



EUROPEAN CENTRAL BANK

EUROSYSTEM

Are ethical and green investment funds more resilient?

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Laura Capota,
Margherita Giuzio, Sujit Kapadia, Dilyara Salakhova

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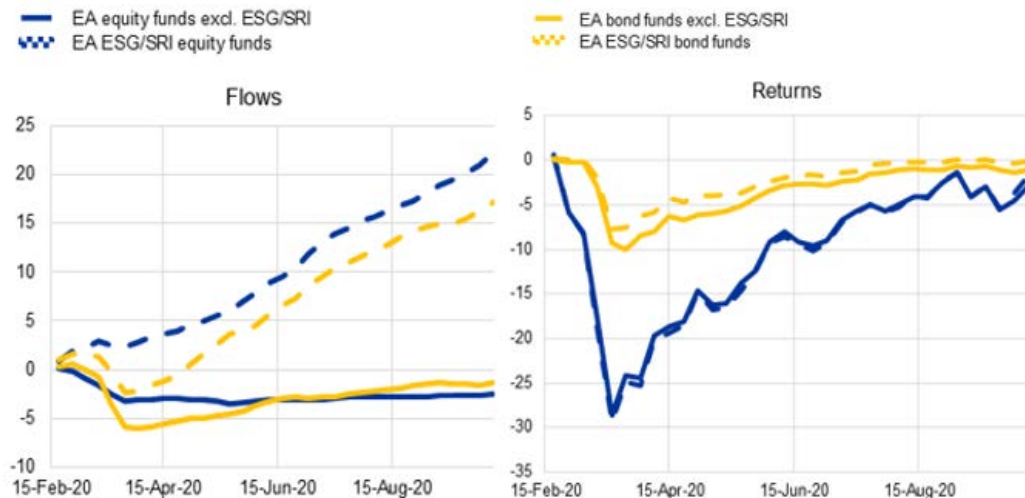


1.

Motivation

Motivation

ESG funds suffered lower outflows than non-ESG peers in March, despite achieving similar performance



Source: EPFR and ECB calculations.

Why are ESG funds more resilient?

- Ethical investors are **committed** to their mandates: they value sustainability more than performance (Hartmark and Sussmann, 2019; Pastor and Vorsatz, 2020; Döttling and Kim, 2020)
- Ethical investors have a **longer-term investment horizon**: they withstand short-term negative performance (Riedl and Smeets, 2017; Döttling and Kim, 2020)
- Ethical investors believe that ESG companies will have higher **future returns**

→ Is the flow-performance relationship different for ESG and non-ESG funds?

Our contribution

Literature on flow-performance relationship

- Bond traditional funds: investors are sensitive to low returns (Goldstein et al., 2017; Chen and Qin, 2017)
- Investors are more sensitive to low returns in less liquid bond funds (Goldstein et al., 2017)
- Equity traditional funds: convex shape (Sirri and Tufano, 1998)
- Equity ESG vs Non-ESG funds: ESG investors are less sensitive to past returns (Benson and Humphrey, 2008; Bollen, 2007)

Our project

- Compares the flow-performance relationship of ESG and traditional funds for **both bond and equity funds**
- Distinguishes **green ESG funds** from other ESG funds
- Considers a **longer time period** to capture a potential shift in investors' behavior and crisis episodes
- Classifies institutional and retail fund shares according to the euro area **Securities Holdings Statistics (SHSS)**
- Assesses funds' liquidity using a granular and **time-varying measure** of portfolio **liquidity**, based on **HQLA** definition

Main findings:

Corporate bond funds

- ESG funds do not exhibit outflows following negative performance, in contrast to their non-ESG peers
- This result holds also during crisis periods and for funds with less liquid assets
- Institutional investors' flows are more stable in ESG funds (longer-term investment horizon, ESG mandate)

Equity funds

- Green and ESG investors are not sensitive to past negative performance, in contrast to their non-ESG peers

→ ESG funds may both be valuable in providing a stable source of finance for the green transition and pose less risks to financial stability stemming from asset fire sales



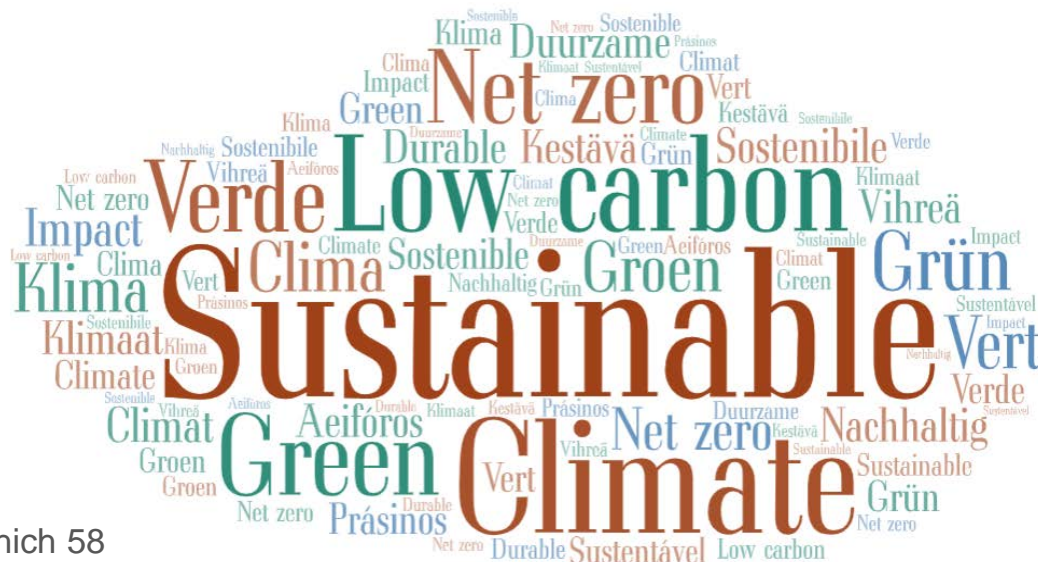
2.

Specification

ESG and green classification

ESG funds are classified according to their ESG score in August 2020.

We distinguish **green funds** from other ESG funds via a text search in fund names and prospectuses.



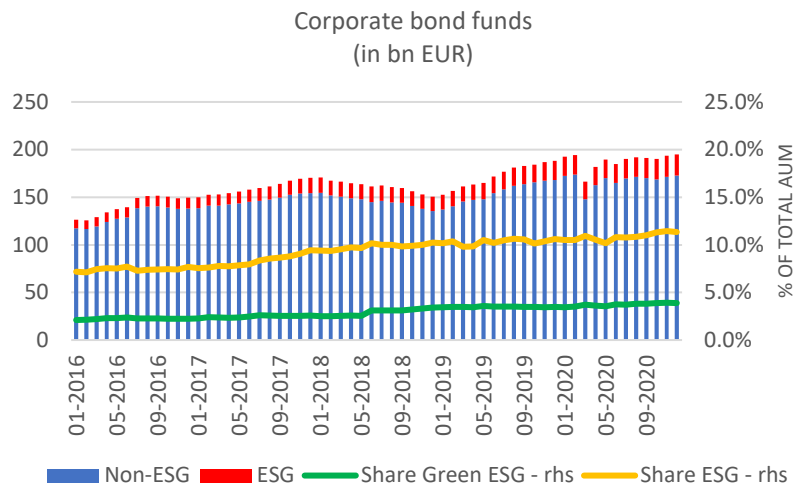
- 133 ESG corporate bond funds shares, of which 58 are classified as green
- 1 070 ESG equity funds shares, of which 454 are classified as green

Sample

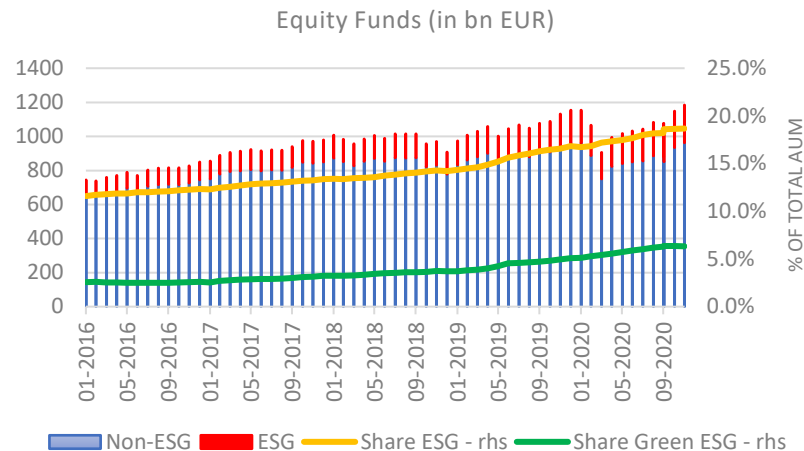
- Share-class level of EA-domiciled active funds
- Monthly return/TNA data, Jan 2016 - Dec 2020

→ ESG funds represent around 10% of the total number of corporate bond funds, but the assets they manage are growing rapidly

Evolution of TNA of corporate bond funds by type



Evolution of TNA of equity funds by type



Main specification

We adopt a specification based on Goldstein et al. (2017)

$$Flows_{i,t} = \alpha + \beta_1 Ret_{i,t-1}^{ESG+} + \beta_2 Ret_{i,t-1}^{non_ESG+} + \beta_3 Ret_{i,t-1}^{ESG-} + \beta_4 Ret_{i,t-1}^{non_ESG-} + \beta_5 Controls_{i,t-1} + \gamma_t + \delta_t \times ESG + \varepsilon_{i,t}$$

Where:

$Ret_ESG_{i,t-1}^+$ is the lagged raw positive return for green/ESG funds and 0 otherwise, etc.

Controls include: age, size, lagged flows, volatility of returns

Share fixed effects, errors clustered at a share level

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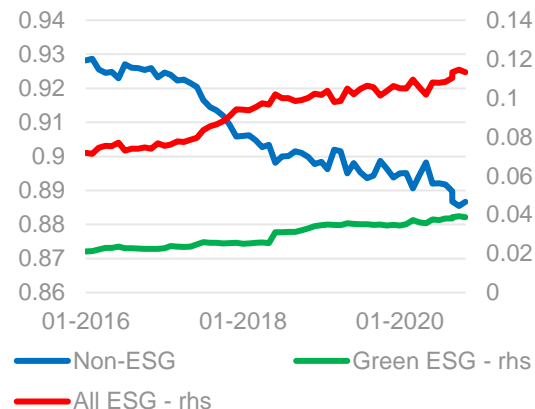
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**Time x ESG fixed effects in order to control
for different time trends between ESG and non-ESG**

Share of total assets managed by corporate bond funds, by group





3.

Results

Baseline: sensitivity to past performance

	Equity	Equity	Bond	Bond
	All ESG	Green ESG	All ESG	Green ESG
Ret Pos ESG	0.082***	0.061**	0.097	-0.203
Ret Pos NESG	0.058***	0.057***	-0.001	0
Ret Neg ESG	-0.003	-0.026	-0.017	-0.065
Ret Neg NESG	0.069***	0.069***	0.092***	0.092***
Share FE	Yes	Yes	Yes	Yes
Time x ESG FE	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
Observations	289,377	270,564	51,608	49,363
R-squared	0.205	0.201	0.147	0.146

Non-ESG investors **withdraw more** from funds with more negative past returns (a decrease of 1 pp of the negative returns leads to 0.07-0.09 pp higher outflows),

while ESG (and Green ESG) fund investors are not sensitive to past negative performance

Investor base

Based on SHSS:

- Institutional shares (if institutional investors hold more than 50% of the assets)
- Retail shares (if retail investors hold more than 50% of the assets)
- Institutional investors **do not redeem** from **green** funds in response to past negative performance (mandates' role?)
- However, they **react** to past negative performance in **non-ESG funds**
- Retail investors **do not react** to past negative performance in **green** funds

	Equity	Equity	Bond	Bond
	Institutional shares	Retail shares	Institutional shares	Retail shares
	Green ESG	Green ESG	Green ESG	Green ESG
Ret Pos ESG	0.056	0.128***	-0.206	0.629
Ret Pos NESG	0.064***	0.064***	-0.008	0.148*
Ret Neg ESG	0.008	0.008	0.063	0.578
Ret Neg NESG	0.102***	0.072***	0.141***	0.122**
Share FE	Yes	Yes	Yes	Yes
Time x ESG FE	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
Observations	89,888	51,803	18,264	7,295
R-squared	0.155	0.347	0.115	0.274

Controlling for the liquidity of assets

Based on HQLA data:

- Illiquid share if less than 1% of the portfolio is invested in high quality assets
- Liquid share otherwise
- Investors in **non-ESG** funds with **illiquid holdings** **withdraw more strongly** following negative performance
- Investors in **green illiquid** funds (or ESG funds) **do not redeem** following negative performance

	Bond	Bond
	All ESG	Green ESG
Ret Neg NESG Liq	0.07*	0.07*
Ret Neg NESG Illiq	0.169***	0.168***
Ret Neg ESG Liq	0.013	-0.046
Ret Neg ESG Illiq	0.055	0.03
Share FE	Yes	Yes
Time x ESG FE	Yes	Yes
Controls	Yes	Yes
Observations	40,950	39,199
R-squared	0.144	0.142

Robustness and further work

Considering different measures of performance:

- definition: monthly raw return in excess of category average, alphas
- horizon: 12-month raw return



4.

Conclusion

Conclusion and policy implications

Green and ESG funds do not exhibit outflows following negative performance

A more **committed** investor base, which is more willing to look-through short-term negative performance, indicates that green and ESG funds

- may be able to provide a **stable source of finance** for the green transition
- pose **less risks** to financial stability stemming from asset fire sales

Greenwashing risk needs to be addressed

- A consistent and harmonized ESG label would help reduce uncertainty and greenwashing risk