opportunistic behaviour that increases board independence, helps correct informational biases and enhances firm legitimacy. This would lessen the costs related to agency problems improving the corporate financial performance (Fama and Jensen, 1983; Reguera-Alvarado et al., 2017).

Complementing this argument, the resource dependence theory assumes gender diversity on the director boards, and top management teams provides a strategic intangible resource because of the synergy generated by the interaction of women and men directors and managers, both genders differing in the style of leadership and the organizational priorities. Women tend to have a more creative, innovative and transparent strategic vision with business policies that take the interest of stakeholders into account, which allows firms to generate a competitive advantage focused on its relationship with the internal and external environment. In the internal environment, women directors on boards could improve the promotion and career development opportunities of women employees by hiring more women managers with whom there is better communication and mentoring (Matsa and Miller, 2011; Hallden et al., 2018).

In the external environment, women directors on boards maintain good relations with their women customers which increases a firm's ability to penetrate markets with a high proportion of women's final consumers (Brammer et al., 2007; Liu et al., 2014). This suggests that gender diversity on board of directors is higher in consumer-oriented sectors, while women directors are underrepresented in producer-oriented sectors such as resources, engineering or business services sectors (Brammer et al., 2007). Additionally, board gender diversity allows firms to expand its communication channels to other external stakeholders, as well as customers, improving their access to financial resources, human capital, technology, and relevant information, which enhances corporate financial performance (Pfeffer and Salancik, 2003; Assenga et al., 2018; Karavitis et al., 2021). Consistent with this arguments, stakeholder theory assumes that the representation of women on boards and top management teams ensures the incorporation of minority stakeholders' interests into the business management. This together with gender diversity in the workforce could signal to the market that the firm is committed to social responsibility issues which affect its stakeholders, thus improving the firm's image and consequently its corporate financial performance (Reguera-Alvarado et al., 2017; Freeman, 1984).

However, previous empirical evidence examining the relationship between gender diversity on the board, top management teams or workforce and corporate financial performance have produced mixed results (Post and Bryon, 2015). Concretely, Conyon and He (2017), Brahma et al. (2021), Maji and Saha (2021), Francoeur et al. (2008), among others, show a positive effect of gender diversity on firm financial performance while other studies such as Fernández-Temprano and Tejerina-Gaite (2020), Matsa and Miller (2013), Ismail and Manaf (2016), Creary et al. (2019), among others, find that gender diversity on firms does not guarantee economic and organizational effectiveness. These contradictory findings could be due to methodological issues or differences in time periods but could also be attributed to differences in industries and institutional context (Kiliç and Kuzey, 2016).

Mutual funds could benefit from investing in firms with high gender equality score for leadership and workforce dimension belonging to specific industries and/or countries. Given that thematic mutual funds in our sample invest in firms located in global or United States geographical markets belonging to one specific sector related to sustainable development goals, we hypothesize that:

H1a: The effect of gender equality score for leadership and workforce dimension on fund financial performance vary across economic sector.

H1b: The effect of gender equality score for leadership and workforce dimension on fund financial performance vary across geographical markets

3. Research method

In this section, we describe the data collection process of thematic mutual funds related to sustainable development goals, the market benchmarks used, and the methodology to check the hypotheses of this study.

3.1 Sample

The sample includes 2,694 equity mutual funds domiciled in the United States, of which 554 belongs to thematic mutual funds and 2,140 to conventional mutual funds investing globally or in the United States market from January 2015 to May 2021 obtained from the As You Sow database. As You Sow, was founded in 1992 as a non-profit foundation, being its main objective to promote corporate social responsibility (ESG) for achieving a safe, just and sustainable world for all by means of shareholder advocacy, coalition building and innovative legal strategies as described in Neville et al. (2019). The adoption of these strategies involves six connected program areas: climate-safe future, food that is safe to eat, plastic-free oceans, invest your values, a just world for all and slavery-free supply chain.

From As You Sow database we select open-end mutual funds with data for the gender balance in leadership and workforce (GBLW) dimension (whose items are described in Table 1), collecting the mutual fund inception date, and the existence of sustainable mandates and stickers.

Table 1: Gender items description

Gender dimension	Items
Gender balance in leadership and workforce (GBLW)	<ol style="list-style-type: none"> 1. Board directors: percentage of male and female on the board directors. 2. Executives: percentage of male and female on Executives. 3. Senior Management: percentage of male and female on senior managers. 4. Workforce: the percentage of male and female on total employees. 5. Promotion and Career Development Opportunities: ratio of each gender in Senior Management compared to ratio of each gender in the Workforce.

Source: As You Sow (<https://genderequalityfunds.org>)

These data are complemented with financial information obtained from the Thomson Reuters Datastream database. Datastream is a worldwide leading database of financial information for mutual funds that provide historical series of total net assets, total return index, total expenses ratio as well as other supporting and operating data such as asset type, geographical scope, Lipper Global Classification obtained from Refinitiv Lipper for over 30 years. From the Datastream database we obtain the daily total return index in dollars -which assumes that all cash distributions are reinvested- from 1 January 2015 to 3 May 2021, monthly total expenses ratio and total net assets in dollars from January 2015 to May 2021, geographical scope, asset type and Lipper Global Classification, using the sticker code provided by As You Sow.

We then select equity mutual funds diversified across sectors and those focused on one specific sector related to sustainable development goal (SDG) such as gold and precious metals, healthcare, information technology, alternative energy, energy, infrastructure, natural resources, water mutual funds investing globally or in the United States markets. Conventional mutual funds with sustainable mandates are classified as ethical mutual funds. Mutual funds with total return index data of less than 24 months were eliminated (Ibikunle and Martí-Ballester, 2020). Our final sample includes 2,694 equity mutual funds domiciled in the United States, of which 554 are thematic mutual funds and 2,140 are conventional mutual funds investing globally or in the United States market from January 2015 to May 2021, as indicated in Table 2, given that Sustainable Development Goals were set up in 2015 by United Nations.

We also collected the daily total return index of the S&P Global 1200 index, S&P 500 index, S&P 500 Metals and Mining index, S&P Global Natural Resources, Metals and Mining index, S&P 600 energy index, S&P Global 1200 Healthcare index, S&P 500 Healthcare index, S&P Global 1200 Information Technology index, S&P 500 Information Technology index, S&P Global Clean Energy index, S&P Global Infrastructure index, S&P Global Natural Resources index, S&P North America Natural Resources index, S&P Global Water index, S&P 500 ESG index and S&P Global 1200 ESG index from the Datastream database as in Nofsinger and Varma (2014). Information related to the daily one-month treasury bill, size, book-to-market, momentum, operating profitability and investment factors was collected from Kenneth French's website (daily version for global markets and US markets).

Table 2: Summary statistics on thematic mutual funds for the final sample: 2015-2021

Sector	Number of funds	Annual net return	TNA (\$ Millions)	TER (%)	AGE	GBLW
<i>Global</i>						
Healthcare (SDG3)	38	0.09	1,542.34	1.18	27.26	20.08
Water (SDG6)	8	0.10	129.50	1.43	11.59	17.75
Alternative energy (SDG7)	5	0.11	22.37	1.80	14.08	16.80
Information technology (SDG9)	35	0.21	490.78	1.27	21.85	18.74
Infrastructure (SDG9)	35	0.06	68.72	1.32	8.46	20.94
Ethical (SDG12)	53	0.12	70.99	1.15	14.66	20.23
Natural resources (SDG15)	41	-0.01	435.48	1.35	25.97	18.78
Gold and precious metals (SDG15)	23	0.12	199.96	1.13	36.83	15.91
Conventional	340	0.11	951.33	1.13	22.88	20.48
<i>United States</i>						
Healthcare (SDG3)	39	0.11	1,261.85	1.17	20.59	18.74
Energy (SDG7)	30	-0.08	250.10	1.52	9.21	9.43
Information technology (SDG9)	79	0.20	533.28	1.28	25.47	19.04
Ethical (SDG12)	134	0.13	285.49	1.04	20.03	20.93
Gold and precious metals (SDG15)	9	0.09	201.55	1.20	30.02	16.44
Natural resources (SDG15)	25	-0.07	224.46	1.26	26.39	18.32
Conventional	1800	0.12	1,998.39	0.95	28.93	20.50

Source: Datastream, As You Sow

3.2 Methodology

To determine whether gender equality is associated with the financial performance of mutual funds specialized in sectors related to sustainable development goals, we adopt an analysis by levels, grouping mutual funds according to geographical area in which mutual fund investment occurs, economic sector in which mutual fund investment occurs and gender equality score. For the first level, we group the mutual fund sample into two groups depending on the geographical area in which mutual funds invest. This allows us to distinguish between mutual funds investing globally and those investing in the United States markets. Mutual funds in each group are subsequently grouped by the economic sector in which mutual fund invests to obtain the following subgroups: gold and precious metals, healthcare, information technology, alternative energy, energy, infrastructure, natural resources and water subgroups related to sustainable development goals and the conventional subgroup integrated by mutual funds diversified across sectors. Each subgroup comprised a second level.

For each mutual fund in each subgroup we obtain its financial performance using market benchmarks focused on the economic sectors and geographical areas in which mutual fund invests. To assess mutual fund financial performance we adopt the 6-factor model (Fama and French, 2018) as follows:

$$R_{f,t} = D_{sector} D_{geographical} [\alpha_f + \beta_f MK_t + \gamma_f SMB_t + \delta_f HML_t + \theta_f RMW_t + \lambda_f CMA_t + \omega_f MOM_t + \varepsilon_{f,t}] \quad [1]$$

where $R_{f,t}$ represents the excess return over the risk-free rate of portfolio f at time t ; D_{sector} is a dummy variable that takes value of one if the fund belongs to the indicated sector (conventional, gold and precious metals, healthcare, information technology, alternative energy, energy, infrastructure, natural resources, water sectors) and zero otherwise; $D_{geographical}$ is a dummy variable that takes value of one if the fund invest in the indicated market (globally or in United States market) and 0 otherwise; α_f denotes the annualized financial performance measure for fund f in period t ; MK_t is the market excess return at time t which corresponds to a conventional

equity market index focused on global or US market or the corresponding sector index focused on US market or global market; SMB_t , HML_t , RMW_t , CMA_t and MOM_t represents the size, value, profitability, investment and momentum factors, respectively, for global markets or US market; $\varepsilon_{f,t}$ is the error term; β , γ , δ , θ , λ and ω are the factor loadings of the risk factors, respectively. Standard errors were estimated using Newey and West's (1987) method.

Then, funds in each subgroup are sorted according to their gender equality scores whose values oscillates between 0 to 40 points for the gender balance in leadership and workforce dimension. A fund is classified as a high category for the gender equality dimension when its value exceeds the average gender balance in leadership and workforce score for its subgroup; while a fund is classified as a low category for the gender equality dimension when its value is similar or below the average gender equality score for its subgroup. These high and low categories constituted the third level.

The financial performance of each mutual fund subgroup with high gender equality scores is compared with that of its counterpart with low gender equality scores by implementing Student's t-test for the independent samples.

4. Results

4.1 Results for mutual funds investing in global market

The financial performance of mutual funds focused on United Nations' sustainable development goals that invest in global markets is evaluated using the new Fama and French six-factor model (Fama and French, 2018) and grouped according their level of gender equality score. Table 3 presents the descriptive statistics of healthcare, water, alternative energy, information technology, infrastructure, ethical, natural resources, gold and precious metals and conventional mutual funds. As observed the healthcare, water, ethical, natural resources and conventional mutual fund categories have a negative mean risk-adjusted return, while alternative energy, information technology, infrastructure and gold and precious metals mutual fund categories have a positive mean risk-adjusted return. The mutual fund category specialized in the gold and precious metals sector has the largest mean risk-adjusted return (3.03%), with all alphas being similar to the market benchmark, whereas the natural resources sector-related mutual fund category has the lowest (5.19%), with alphas being significantly negative for 4.88% and similar to market benchmark for 95.12 of the natural resources mutual funds in our sample. For the information technology and conventional fund categories, the alpha coefficient is significantly positive for 12.90 percent of information technology funds and 2.94 percent of conventional funds, respectively, while none is significantly negative for the information technology fund category and the 20.29 percent is significantly negative for the conventional fund category.

Comparing the financial performance achieved by mutual funds with the highest levels of gender equality score to those with the lowest levels of gender equality score in each mutual fund category, we find that mutual funds with high levels of gender equality score reach similar risk-adjusted return, on average, as the mutual funds with low levels of gender equality score for alternative energy and natural resources fund categories. However, infrastructure mutual funds with high levels of gender equality score significantly outperform those with low levels of gender equality score. On the contrary, healthcare, water, information technology, ethical, gold and precious metals and conventional mutual funds with high levels of gender equality score underperform those with low levels of gender equality score. This finding support our hypothesis H1a.

Table 3: Financial performance of mutual funds investing in global geographical markets according to gender balance in leadership and workforce score from 2015-2021

Category	Annualized performance				R ²	Number of estimates +/0/-	Differences High-Low
	Mean	Standard deviation	Max	Min			
Healthcare (SDG3)							
High	-0.0193	0.0087	-0.0029	-0.0338	0.9151	0/11/2	-4.124***
Low	-0.0030	0.0157	0.0125	-0.0370	0.8829	0/24/1	
Full	-0.0086	0.0157	0.0125	-0.0370	0.8939	0/35/3	

Category	Annualized performance				R ²	Number of estimates +/-	Differences High-Low
	Mean	Standard deviation	Max	Min			
Water (SDG6)							
High	-0.0297	0.0096	-0.0207	-0.0423	0.8822	0/4/0	-2.719**
Low	-0.0159	0.0033	-0.0138	-0.0208	0.9200	0/4/0	
Full	-0.0228	0.0099	-0.0138	-0.0423	0.9011	0/8/0	
Alternative energy (SDG7)							
High	0.0103	0.0059	0.0152	0.0038	0.7812	0/3/0	1.989
Low	-0.0119	0.0151	-0.0013	-0.0226	0.7567	0/2/0	
Full	0.0014	0.0149	0.0152	-0.0226	0.7714	0/5/0	
Information technology (SDG9)							
High	-0.0092	0.0244	0.0187	-0.0413	0.9208	0/18/0	-4.256***
Low	0.0217	0.0182	0.0451	-0.0042	0.9097	4/13/0	
Full	0.0058	0.0265	0.0451	-0.0413	0.9154	4/31/0	
Infrastructure (SDG9)							
High	0.0107	0.0106	0.0345	-0.0049	0.8752	0/19/0	2.439**
Low	0.0001	0.0151	0.0287	-0.0147	0.8751	0/16/0	
Full	0.0059	0.0137	0.0345	-0.0147	0.8752	0/35/0	
Ethical (SDG12)							
High	-0.0263	0.0242	0.0117	-0.0693	0.9235	0/19/8	-5.634***
Low	0.0027	0.0112	0.0196	-0.0267	0.9049	0/26/0	
Full	-0.0121	0.0238	0.0196	-0.0693	0.9144	0/45/8	
Natural resources (SDG15)							
High	-0.0459	0.0317	-0.0076	-0.0877	0.8126	0/20/0	0.135
Low	-0.0577	0.0228	-0.0242	-0.0940	0.7270	0/19/2	
Full	-0.0519	0.0278	-0.0076	-0.0940	0.7687	0/39/2	
Gold and precious metals (SDG15)							
High	0.0200	0.0127	0.0393	0.0040	0.4043	0/12/0	-2.157*
Low	0.0415	0.0308	0.1068	-0.0041	0.4268	0/11/0	
Full	0.0303	0.0252	0.1068	-0.0041	0.4151	0/23/0	
Conventional							
High	-0.0144	0.0188	0.0539	-0.0567	0.9255	4/116/41	0.706***
Low	-0.0034	0.0199	0.0690	-0.0375	0.9292	6/145/28	
Full	-0.0086	0.0201	0.0690	-0.0567	0.9274	10/261/69	

4.2 Results for mutual funds investing in United States stock markets

The financial performance of mutual funds focused on United Nations' sustainable development goals that invest in United States stock markets is evaluated using the new Fama and French six-factor model (Fama and French, 2018) and grouped according their level of gender equality score. Table 4 presents the descriptive statistics of healthcare, energy, information technology, ethical, natural resources, gold and precious metals and conventional mutual funds. As observed the healthcare, ethical, natural resources and conventional mutual fund categories have a negative mean risk-adjusted return, while energy, information technology and gold and precious metals mutual fund categories have a positive mean risk-adjusted return. The mutual fund category specialized in the energy sector has the largest mean risk-adjusted return (3.66%), with all alphas being similar to the market benchmark, whereas the natural resources sector-related mutual fund category has the lowest (6.11%), with alphas being significantly negative for 60.00 percent and similar to market benchmark for 36.00 percent of the natural resources mutual funds in our sample. The alpha coefficient is significantly positive for

2.56 percent of healthcare mutual funds, for 3.80 percent of information technology funds, for 2.99 percent of ethical funds, for 4 percent of natural resources funds and for 1.94 percent of conventional funds, while the alpha coefficient is significantly negative for 20.51 percent of healthcare funds, for 7.60 percent of information technology funds, for 17.91 percent of ethical funds, for 60 percent of natural resources funds and for 23.94 percent of conventional mutual funds.

Comparing the financial performance achieved by mutual funds with the highest levels of gender equality score to those with the lowest levels of gender equality score in each mutual fund category, we find that mutual funds with high levels of gender equality score reach similar risk-adjusted return, on average, as the mutual funds with low levels of gender equality score for healthcare, energy, information technology, gold and precious metals and natural resources fund categories. However, ethical and conventional mutual funds with high levels of gender equality score underperform those with low levels of gender equality score. This findings differ those achieved for US mutual funds investing in global markets, supporting our hypothesis H1b.

Table 4: Financial performance of mutual funds investing in US geographical markets according to gender balance in leadership and workforce score from 2015-2021

Category	Annualized performance				R ²	Number of estimates +/0/-	Differences High-Low
	Mean	Standard deviation	Max	Min			
Healthcare (SDG3)							
High	-0.0092	0.0494	0.1167	-0.0859	0.8777	0/13/4	1.052
Low	-0.0246	0.0418	0.0564	-0.1018	0.8582	1/17/4	
Full	-0.0179	0.0453	0.1167	-0.1018	0.8667	1/30/8	
Energy (SDG7)							
High	0.0438	0.0510	0.0701	-0.1154	0.5477	0/12/0	0.837
Low	0.0319	0.0271	0.0665	-0.0280	0.5844	0/18/0	
Full	0.0366	0.0381	0.0701	-0.1154	0.5697	0/30/0	
Information technology (SDG9)							
High	0.0078	0.1069	0.6252	-0.0915	0.8675	2/34/6	-0.134
Low	0.0106	0.0670	0.3893	-0.0438	0.8865	1/36/0	
Full	0.0091	0.0899	0.6252	-0.0915	0.8764	3/70/6	
Ethical (SDG12)							
High	-0.0100	0.0194	0.0784	-0.0784	0.9036	2/66/24	-2.453**
Low	-0.0012	0.0190	0.0514	-0.0285	0.9338	2/40/0	
Full	-0.0072	0.0197	0.0784	-0.0784	0.9131	4/106/24	
Gold and precious metals (SDG15)							
High	0.0141	0.0050	0.0193	0.0073	0.3897	0/4/0	-0.272
Low	0.0149	0.0041	0.0186	0.0091	0.4038	0/5/0	
Full	0.0145	0.0042	0.0193	0.0073	0.3975	0/9/0	
Natural resources (SDG15)							
High	-0.0608	0.0235	-0.0350	-0.0849	0.9477	0/5/6	0.025
Low	-0.0613	0.0684	0.0519	-0.1336	0.9063	1/4/9	
Full	-0.0611	0.0526	0.0519	-0.1336	0.9245	1/9/15	
Conventional							
High	-0.0112	0.0223	0.1683	-0.5017	0.9667	4/788/303	-4.477***
Low	-0.0047	0.0336	0.2283	-0.1991	0.9320	31/546/128	
Full	-0.0086	0.0274	0.2283	-0.5017	0.9531	35/1334/431	

5. Conclusions

By examining a sample of US mutual funds investing in specialised sectors related to UN sustainable development goals across countries or in the United States markets, this study shows that the integration of gender equality criteria to portfolios of mutual funds focused on one specific sectors related to sustainable development goals, which invest in US stock markets, does not imply financial cost for investors. However, investors integrating gender criteria in their investments in ethical and conventional funds obtain lower financial performance than those whose investment preferences are only focused on ethical criteria or on diversified portfolios across countries and industries.

This study also shows that the integration of gender equality criteria in portfolios of US global water, alternative energy, infrastructure, natural resources, and gold and precious metals funds does not imply financial cost for investors.

References

- Alvarez, M., & Rodríguez, J. (2015). Water-related mutual funds: investment performance and social role. *Social Responsibility Journal*, 11(3), 502-512.
- Assenga, M. P., Aly, D., & Hussainey, K. (2018). The impact of board characteristics on the financial performance of Tanzanian firms. *Corporate Governance: The International Journal of Business in Society*, 18 (6), 1089-1106.
- Badía, G., Ferruz, L., & Cortez, M. C. (2021). The performance of social responsible investing from retail investors' perspective: international evidence. *International Journal of Finance & Economics*, 26 (4), 6074-6088.
- Brahma, S., Nwafor, C., & Boateng, A. (2021). Board gender diversity and firm performance: The UK evidence. *International Journal of Finance & Economics*, 26, 5704-5719.
- Brammer, S., Millington, A., & Pavelin, S. (2007). Gender and ethnic diversity among UK corporate boards. *Corporate Governance: An International Review*, 15(2), 393-403.
- Carter, D. A., D'Souza, F., Simkins, B. J., & Simpson, W. G. (2010). The gender and ethnic diversity of US boards and board committees and firm financial performance. *Corporate Governance: An International Review*, 18(5), 396-414.
- Chapple, L., & Humphrey, J. E. (2014). Does board gender diversity have a financial impact? Evidence using stock portfolio performance. *Journal of Business Ethics*, 122(4), 709-723.
- Climont, F., & Soriano, P. (2011). Green and good? The investment performance of US environmental mutual funds. *Journal of Business Ethics*, 103(2), 275-287.
- Canyon, M. J., & He, L. (2017). Firm performance and boardroom gender diversity: A quantile regression approach. *Journal of Business Research*, 79, 198-211.
- Creary, S., McDonnell, M. H., Ghai, S., & Scruggs, J. (2019). When and why diversity improves your board's performance. *Harvard Business Review*, 27, 2-6.
- Fama, E. F., & French, K. R. (2018). Choosing factors. *Journal of Financial Economics*, 128(2), 234-252.
- Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *The Journal of Law and Economics*, 26(2), 301-325.
- Fernández-Temprano, M.A. & Tejerina-Gaite, F. (2020). Types of director, board diversity and firm performance", *Corporate Governance: The International Journal of business Society*, 20(2), 324-342.
- Francoeur, C., Labelle, R., & Sinclair-Desgagné, B. (2008). Gender diversity in corporate governance and top management. *Journal of Business Ethics*, 81(1), 83-95.
- Freeman, R. E. (1984). Strategic management: A stakeholder theory. *Journal of Management Studies*, 39(1), 1-21.
- Halldén, K., Sæve-Söderbergh, J., & Rosén, Å. (2018). Gender of the immediate manager and women's wages: The importance of managerial position. *Social Science Research*, 72, 115-133.
- Ibikunle, G., & Martí-Ballester, C. P. (2020). Can water mutual funds aid sustainable development?. *International Journal of Finance & Economics*. (In-press)
- Ielasi, F., & Rossolini, M. (2019). Responsible or thematic? The true nature of sustainability-themed mutual funds. *Sustainability*, 11(12), 3304.
- Ismail, K. N. I. K., & Manaf, K. B. A. (2016). Market reactions to the appointment of women to the boards of Malaysian firms. *Journal of Multinational Financial Management*, 36, 75-88.
- Jin, J., & Han, L. (2018). Assessment of Chinese green funds: Performance and industry allocation. *Journal of Cleaner Production*, 171, 1084-1093.
- Karavitis, P., Kokas, S., & Tsoukas, S. (2021). Gender board diversity and the cost of bank loans. *Journal of Corporate Finance*, 101804.
- Kiliç, M., & Kuzey, C. (2016). The effect of board gender diversity on firm performance: evidence from Turkey. *Gender in management: An international Journal*, 31(7), 434-455.
- Lesser, K., Röble, F., & Walkshäusl, C. (2016). Socially responsible, green, and faith-based investment strategies: Screening activity matters!. *Finance Research Letters*, 16, 171-178.
- Liu, Y., Wei, Z., & Xie, F. (2014). Do women directors improve firm performance in China?. *Journal of Corporate Finance*, 28, 169-184.

- Maji, S. G., & Saha, R. (2021). Gender diversity and financial performance in an emerging economy: empirical evidence from India. *Management Research Review*. (In press).
- Martí-Ballester, C. P. (2019a). Do European renewable energy mutual funds foster the transition to a low-carbon economy?. *Renewable Energy*, 143, 1299-1309.
- Martí-Ballester, C. P. (2019b). The role of mutual funds in the sustainable energy sector. *Business Strategy and the Environment*, 28(6), 1107-1120.
- Martí-Ballester, C. P. (2020a). Examining the financial performance of pension funds focused on sectors related to sustainable development goals. *International Journal of Sustainable Development & World Ecology*, 27(2), 179-191.
- Martí-Ballester, C. P. (2020b). Financial performance of SDG mutual funds focused on biotechnology and healthcare sectors. *Sustainability*, 12(5), 2032.
- Martí-Ballester, C. P. (2021). Analysing the financial performance of sustainable development goals-themed mutual funds in China. *Sustainable Production and Consumption*, 27, 858-872.
- Matsa, D. A., & Miller, A. R. (2011). Chipping away at the glass ceiling: Gender spillovers in corporate leadership. *American Economic Review*, 101(3), 635-39.
- Matsa, D. A., & Miller, A. R. (2013). A female style in corporate leadership? Evidence from quotas. *American Economic Journal: Applied Economics*, 5(3), 136-69.
- Naqvi, B., Mirza, N., Rizvi, S. K. A., Porada-Rochón, M., & Itani, R. (2021). Is there a green fund premium? Evidence from twenty seven emerging markets. *Global Finance Journal*, 50, 100656.
- Neville, K. J., Cook, J., Baka, J., Bakker, K., & Weinthal, E. S. (2019). Can shareholder advocacy shape energy governance? The case of the US antifracking movement. *Review of International Political Economy*, 26(1), 104-133.
- Newey, W. K., & West, K. D. (1987). Hypothesis testing with efficient method of moments estimation. *International Economic Review*, 777-787.
- Nofsinger, J., & Varma, A. (2014). Socially responsible funds and market crises. *Journal of Banking & Finance*, 48, 180-193.
- Pfeffer, J., & Salancik, G. R. (2003). *The external control of organizations: A resource dependence perspective*. Stanford University Press.
- Popescu, I. S., Hitaj, C., & Benetto, E. (2021). Measuring the sustainability of investment funds: A critical review of methods and frameworks in sustainable finance. *Journal of Cleaner Production*, 128016.
- Post, C., & Byron, K. (2015). Women on boards and firm financial performance: A meta-analysis. *Academy of Management Journal*, 58(5), 1546-1571.
- Provasi, R., & Harasheh, M. (2021). Gender diversity and corporate performance: Emphasis on sustainability performance. *Corporate Social Responsibility and Environmental Management*, 28(1), 127-137.
- Reboredo, J. C., Quintela, M., & Otero, L. A. (2017). Do investors pay a premium for going green? Evidence from alternative energy mutual funds. *Renewable and Sustainable Energy Reviews*, 73, 512-520.
- Silva, F., & Cortez, M. C. (2016). The performance of US and European green funds in different market conditions. *Journal of Cleaner Production*, 135, 558-566.