

# Course 2022-2023 in Sustainable Finance

## Lecture 5. Sustainable Financial Products, Impact Investing & Engagement

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<sup>1</sup>The opinions expressed in this presentation are those of the authors and are not meant to represent the opinions or official positions of Amundi Asset Management.

# Greenwashing

## The big issue for an investor is: How to avoid Greenwashing (& ESG washing)?

### Greenwash (also greenwashing)

- Activities by a company or an organization that are intended to make people think that it is concerned about the environment, even if its real business actually harms the environment
- A common form of greenwash is to publicly claim a commitment to the environment while quietly lobbying to avoid regulation

Source: Oxford English Dictionary (2020), <https://www.oed.com>

In finance, greenwashing is understood as making misleading claims about environmental practices, performance or products

# Greenwashing

We must distinguish two types of risk:

- Explicit & deliberate greenwashing

**Deliberate greenwashing = mis-selling risk**

- Unintentional greenwashing

**Unintentional greenwashing = misinterpretation risk**

# SRI Investment funds

## Market

- Investment vehicles
  - Mutual funds
  - ETFs
  - Mandates & dedicated funds
- Investment strategies
  - Thematic strategies (e.g. water, social, wind energy, climate, plastic, etc.)
  - ESG-tilted strategies (e.g. exclusion, negative screening, best-in-class, enhanced ESG score, controlled tracking error, etc.)
  - Climate strategies (e.g. low carbon, 2°C alignment, activity exclusions<sup>2</sup>, etc.)
  - Sustainability-linked securities (e.g. green bonds, social bonds, etc.)

## Both $\alpha$ and $\beta$ management

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<sup>2</sup>e.g. coal exploration, oil exploration, electricity generation with a high GHG intensity

# SRI Investment funds

## Market

### Mutual funds

- Amundi Climate Transition
- Amundi ARI European Credit SRI
- AXA World Funds – Euro Bonds SRI
- CPR Invest Social Impact
- Fidelity U.S. Sustainability Index
- Fidelity Sustainable Water & Waste
- Natixis ESG Dynamic Fund
- Vanguard FTSE Social Index
- Etc.

### ETFs

- Amundi Index MSCI Europe SRI UCITS ETF
- Amundi MSCI Emerging ESG Leaders UCITS ETF
- Amundi EURO ISTOXX Climate Paris Aligned PAB UCITS ETF
- Lyxor New Energy UCITS ETF
- Lyxor World Water UCITS ETF
- SPDR S&P 500 ESG
- First Trust Global Wind Energy ETF
- Invesco S&P 500 ESG UCITS ETF
- Etc.

# SRI Investment funds

## Market

- ESG represents **58% of the net new assets** (NNA) in the European ETF market
- ESG fund assets reach \$1 652 bn
  - Europe: \$1 343 bn (or 81.3%)
  - US: \$236.4 bn (or 14.3%)
  - Asia: \$43.1 bn (or 2.6%)
- Net flows into sustainable mutual funds and ETFs in Q4 2020: \$370 bn (or **+29% of assets**)
- Net flows into sustainable mutual funds and ETFs in 2020
  - Europe: \$273 bn, almost double the total for 2019, almost 5 times more than in 2017
  - US: \$51.2 bn, more than double the total for 2019, almost 10 times more than in 2018

Source: Morningstar, Global Sustainable Fund Flows: Q4 2020 in Review (January 2021)

# SRI Investment funds

## Labels

### European sustainable finance labels

- Novethic label (pioneer label in 2009, suspended in 2016)
- French SRI label — <https://www.lelabelisr.fr>
- FNG label (Germany) — <https://fng-siegel.org>
- Towards Sustainability label (Belgium) — <https://www.towardssustainability.be>
- LuxFLAG label (Luxembourg) — <https://www.luxflag.org>
- Nordic Swan Ecolabel (Nordic countries) — <https://www.nordic-ecolabel.org>
- Umweltzeichen Ecolabel (Austria) — <https://www.umweltzeichen.at/en>
- French Greenfin label — <https://www.ecologie.gouv.fr/label-greenfin>

# SRI Investment funds

## Labels

### Remark

According to Novethic (2020), 806 funds had a label at the end of December 2019. Nine months later, this number has increased by 392 and the AUM has been multiplied by 3.2!

# SRI Investment funds

## Regulation

*“Today it is difficult for consumers, companies and other market actors to make sense of the many environmental labels and initiatives on the environmental performance of products and companies. There are more than 200 environmental labels active in the EU, and more than 450 active worldwide; there are more than 80 widely used reporting initiatives and methods for carbon emissions only. Some of these methods and initiatives are reliable, some not; they are variable in the issues they cover” (European Commission, 2020).*

Source: <https://ec.europa.eu/environment/eussd/index.htm>

# SRI Investment funds

## Regulation

- 1 EU taxonomy regulation
- 2 Sustainable Finance disclosure regulation (SFDR)
- 3 Climate benchmarks
- 4 Sustainability preferences (MiFID II & IDD)

# SRI Investment funds

## Regulation

### SFDR

- Article 6: Non-ESG funds (standard funds)
- Article 8: ESG funds (funds that promote **E** or **S** characteristics)
- Article 9: Sustainable funds (funds that have a sustainable investment objective: impact investing or reduction of carbon emissions)

# SRI Investment funds

## Regulation

### New benchmark rules

- Climate transition benchmarks (CTB): high level of decarbonization (−30%), no controversial weapons and tobacco, high positive impact on climate change, etc.
- Paris-aligned benchmarks (PAB): high level of decarbonization (−50%), no controversial weapons and tobacco, no activities in coal, oil and natural gas, global warming below 2°, etc.
- MSCI Climate Paris Aligned Indexes — [www.msci.com/esg/climate-paris-aligned-indexes](http://www.msci.com/esg/climate-paris-aligned-indexes)
- FTSE TPI Climate Transition Index Series — [www.ftserussell.com/products/indices/tpi-climate-transition](http://www.ftserussell.com/products/indices/tpi-climate-transition)
- STOXX Climate Transition Benchmark (CTB) and STOXX Paris-Aligned Benchmark (PAB) Indices — [qontigo.com/solutions/climate-indices](http://qontigo.com/solutions/climate-indices)

# Sustainable fixed-income products

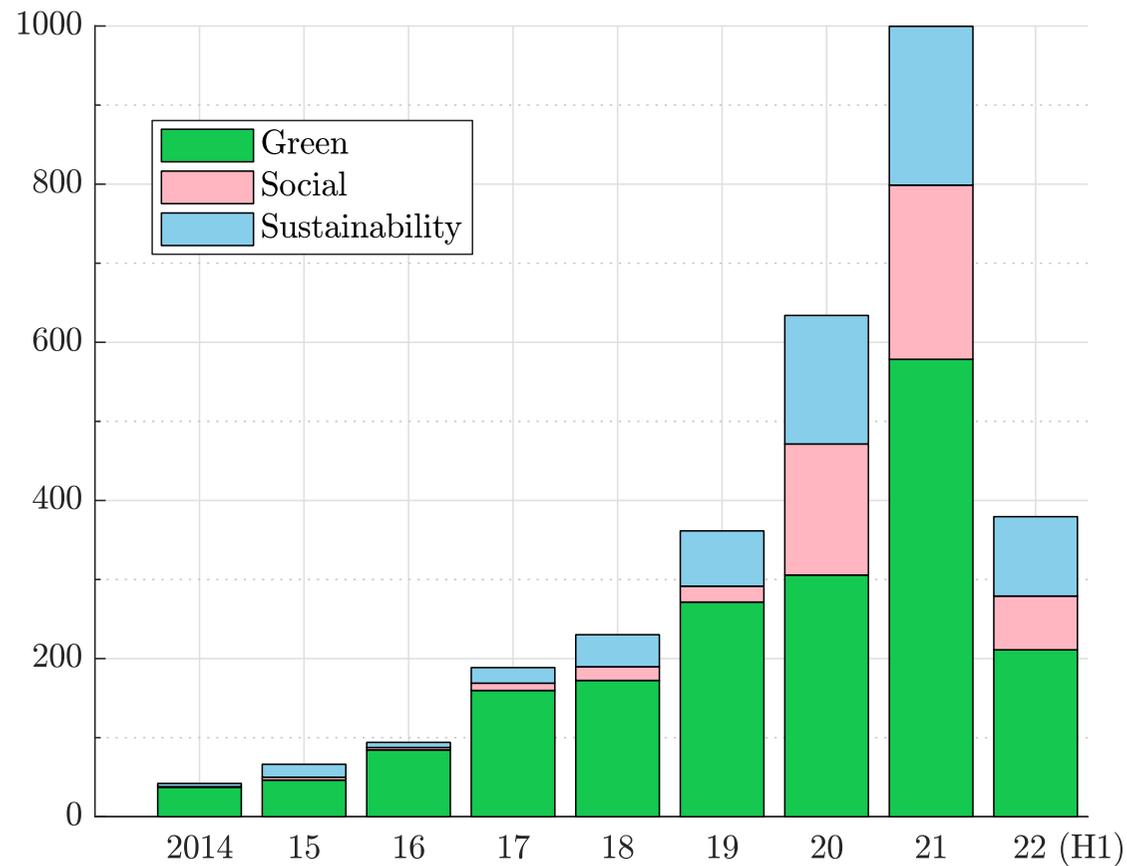
**Table 1:** Sustainable fixed-income market

	Theme	Label	Format
GSS+	GSS	Green	Use of proceeds
		Social	Use of proceeds
		Sustainability	Use of proceeds
	Transition	Sustainability-Linked Transition	Entity KPI-linked Use of proceeds

Source: CBI (2022).

# Sustainable fixed-income products

Figure 1: Issuance of GSS securities (in \$ bn)



Source: <https://www.climatebonds.net/market/data>.

# Green bonds

## Definition

### Definition

Green bonds are any type of bond instrument where the proceeds or an equivalent amount will be exclusively applied to finance or re-finance, in part or in full, new and/or existing eligible **green projects** and which are aligned with the four core components of the Green Bond Principles (GBP).

Source: ICMA (2021).

⇒ Green bonds are “*regular*” bonds<sup>3</sup> aiming at funding projects with positive environmental and/or climate benefits

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<sup>3</sup>A regular bond pays regular interest to bondholders

# Green bonds

## Green Bonds Principles

### Green Bonds Principles (GBP)

The 4 core components of the GBP are:

- 1 Use of proceeds
- 2 Process for project evaluation and selection
- 3 Management of proceeds
- 4 Reporting

<https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks>

# Green bonds

## Green Bonds Principles

The use of proceeds includes:

- Renewable energy
- Energy efficiency
- Pollution prevention (e.g. GHG control, soil remediation, waste recycling)
- Sustainable management of living natural resources (e.g. sustainable agriculture, sustainable forestry, restoration of natural landscapes)
- Terrestrial and aquatic biodiversity conservation (e.g. protection of coastal, marine and watershed environments)
- Clean transportation
- Sustainable water management
- Climate change adaptation
- Eco-efficient products
- Green buildings

# Green bonds

## Green Bonds Principles

With respect to the **process for project evaluation and selection** (component 2), the issuer of a green bond should clearly communicate:

- the environmental sustainability objectives
- the eligible projects
- the related eligibility criteria

The **management of proceeds** (component 3) includes:

- The tracking of the “*balance sheet*” and the allocation of funds<sup>4</sup>
- An external review (not mandatory but highly recommended)

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<sup>4</sup>The proceeds should be credited to a sub-account

# Green bonds

## Green Bonds Principles

The **reporting** (component 4) must be based on the following pillars:

- Transparency
- Description of the projects, allocated amounts and expected impacts
- Qualitative performance indicators
- Quantitative performance measures (e.g. energy capacity, electricity generation, GHG emissions reduced/avoided, number of people provided with access to clean power, decrease in water use, reduction in the number of cars required)

# Green bonds

## Several standards

Standardization is strongly required by investors and regulators

- Green Bond Principles<sup>5</sup> (ICMA, 2021)
- Climate Bonds Standard<sup>6</sup> (CBI, 2019)
- EU Green Bond Standard (2021)
- China Green Bond Principles (PBOC, CBIRC, July 2022)
- Asean Green Bond Standards (ACMF, 2018)

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<sup>5</sup>The first version is published in January 2014

<sup>6</sup>The first version is published in November 2011

# Green bonds

## Types of debt instruments

### Asset-linked bond structures

- Regular bond
- Revenue bond
- Project bond
- Green loans

### Asset-backed bond structures

- Securitized bond
- Project bond
- ABS/MBS/CLO/CDO
- Covered bond

# Green bonds

## Certification

- Second party opinion provided by ESG rating agencies (ISS, Sustainalytics, Vigeo-Eiris);
- Certification by specialized green bond entities (CBI, CICERO, DNV);
- Green bond assessment by statistical rating organizations (Moody's, S&P).

# Green bonds

## Examples

- Solar bond by the City of San Francisco in 2001
- Equity-linked climate awareness bond by the European Investment Bank (EIB) in 2007
- First green bond issued by the World Bank (in collaboration with Skandinaviska Enskilda Banken) in November 2008
- First corporate green bonds: French utility company EDF (\$1.8 bn) and Swedish real estate company Vasakronan (\$120 bn)
- Toyota introduced the auto industry's first-ever asset-backed green bond in 2014 (\$1.75 bn)
- The Commonwealth of Massachusetts issued the first municipal green bond in 2013 (\$100 mn)
- The first sovereign green are: Poland in December 2016 (\$1 bn) and France<sup>7</sup> in January 2017 (\$10 bn)

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<sup>7</sup>Green OAT 1.75% 25 June 2039.

# Green bonds

## The green bond market

### Green bond issuers

- Sovereigns (agencies, municipals, governments)
- Multilateral development banks (MDB)
- Energy and utility companies
- Banks
- Other corporates

### Green bond investors

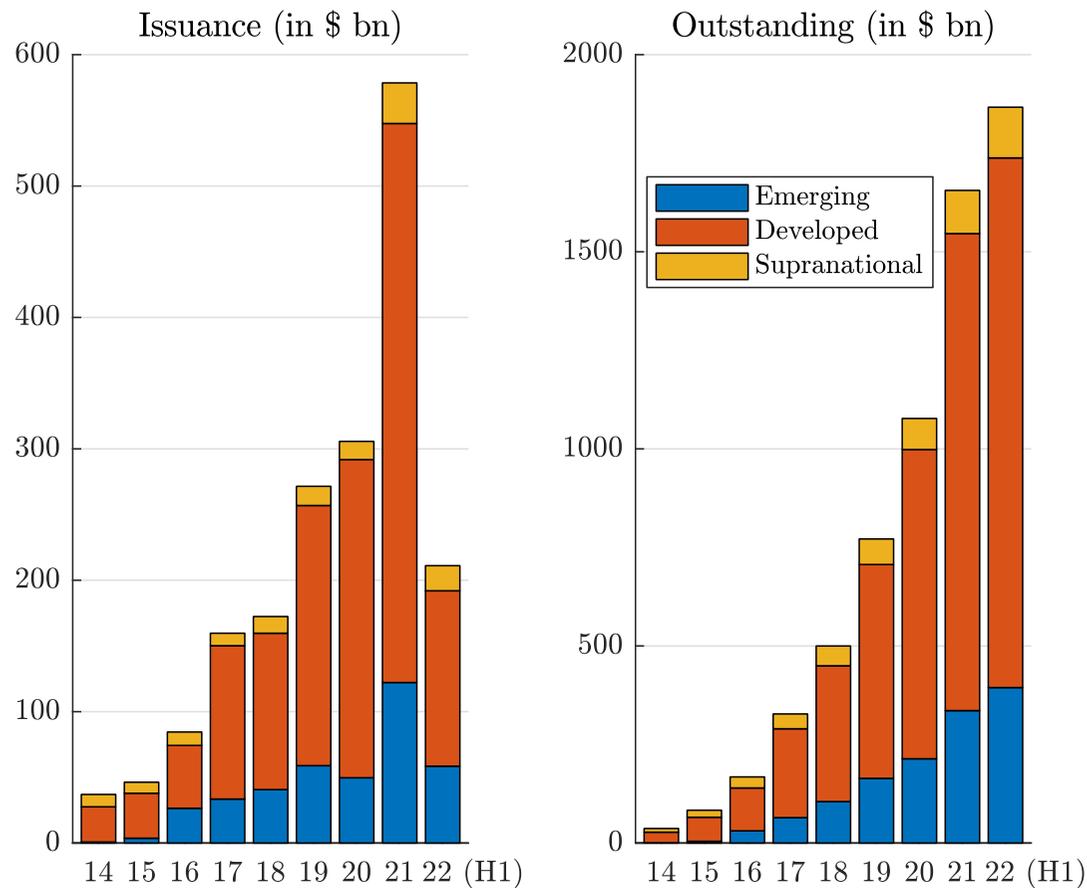
- Pension funds
- Sovereign wealth funds
- Insurance companies
- Asset managers
- Retail investors (e.g. employee savings plans)

**Strong imbalance between supply and demand**

# Green bonds

## The green bond market

Figure 2: Issuance and notional outstanding of green debt by market type

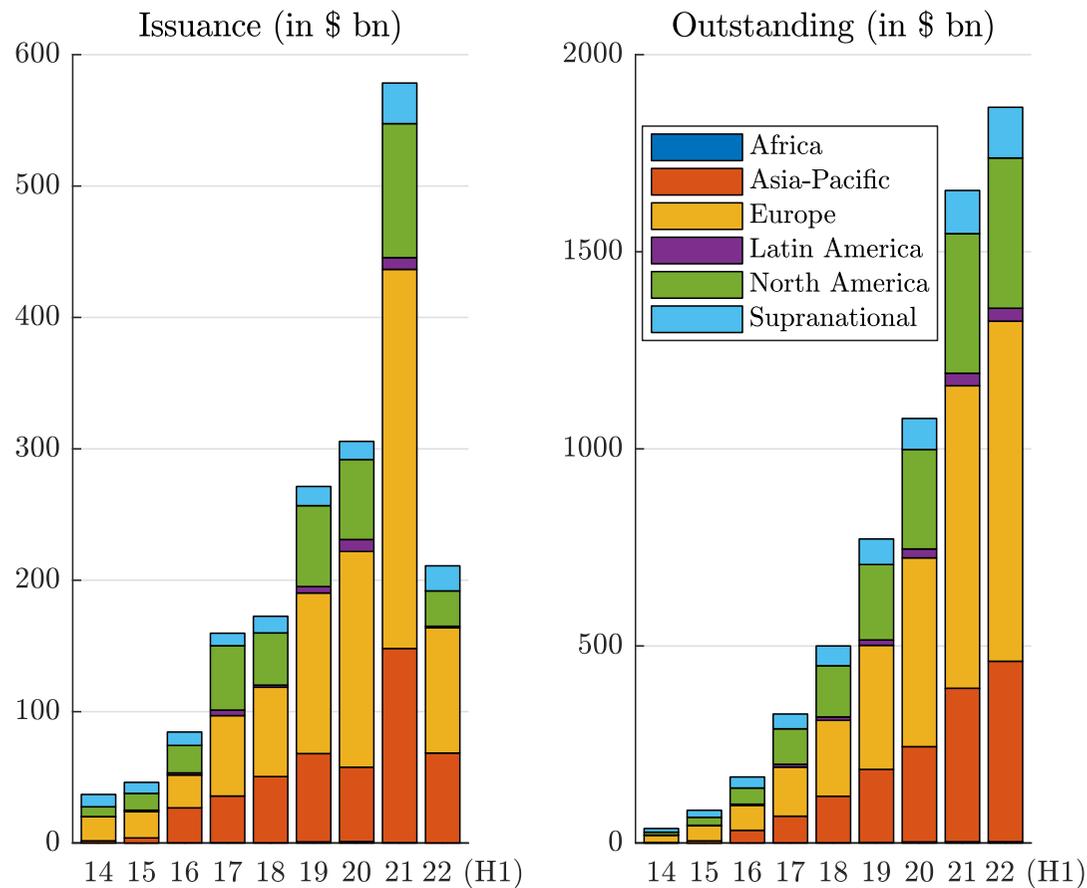


Source: <https://www.climatebonds.net/market/data>.

# Green bonds

## The green bond market

Figure 3: Issuance and notional outstanding of green debt by region

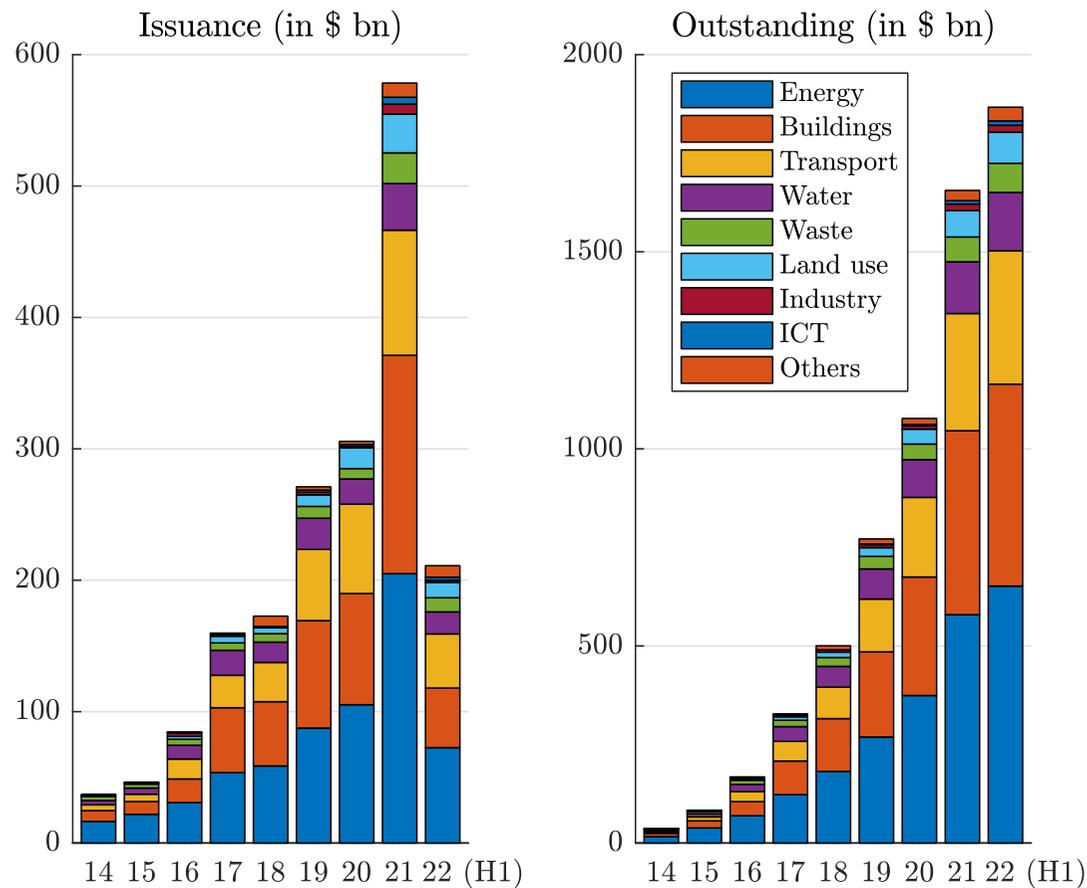


Source: <https://www.climatebonds.net/market/data>.

# Green bonds

## The green bond market

Figure 4: Issuance and notional outstanding of green debt by use of proceeds

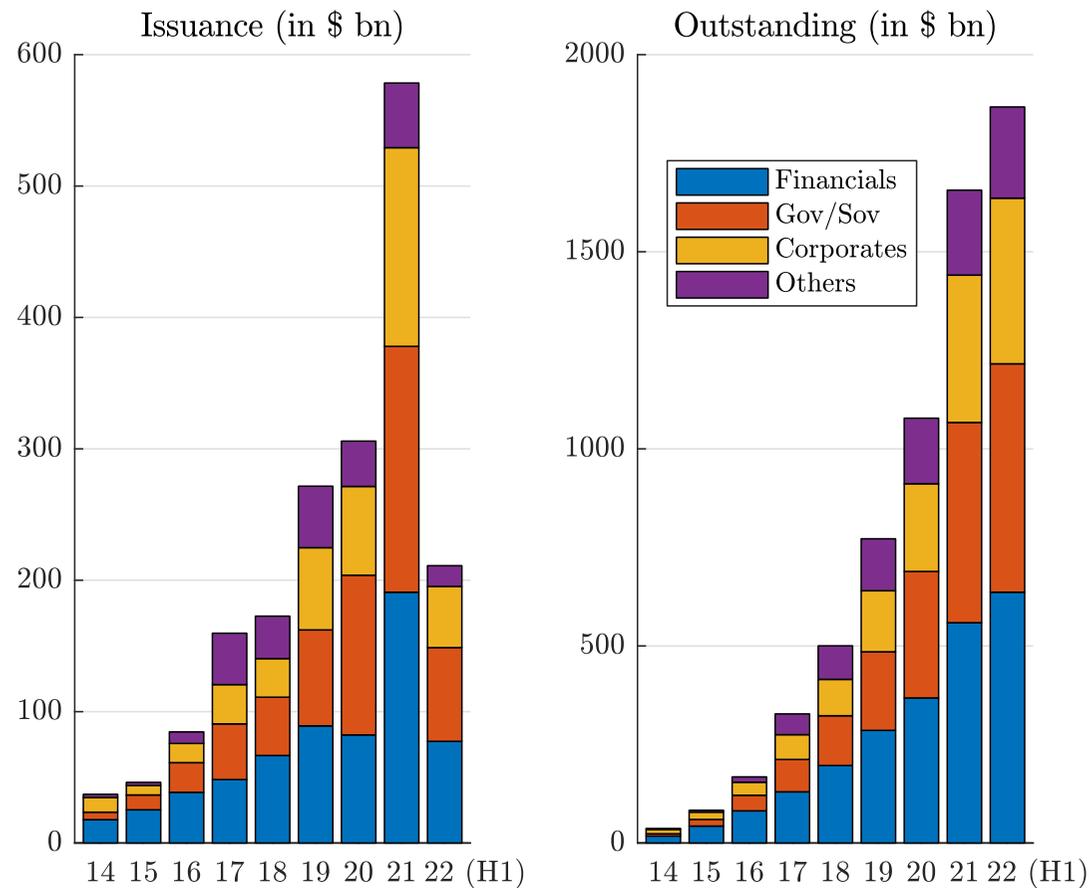


Source: <https://www.climatebonds.net/market/data>.

# Green bonds

## The green bond market

Figure 5: Issuance and notional outstanding of green debt by issuer type



Source: <https://www.climatebonds.net/market/data>.

# Green bonds

## How to investing in green bonds

Example of green bond funds:

- Allianz IG green bond fund
- Amundi RI impact green bonds
- AXA WF ACT green bonds
- BNP Paribas green bond
- Calvert green bond fund
- Mirova global green bond fund
- TIAA-CREF green bond fund
- Etc.

# Green bonds

## How to investing in green bonds

List of green bond indices:

- Bloomberg Barclays MSCI Global Green Bond Index
- S&P Green Bond Index
- Solactive Green Bond Index
- ChinaBond China Climate-Aligned Bond Index:
- ICE BofA Green Index

⇒ ETF and index funds

# Green bonds

## The economics of green bonds

*[...] “I show that investors respond positively to the issuance announcement, a response that is stronger for first-time issuers and bonds certified by third parties. The issuers improve their environmental performance post-issuance (i.e., higher environmental ratings and lower CO<sub>2</sub> emissions) and experience an increase in ownership by long-term and green investors. Overall, the findings are consistent with a signaling argument – by issuing green bonds, companies credibly signal their commitment toward the environment.” (Flammer, 2021, page 499).*

# Green bonds

## The economics of green bonds

Green bonds = second-best instrument

# Green bonds

## The green bond premium

### Definition

- The green bond premium (or greenium) is the difference in pricing between green bonds and regular bonds
- The greenium is defined as:

$$g = y(\text{GB}) - y(\text{CB})$$

where  $y(\text{GB})$  is the yield (or return) of the green bond and  $y(\text{CB})$  is the yield (or return) of the conventional twin bond

# Green bonds

## The green bond premium

- From the issuer's point of view, a green bond issuance is more expensive than a conventional issuance due to the need for external review, regular reporting and impact assessments
- From the investor's point of view, there is no fundamental difference between a green bond and a conventional bond, meaning that one should consider a negative green bond premium as a market anomaly

# Green bonds

## The green bond premium

### Green twin bonds

- Introduced in 2020 by Germany
- Issuance of a green and conventional bond at the same time with the same characteristics
- Investors may swap the green bond with the conventional bond any time, but not vice-versa
- Liquidity of the green bond market ↗

# Green bonds

## The green bond premium

### Examples of twin bonds:

- On 3 September 2020, the 10-year German green bond with a coupon of 0.00% was priced 1 basis point below the 10-year conventional German bond
- On 19 January 2022, Denmark issued a 10-year green bond with the same maturity, interest payment dates and coupon rate as the conventional 2031 Danish bond. The effective yield of the green bond was 5 basis points below the twin regular bond

# Green bonds

## The green bond premium

### Example #1

We consider a 10-year green bond  $GB_1$  whose current price is equal to 91.35. The corresponding conventional twin bond is a 20-year regular bond, whose remaining maturity is exactly equal to ten years and its price is equal to 90.07%. We assume that the two bonds have the same coupon level, which is equal to 4%.

# Green bonds

## The green bond premium

Computation of the greenium with the current yield:

- We have:

$$y(\text{GB}) = \frac{4}{91.35} = 4.379\%$$

and:

$$y(\text{CB}) = \frac{4}{90.07} = 4.441\%$$

- We deduce that the greenium is equal to:

$$g = 4.441\% - 4.379\% = -6.2 \text{ bps}$$

# Green bonds

## The green bond premium

Computation of the greenium with the yield to maturity:

- We solve the equation:

$$\sum_{t=1}^{10} 4e^{-ty} + 100e^{-10y} = 91.35$$

and find:

$$y(\text{GB}) = 5\%$$

- We solve the equation:

$$\sum_{t=1}^{10} 4e^{-ty} + 100e^{-10y} = 90.07$$

and find:

$$y(\text{CB}) = 5.169\%$$

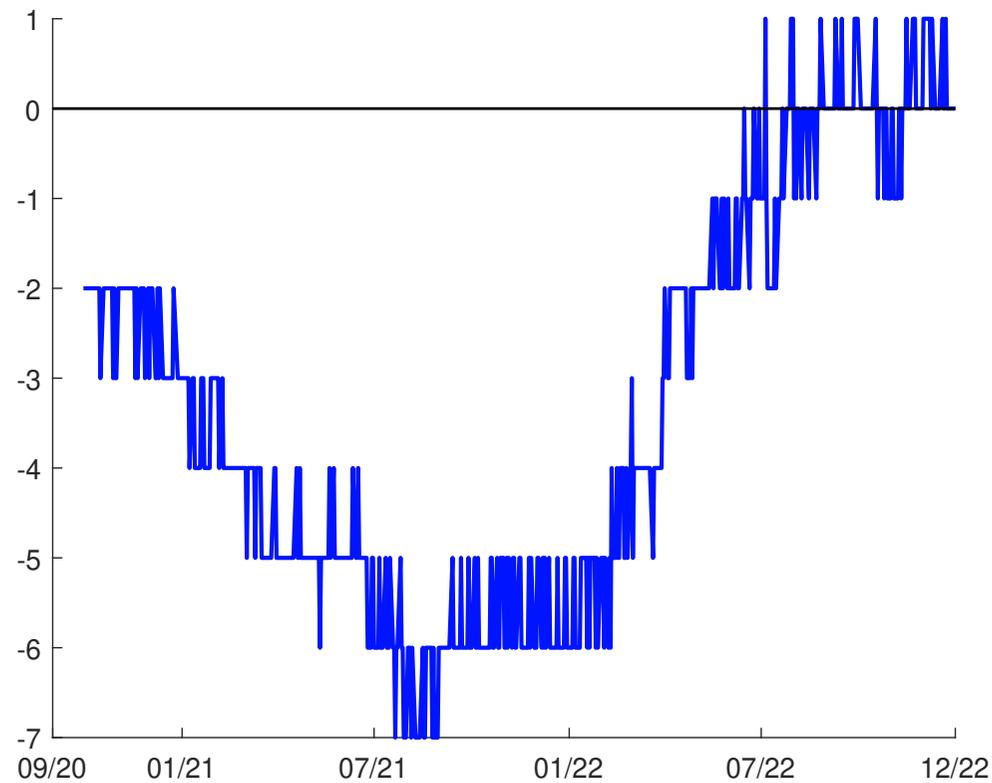
- We deduce that the greenium is equal to:

$$g = 5\% - 5.169\% = -16.9 \text{ bps}$$

# Green bonds

## The green bond premium

Figure 6: Greenium in bps of the German green (twin) bond (DBR 0% 15/08/2030)



Source: ICE (2022).

# Green bonds

## The green bond premium

**What about the greenium when the green bond is not a twin bond?**

⇒ We must distinguish primary and secondary markets

# Green bonds

## The green bond premium

- In the primary market, the greenium is negative ( $\approx 5 - 10$  bps on average)
- How to measure the persistence of the greenium in the secondary market?

# Green bonds

## The green bond premium

There are two approaches:

① Bottom-up approach

- Compares the green bond of an issuer with a synthetic conventional bond of the same issuer
- Same characteristics in terms of currency, seniority and duration

② Top-down approach

- Compare a green bond index portfolio to a conventional bond index portfolio
- Same characteristics in terms of currency, sector, credit quality and maturity

# Green bonds

## The green bond premium

### Bottom-up approach

- 1 We filter all the conventional bonds, which has the same issuer, the same currency, and the same seniority of the green bond GB
- 2 We select the two conventional bonds  $CB_1$  and  $CB_2$  which are the nearest in terms of modified duration:

$$|\text{MD}(\text{GB}) - \text{MD}(\text{CB}_j)|_{j \neq 1,2} \geq \sup_{j=1,2} |\text{MD}(\text{GB}) - \text{MD}(\text{CB}_j)|$$

- 3 We perform the linear interpolation/extrapolation of the two yields  $y(\text{CB}_1)$  and  $y(\text{CB}_2)$ :

$$y(\text{CB}) = y(\text{CB}_1) + \frac{\text{MD}(\text{GB}) - \text{MD}(\text{CB}_1)}{\text{MD}(\text{CB}_2) - \text{MD}(\text{CB}_1)} (y(\text{CB}_2) - y(\text{CB}_1))$$

# Green bonds

## The green bond premium

### Example #2

- We consider a green bond, whose modified duration is 8 years. Its yield return is equal to 132 bps
- We can surround the green bond by two conventional bonds with modified duration 7 and 9.5 years. The yield is respectively equal to 125 and 148 bps
- The interpolated yield is equal to:

$$\begin{aligned}y(\text{CB}) &= 125 + \frac{8 - 7}{9.5 - 7} (148 - 125) \\ &= 134.2 \text{ bps}\end{aligned}$$

- It follows that the greenium is equal to  $-2.2$  bps:

$$g = 132 - 134.2 = -2.2 \text{ bps}$$

# Green bonds

## The green bond premium

### Top-down approach

- 1 We consider a portfolio  $w = (w_1, \dots, w_n)$  of green bonds.
- 2 We perform a clustering analysis by considering the 4-uplets (Currency  $\times$  Sector  $\times$  Credit quality  $\times$  Maturity)
- 3 Let  $(C_h, S_j, R_k, M_l)$  be an observation for the 4-uplet (e.g. EUR, Financials, AAA, 1Y-3Y). We compute its weight:

$$\omega_{h,j,k,l} = \sum_{i \in (C_h, S_j, R_k, M_l)} w_i$$

- 4 The greenium is then defined as the weighted excess yield:

$$\mathbf{g} = \sum_{h,j,k,l} \omega_{h,j,k,l} (y_{h,j,k,l}(\text{GB}) - y_{h,j,k,l}(\text{CB}))$$

# Green bonds

## The green bond premium

### Main result (Ben Slimane *et al.*, 2020)

The greenium is negative between  $-5$  and  $-2$  bps on average

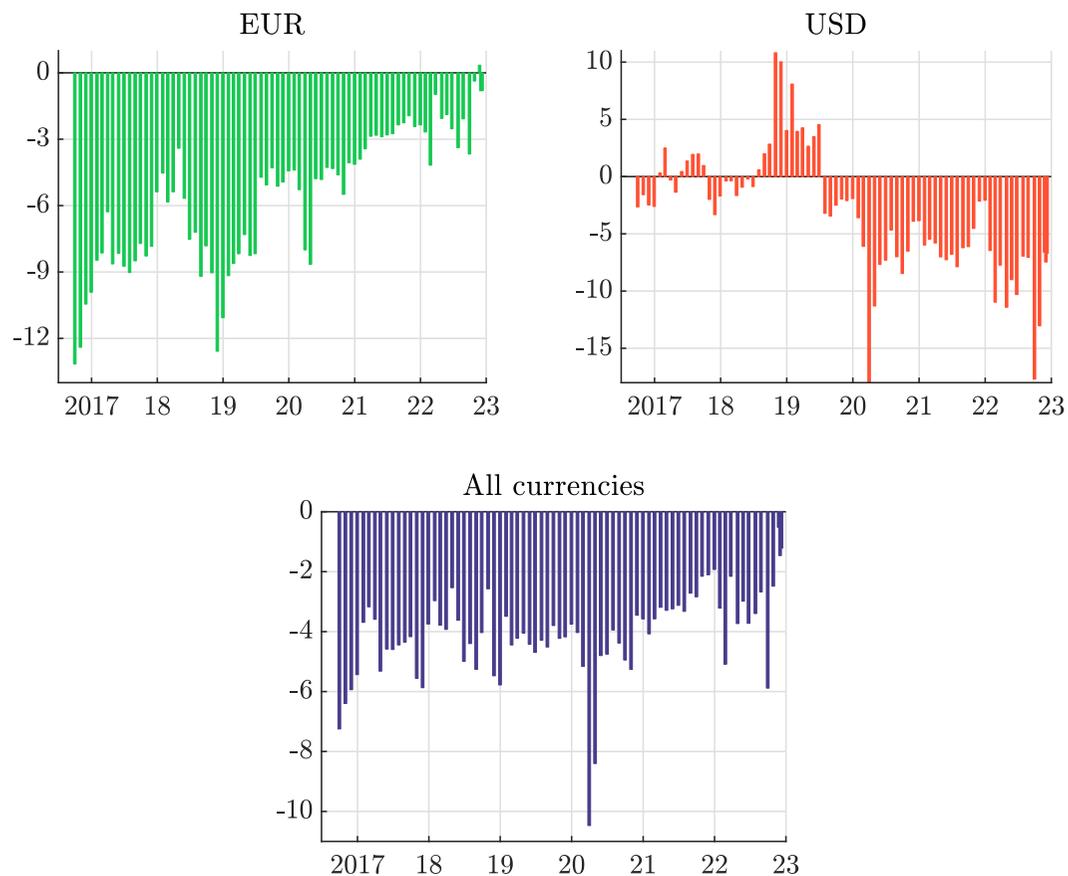
#### Other results:

- Differences between sectors, currencies, maturities, regions and ratings
- Transatlantic divided between US and Europe
- The volatility of green bond portfolios are lower than the volatility of conventional bond portfolios  $\Rightarrow$  identical Sharpe ratio since the last four years
- Time-varying property of the greenium

# Green bonds

## The green bond premium

Figure 7: Evolution of the greenium (in bps)



Source: Ben Slimane *et al.* (2020)

# Green bonds

## The green bond premium

### Green financing $\Leftrightarrow$ green investing

- 1 Bond issuers have a competitive advantage to finance their environmental projects using green bonds instead of conventional bonds
- 2 Another premium? the “green bond issuer premium”

# Social bonds

## Definition

Social Bonds are any type of bond instrument where the proceeds, or an equivalent amount, will be exclusively applied to finance or re-finance in part or in full new and/or existing eligible **social projects** and which are aligned with the four core components of the Social Bond Principles (SBP).

Source: ICMA (2021), <https://www.icmagroup.org/sustainable-finance>

# Social bonds

## Social Bonds Principles

### Social Bonds Principles (SBP)

The 4 core components of the SBP are:

- ① Use of proceeds
  - ① Eligible social project categories
  - ② **Target populations**
- ② Process for project evaluation and selection
- ③ Management of proceeds
- ④ Reporting

<https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks>

# Social bonds

## Social Bonds Principles

The **eligible social projects categories** (component 1) are:

- Affordable basic infrastructure (e.g. clean drinking water, sanitation, clean energy)
- Access to essential services (e.g. health, education)
- Affordable housing (e.g. sustainable cities)
- Employment generation (e.g. pandemic crisis)
- Food security and sustainable food systems (e.g. nutritious and sufficient food, resilient agriculture)
- Socioeconomic advancement and empowerment (e.g. income inequality, gender inequality)
- Etc.

# Social bonds

## Social Bonds Principles

The **target populations** (component 1) are:

- Living below the poverty line
- Excluded and/or marginalised populations/communities
- People with disabilities
- Migrants and /or displaced persons
- Undereducated
- Unemployed
- Women and/or sexual and gender minorities
- Aging populations and vulnerable youth
- Etc.

# Social bonds

## Social Bonds Principles

With respect to the **process for project evaluation and selection** (component 2), the issuer of a social bond should clearly communicate:

- the social objectives
- the eligible projects
- the related eligibility criteria

The **management of proceeds** (component 3) includes:

- The tracking of the “*balance sheet*” and the allocation of funds<sup>8</sup>
- An external review (not mandatory but highly recommended)

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<sup>8</sup>The proceeds should be credited to a sub-account

# Social bonds

## Social Bonds Principles

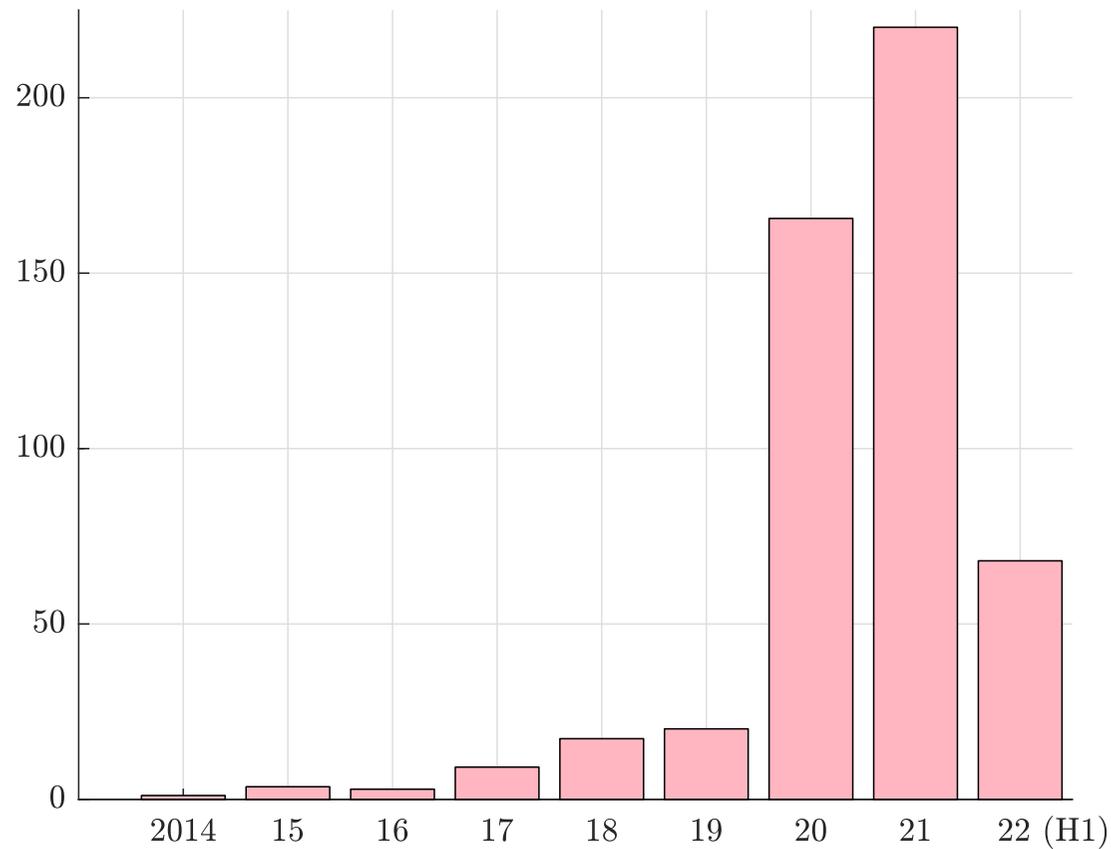
The **reporting** (component 4) must be based on the following pillars:

- Transparency
- Description of the projects, allocated amounts and expected impacts
- Qualitative performance indicators
- Quantitative performance measures (e.g. number of beneficiaries)

# Social bonds

## Market

Figure 8: Issuance of social bonds



Source: <https://www.climatebonds.net/market/data>.

# Social bonds

## Examples

- Instituto de Crédito Oficial (Spanish state-owned bank, March 2020)  
*“The Social Bond proceeds under ICO’s Second – Floor facilities will be allocated to loans to finance small, medium and micro enterprises with an emphasis on employment creation or employment retention in: (1) specific economically underperforming regions of Spain; (2) specific municipalities of Spain facing depopulation; (3) regions affected by a natural disaster. [...] The target populations are SMEs in line with European Union’s standards.”*

# Social bonds

## Examples

- Pepper Money (non-bank lender in Australia and New Zealand, April 2022)  
*“The positive social impact of a Pepper Money eligible social project derives from its direct contribution to improving access to financial services and socio-economic empowerment, by using proprietary systems to make flexible loan solutions available to applicants who are not served by traditional banks. [...] Pepper Money is seeking to achieve positive social outcomes for a target population of Australians that lack access to essential financial services and experience inequitable access to and lack of control over assets. Pepper Money directly aims to address the positive social outcome of home ownership for borrowers who may have complexity in their income streams, gaps in their loan documentation or have adverse credit history. Traditionally, this cohort has been underserved by banks that rely on inflexible algorithmic loan application processing.”*

# Social bonds

## Examples

- Danone (French multinational food-products corporation, March 2018)  
*“The eligible project categories are: (1) research & innovation for advanced medical nutrition (target populations: infants, pregnant women, patients and elderly people with specific nutritional needs), (2) social inclusiveness (target populations: farmers, excluded and/or marginalised populations and/or communities, people living under the poverty line, rural communities in developing countries), (3) responsible farming and agriculture (target populations: milk producers, farmers), etc.”*

# Social bonds

## Examples

- Korian (European care group, October 2021)  
*“The proceeds of any instrument issued under the framework will be used [...] to provide services, solutions, and technologies that will enable Korian to meet at least one of its social objectives: (1) to increase and improve long-term care nursing home capacity for dependent older adults; (2) to increase and improve medical capacity for people in need of medical support; (3) to increase and improve access to alternative, nonmedical services, technologies, and housing solutions that facilitate the retention of older adults’ autonomy; and (4) to improve the daily provision of care to and foster a safer living environment for its patients. [...] Furthermore, Korian’s target populations are older adults, which Korian defines as being over 65 years of age, and those who are dependent on others for some degree of care, which is defined by the health authorities or insurance system of the respective country.”*

# Social bonds

## Examples

- JASSO (Japan Student Services Organization, July 2022)  
*“The social project categories concern the financing of the ‘Category 2 Scholarship Loans’ (interest-bearing scholarship loans that have to be repaid) while the target population is made up of students with financial difficulties.”*

# Other sustainability-related instruments

## Sustainability bonds

Sustainability bond = GBP + SBP

### Remark

*According to CBI, the cumulative issuance of sustainability bonds reaches \$620 bn at the end of June 2022*

# Other sustainability-related instruments

## Sustainability-linked bonds (SLB)

### Sustainability-linked bond (SLB)

- Two principles:
  - = a sustainability bond (green/social)
  - + a step up coupon if the KPI is not satisfied

⇒ forward-looking performance-based instrument
- The financial characteristics of the bond depends on whether the issuer achieves predefined ESG objectives
- Those objectives are:
  - ① measured through predefined Key Performance Indicators (KPI)
  - ② assessed against predefined Sustainability Performance Targets (SPT)

# Other sustainability-related instruments

## Sustainability-linked bonds (SLB)

### ENEL General Purpose SDG Linked Bond

- SDG: 7 (affordable and clean energy), 13 (climate action), 9 (industry, innovation and infrastructure) and 11 (sustainable cities and communities)
- SDG 7 target: renewables installed capacity as of December 31, 2021  $\geq$  55% (confirmed by external verifier)
- One time step up coupon of 25 bps if SDG 7 is not achieved
- On April 2022, the independent report produced by KPMG certifies that *“the renewables installed capacity percentage as of December 31, 2021 is equal to 57.5%”*.

# Other sustainability-related instruments

## Sustainability-linked bonds (SLB)

### H&M sustainability-linked bond

- 18 February 2021
- €500 mn
- Maturity of 8.5 years
- The annual coupon rate is 25 bps
- The objectives to achieve by 2025 are:
  - $KPI_1$  Increase the share of recycled materials used to 30% ( $SPT_1$ )
  - $KPI_2$  Reduce emissions from the Group's own operations (scopes 1+2) by 20% ( $SPT_2$ )
  - $KPI_3$  Reduce scope 3 emissions from fabric production, garment manufacturing, raw materials and upstream transport by 10% ( $SPT_3$ )
- The global KPI is equal to  $40\% \times KPI_1 + 20\% \times KPI_2 + 40\% \times KPI_3$
- The step-up of the coupons can consequently be 0%, 20%, 40%, 60%, 80% or 100% of the total step-up rate

# Other sustainability-related instruments

## Sustainability-linked bonds (SLB)

According to Berrada *et al.* (2022), “the SLB market has grown strongly since its inception. [...] Bloomberg identifies a total of 434 outstanding bonds flagged as ‘sustainability-linked’ as of February 2022. In contrast, in 2018, there was only a single SLB. The amount raised through the single 2018 SLB issue was \$0.22 bn, whereas the total amount raised through all SLBs issued in 2021 was approximately \$160 bn” .

- The large majority of SLB issues address exclusively **E** issues (65%) or a combination of **E**, **S** and **G** issues (17%) or **E** and **G** issues (3%)
- The most frequent KPI concerns GHG emissions (40 %), followed by the issuer’s global ESG score (14 %)

# Other sustainability-related instruments

## Transition bonds

- Financial instruments to support the transition of an issuer, which has significant current carbon emissions
- Fund projects such as renewable energy developments, energy efficiency upgrades, etc.
- The final objective of the bond issuer is always to reduce their carbon emissions
- For example, transition bonds can be used to switch diesel powered ships to natural gas or to implement carbon capture and storage.

# Sustainable real assets

# Definition

## Principle

- Financial risks  $\Rightarrow$  financial performance (return, volatility, Sharpe ratio, etc.)
- Extra-financial risks  $\Rightarrow$  financial performance (return, volatility, Sharpe ratio, etc.)
- **Extra-financial risks  $\Rightarrow$  extra-financial performance** (ESG KPIs)

What is the final motivation of the ESG investor?

Financial performance or/and extra-financial performance?

# Definition

## Definition

The key elements of impact investing are:

- 1 Intentionality  
The intention of an investor to generate a positive and measurable social and environmental impact
- 2 Additionality  
Fulfilling a positive impact beyond the provision of private capital
- 3 **Measurement**  
Being able to account for in a transparent way on the financial, social and environmental performance of investments

Source: Eurosif (2019)

**The investor must be able to measure its impact  
from a quantitative point of view**

Figure 9: Global Impact Investing Network (GIIN)



<https://thegiin.org>

# The example of social impact bonds

Social impact bond (SIB) = **pay-for-success bond** ( $\approx$  call option)

## The Peterborough SIB

- On 18 March 2010, the UK Secretary of State for Justice announced a six-year SIB pilot scheme that will see around 3 000 short term prisoners from Peterborough prison, serving less than 12 months, receiving intensive interventions both in prison and in the community
- Funding from investors will be initially used to pay for the services
- If reoffending is not reduced by at least 7.5%, the investors will receive no recompense

# The example of sustainability-linked bonds

Sustainability-linked<sup>9</sup> (SLB) = **pay-for-failure bond** ( $\approx$  cap option)

**Risk taker**

**SIB: investor viewpoint  $\neq$  SLB: issuer viewpoint**

---

<sup>9</sup>See the examples of ENEL and H&M previously

# Measurement tools

## Impact assessment and metrics

- Avoided CO2 emissions in tons per \$M invested
- Amount of clean water produced by the project
- Number of children who are less obese
- Land management
- Affordable housing
- Job creation
- Construction of student housing

# Sustainable development goals (SDG)

The sustainable development goals are a collection of 17 interlinked global goals designed to be a “*blueprint to achieve a better and more sustainable future for all*”

<https://sdgs.un.org>

# Sustainable development goals (SDG)

Figure 10: The map of sustainable development goals



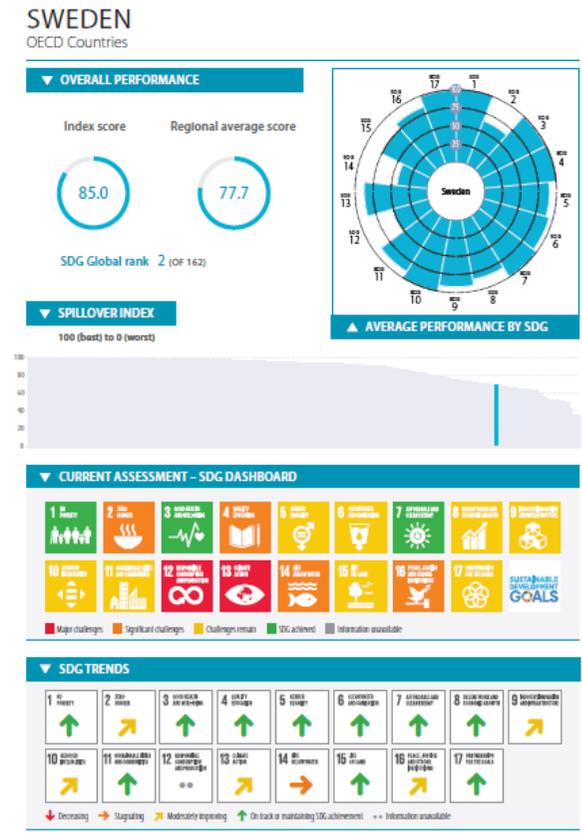
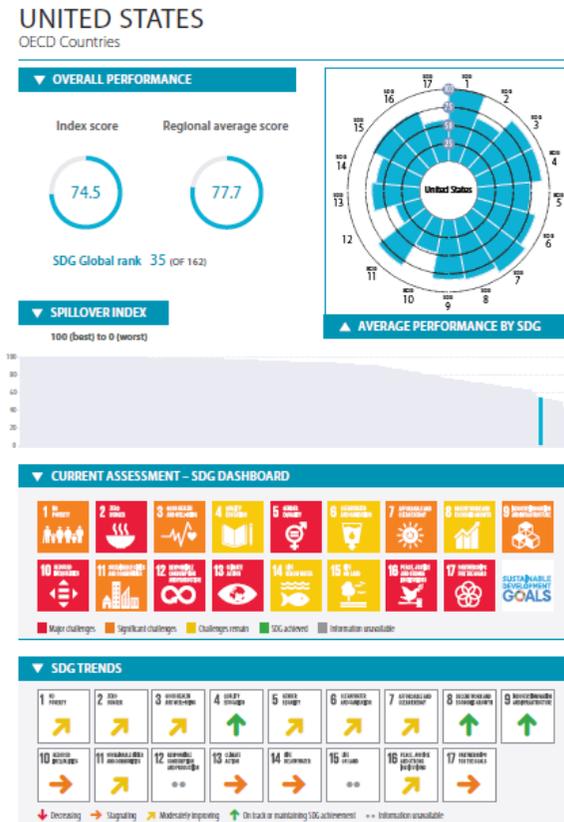
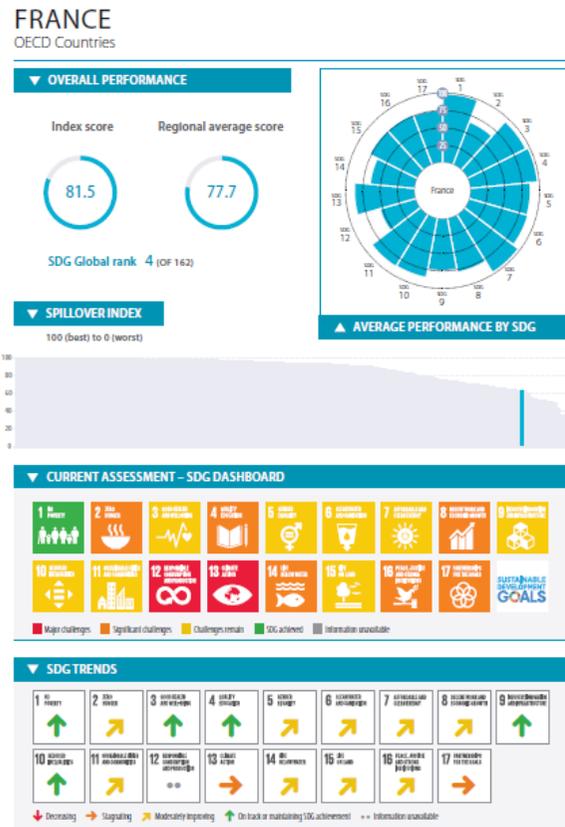
# Sustainable development goals (SDG)

Figure 11: Mapping the SDGs across **E**, **S** and **G**



# Sustainable development goals (SDG)

Figure 12: Examples of sovereign SDG reports



Notes: The full title of Goal 17 'Partnerships for Sustainable Development' is 'Partnerships for Sustainable Development to Revitalize and Promote Sustainable Agriculture'. The full title of each SDG is available here: <https://www.sustainabledevelopment.un.org/topics/sustainabledevelopmentgoals>.

Notes: The full title of Goal 17 'Partnerships for Sustainable Development' is 'Partnerships for Sustainable Development to Revitalize and Promote Sustainable Agriculture'. The full title of each SDG is available here: <https://www.sustainabledevelopment.un.org/topics/sustainabledevelopmentgoals>.

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Source: Sustainable Development Report 2019, <https://dashboards.sdgindex.org>

# The challenge of reporting

- Impact reporting and investment standards (IRIS) proposed by GIIN
- EU taxonomy on sustainable finance
- Non-financial reporting directive 2014/95/EU (NFRD)
- Carbon accounting

# The challenge of reporting

**Table 2:** Impact reporting of the CPR Invest — Social Impact fund

	Social indicator		Coverage ratio	
	Global Index	CPR Fund	Global Index	CPR Fund
CEO pay ratio	333	114	82%	84%
% of women in the board direction	18%	19%	79%	75%
Hours of training	33 hours	39 hours	33%	45%
Trade union rate	36%	45%	25%	36%

Source: CPR Asset Management (2021)

# The challenge of reporting

- Amundi ARI – Impact Green Bonds (Annual impact record 2020)
  - GHG avoided emissions per €1 mn invested per year : 586.5 tCO<sub>2</sub>e
  - GHG avoided emissions rebased per €1 mn invested per year 882.7 tCO<sub>2</sub>e
- CPR Invest – Climate Action
  - –69% of tCO<sub>2</sub>e wrt MSCI ACWI
- CPR Invest – Food For Generations
  - **Water consumption**: 6 765 m<sup>3</sup>/meur for the fund vs 13 258 for the benchmark and 18 869 for the universe
  - **Waste recycling ratio**: 71.14% for the fund vs 66.45% for the benchmark and 67.22% for the universe

Source: Amundi (2021) and CPR Asset Management (2021)

# The challenge of reporting

**Table 3:** Impact investing reporting of the Amundi Finance & Solidarité fund

	2020	Since inception (2012)
People housed	2 364	10 336
Job created/preserved	9 439	43 655
Care recipients	83 240	250 314
Trained people	18 702	59 686
Preserved agricultural farmland (hectare)	438	987
Waste recycling (ton)	82 590	219 287
Microcredit beneficiaries	60 171	276 514

Source: Amundi (2021)

# The challenge of reporting

Figure 13: Companies' portfolio contribution of the Finance & Solidarité fund



Source: Amundi (2021)

# Stewardship vs. engagement

Voting  $\subset$  Engagement  $\subset$  Stewardship

# Stewardship vs. engagement

Figure 14: Difference between stewardship and engagement reports

Amundi Stewardship  
Report (2021)



Amundi Engagement  
Report (2021)



Source: Amundi corporate website,  
<https://about.amundi.com/esg-documentation>.

# Stewardship

*“It guides investors on how to implement the PRI’s Principle 2, which sets out signatories’ commitment to stewardship, stating: we will be active owners and incorporate ESG issues into our ownership policies and practices. [...] The PRI defines stewardship as the use of influence by institutional investors to maximise overall long-term value including the value of common economic, social and environmental assets, on which returns and clients’ and beneficiaries’ interests depend.” (PRI, 2021).*

# Definition

**Active ownership  $\approx$  Engagement  $\approx$  Shareholder activism**

*“investors who, dissatisfied with some aspect of a company’s management or operations, try to bring about change within the company without a change in control” Gillan and Starks (2000).*

# Definition

- Conflicting interests between shareholders and management (separation between ownership and control)
- Stakeholder theory (Freeman, 2004)

## Milton Friedman (1970)

*“the social responsibility of business is to increase its profits”*

## Peter Drucker (1954)

*“leaders in every single institution and in every single sector . . . have two responsibilities. They are responsible and accountable for the performance of their institutions, and that requires them and their institutions to be concentrated, focused, limited. They are responsible also, however, for the community as a whole”*

# Shareholder activism

Shareholder activism can take various forms

- 1 Engage behind the scene with management and the board
- 2 Propose resolutions (shareholder proposals)
- 3 Vote (form coalition/express dissent/call back lent shares)
- 4 Voice displeasure publicly (in the media)
- 5 Initiate a takeover (acquire a sizable equity share)
- 6 Exit (sell shares, take an offsetting bet)

Source: Bekjarovski and Brière (2018)

# Shareholder activism

Engage behind the scenes

*“Behind the curtain engagement involves private communication between activist shareholders and the firm’s board or management, that tends to precede public measures such as vote, shareholder proposals and voice. In a sense, the existence of other forms of public activism can be taken as a signal that behind the scene engagements were unsuccessful. When it comes to environmental and social issues, writing to the board or management is a common method through which shareholders can express concern and attempt to influence corporate policy behind the curtain; alternatively, face to face meetings with management or non-executive directors are a more common behind the scene engagement method when it comes to governance.” Bekjarovski and Brière (2018).*

# Shareholder activism

Engage behind the scenes

Three families of engagement:

- 1 on-going engagement, where the goal for investors is to explain their ESG policy and collect information from the company. For instance, they can encourage companies to adopt best ESG practices, alert companies on ESG risks or better understand sectorial ESG challenges;
- 2 engagement for influence (or protest), where the goal is to express dissatisfaction with respect to some ESG issues, make recommendations to the firm and measure/control ESG progress of companies;
- 3 pre-AGM engagement, where the goal is to discuss with companies any resolution items that the investor may vote against.

# Shareholder activism

Engage behind the scenes

The three steps of identification are:

- 1 List of engagement issues
- 2 Screening of companies
- 3 List of targeted companies

The different stages of engagement tracking are:

- Issues are raised to the company;
- Issues are acknowledged by the company;
- The company develops a strategy to address the issues;
- The company implements changes and the issues are resolved;
- The company did not solve the issues and the engagement failed.

# Shareholder activism

## Propose resolutions

According to the SEC (Securities Exchange Act Rule 14a-8, §240):

*“a shareholder proposal or resolution is a recommendation or requirement that the company and/or its board of directors take action, which the shareholder intend to present at a meeting of the company’s shareholders. The proposal should state as clearly as possible the course of action that the shareholder believes the company should follow. If the proposal is placed on the company’s proxy card, the company must also provide in the form of proxy means for shareholders to specify by boxes a choice between approval or disapproval, or abstention.”*

# Shareholder activism

## Propose resolutions

### Threshold criteria:

- US: \$2 000 + No-action letter
- France, Germany and UK: 5% of the capital
- Italy: 2.5% of the capital
- Netherlands: 0.33%
- Spain: 3% of the capital

⇒ Collective shareholder proposals

Shareholder resolution = Escalation

# Shareholder activism

## Propose resolutions

### Some figures (Russell 300 & 2022 proxy season)

- 98% of proposals are filed by the management, while less than 2% corresponds to shareholder resolutions;
- Only 60% of shareholder resolutions are voted; The other 40% are omitted, not presented, withdrawn or pending;
- The average number of proposals per company is around two;
- The proponents of shareholder resolutions are concentrated on a small number of investors or organisations (15 proponents were responsible of 75% of shareholder proposals);
- The repartition of shareholder proposals voted in 2022 was the following: 11% related to **E** issues, 41% related to **S** issues and 48% related to **G** issues

# Shareholder activism

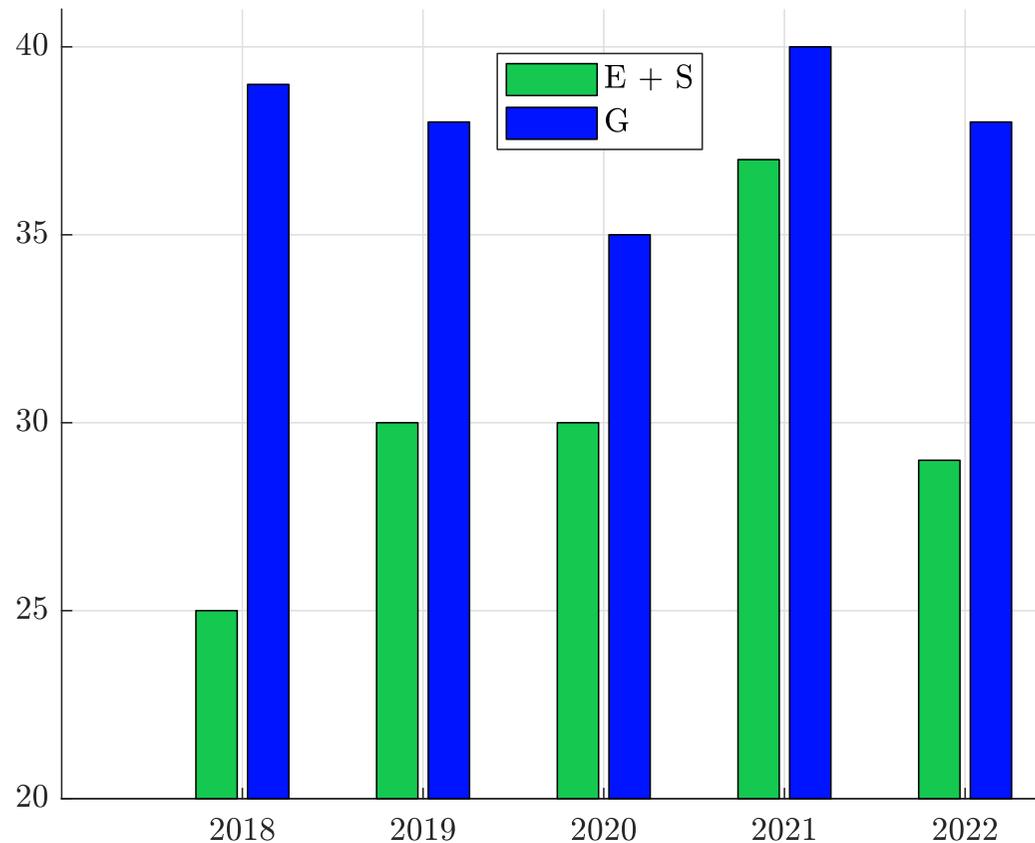
## Vote

- Historical perspectives
- Importance of voting associations and NGOs
- US  $\succ$  Europe
- The concept of proxy voting
  - Institutional Shareholder Services (ISS)
  - Glass Lewis
- Say on Pay (2002)
  - Support rate for Russell 3000 companies: 87% in 2022 (from 15.4% to 99%)
  - Results for Germany, France and Spain
- Say on Climate (2020)

# Shareholder activism

## Vote

Figure 15: Average support rate of shareholder proposals (Russell 3000 companies)



Source: PwC's Governance Insights Center (2022).

# Shareholder activism

## Vote

### Some figures with Russell 3000 companies

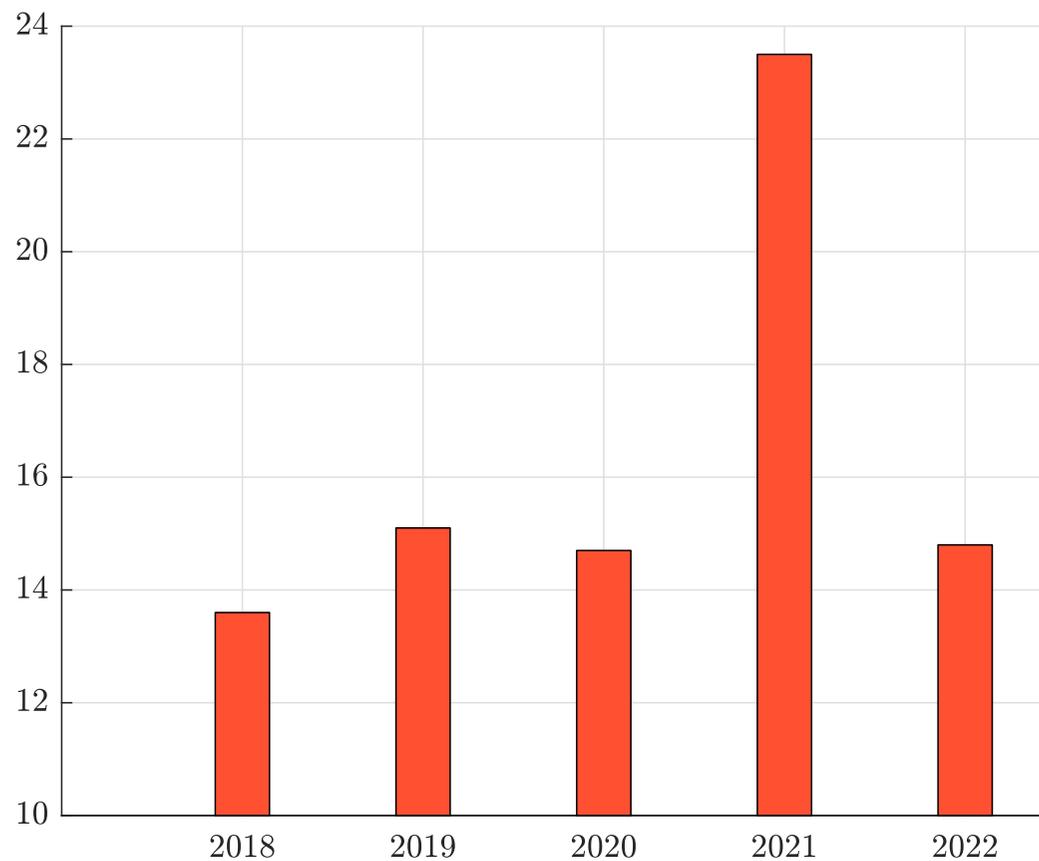
- 555 shareholder resolutions have been voted
- Only 82 have received majority support
- This means that one shareholder resolution was adopted for 37 companies!

**What is the efficiency of vote?  $\neq$  What is the impact of vote?**

# Shareholder activism

## Vote

Figure 16: Pass rate of shareholder proposals (Russell 3000 companies)



Source: Tonello (2022).

# Shareholder activism

## Voice

- 1970: Publication of the book *Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States* by the economist Albert Hirschman
- Exist-voice model: exist **versus** voice or exit **and** voice
- Voice as a form of escalation
- Impact of collaborative engagement (e.g., Climate Action 100+)
- Increasing involvement of NGOs in the debate on engagement and greenwashing

# Shareholder activism

Initiate a takeover

⇒ Hedge funds

# Shareholder activism

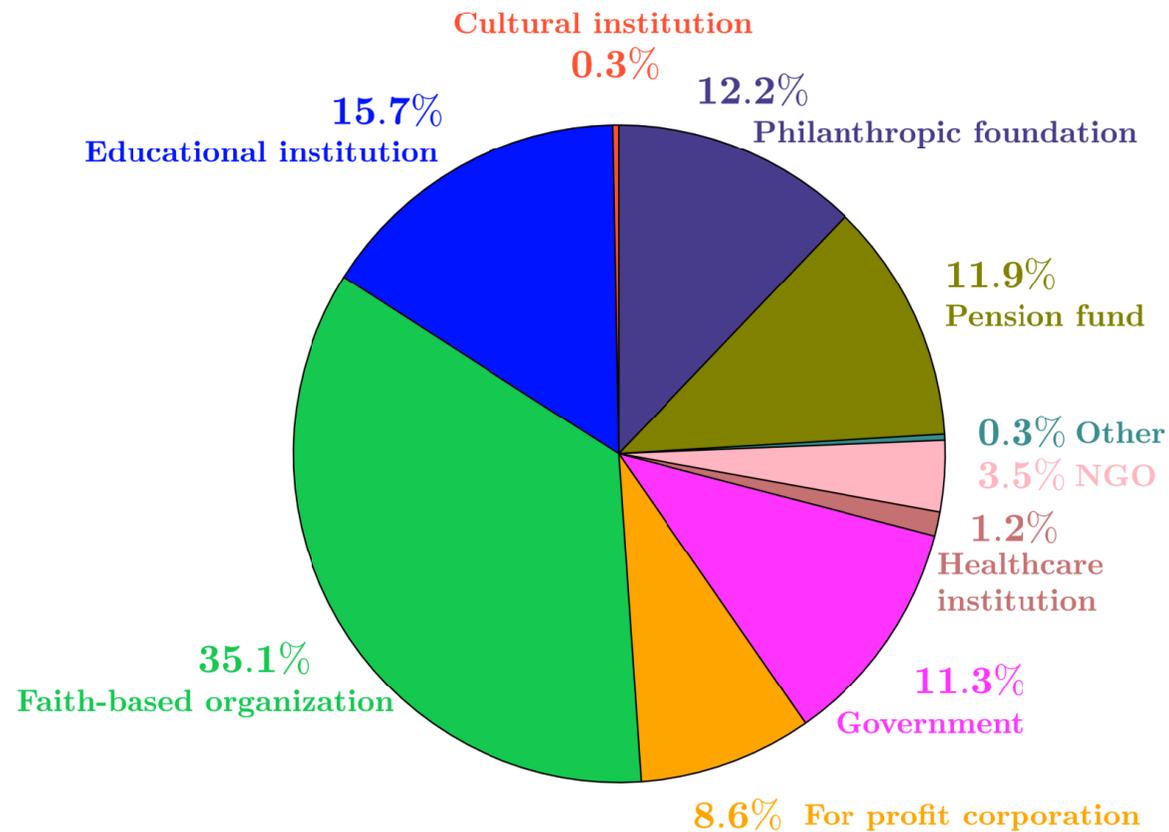
## Exit

- **Exit** refers to the process of selling off investments in a particular company or industry
- **Divestment** is a more general term that implies a significant exposure reduction
- Divestment: Final step in an escalation strategy?

# Shareholder activism

## Exit

Figure 17: What kinds of institutions are divesting from fossil fuel?



Source: <https://divestmentdatabase.org>.

# Shareholder activism

## Exit

### Case study: the Cambridge University endowment fund

*“A dilemma faced by an increasing number of investors is whether to divest from environmentally damaging businesses or whether to enter into a dialogue with them. This predicament now has its epicentre in Cambridge, England, where the ancient University of Cambridge faces great pressure from students and staff to respond to the threat of climate breakdown. Having already received two reports on its approach to responsible investment, the university has appointed a new chief investment officer (CIO) who, alongside University Council and the wider university community, needs to consider the question of whether to divest from or to engage with fossil-fuel firms.” Chambers et al. (2020).*

# Shareholder activism

## Exit

### Case study: Church of England Pensions Board

In 2020, they engaged with 21 companies. At the end of the process, 12 companies were supposed to make sufficient progress, while 9 companies were added to the list of restricted investments. These divestments totalled £32.23 mn (wrt £3.7 bn of assets under management).

# Shareholder activism

## Exit

### Case study: The Universities Superannuation Scheme (USS)

- USS manage about £90 bn
- In 2020, they excluded certain sectors: tobacco manufacturing; thermal coal mining (coal to be burned for electricity generation), specifically where they made up more than 25% of revenues, and certain controversial weapons
- The first exclusion was announced in May 2020
- Two years after, divestment from these sectors is completed
- Ethics for USS  $\Rightarrow$  USS should extend its divestment policy

# Individual vs. collaborative engagement

# The role of institutional investors

# Impact of active ownership

# Voting process

- *“The company sets the agenda for the annual shareholder meeting;*
- *The custodian confirms the identity of the shareholders and the number of shares eligible for voting – often for a specific date ahead of the meeting (record date);*
- *Shareholders receive the meeting materials from the company (may be before or after the record date);*
- *Shareholders procuring proxy advisory services receive voting recommendations;*
- *Shareholders instruct the custodian on how to vote, often through a proxy voting service provider, within a deadline ahead of the shareholder meeting (cut-off date);*
- *Voting takes place at the shareholder meeting;*
- *Shareholders receive confirmation from the service provider that their voting instructions have been carried out.”*

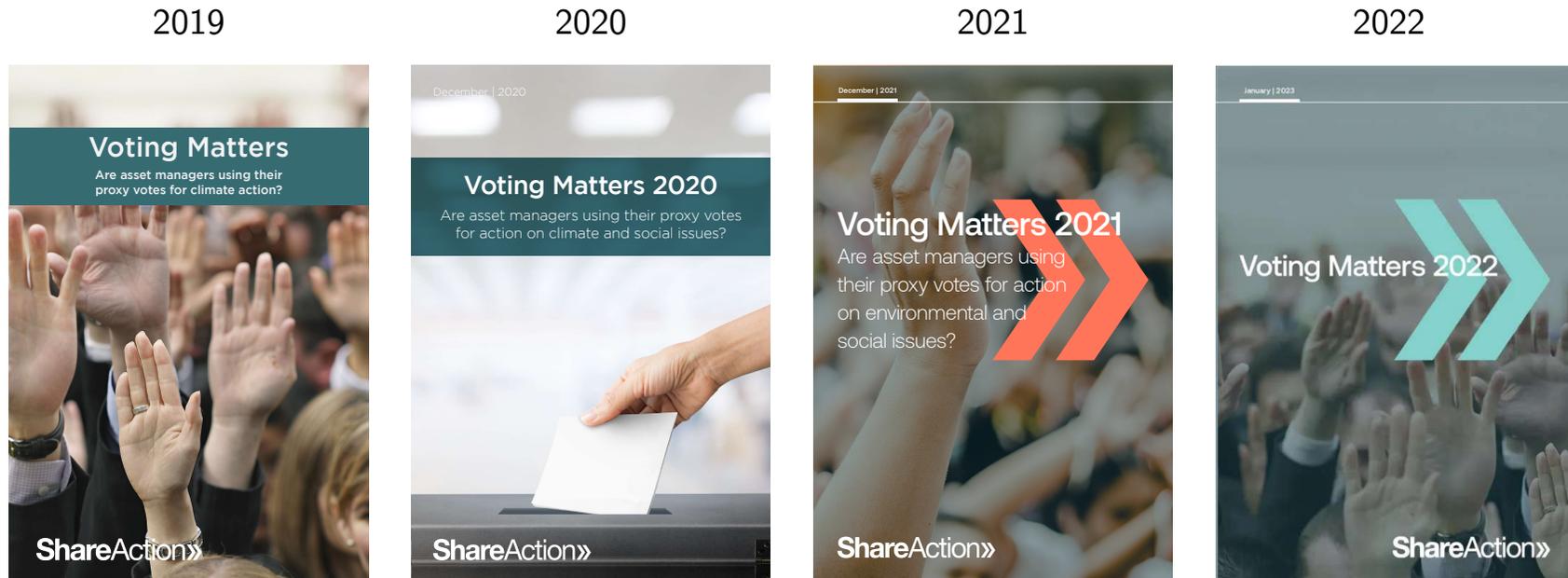
# Proxy voting

# Voting policy

# Statistics about ESG voting

## Asset managers

Figure 18: Voting Matters series of ShareAction



Source: <https://shareaction.org>.

# Statistics about ESG voting

## Asset managers

**Table 4:** Statistics of success rate shareholder resolutions

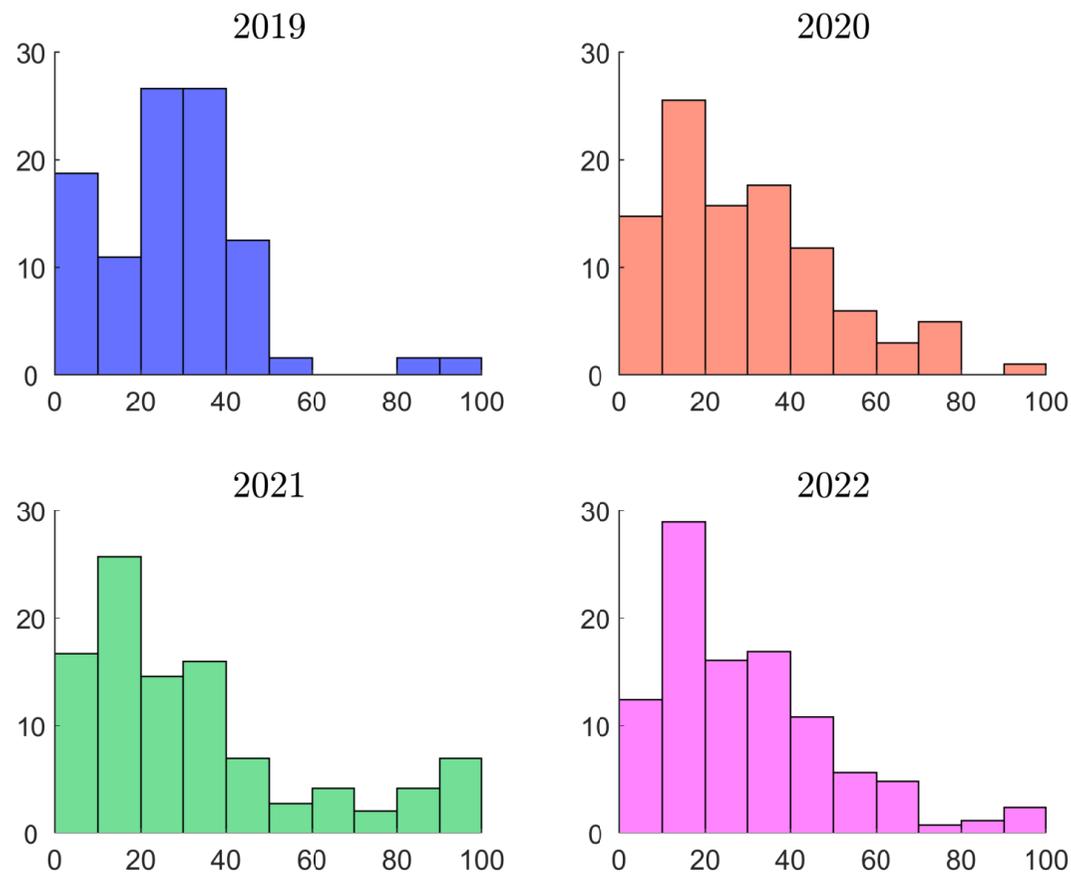
Year		2019	2020	2021	2022
Number of resolutions		64	102	144	249
Resolutions with majority support		3	15	29	37
Success rate (in %)		4.7	14.7	20.1	14.9
Average support rate (in %)		28.2	29.9	32.9	29.9
	10%	6.5	9.2	7.2	9.4
Percentile of support rate (in %)	25%	17.0	13.1	12.0	13.5
	75%	37.7	42.6	42.8	40.3
	90%	41.8	55.2	81.2	57.6
Average support rate (in %)		28.2	35.8	41.8	31.6
			24.5	28.8	27.4

Source: ShareAction (2019, 2020, 2021, 2023) & Author's calculations.

# Statistics about ESG voting

## Asset managers

Figure 19: Histogram (in %) of support rates



Source: ShareAction (2019, 2020, 2021, 2023) & Author's calculations.

# Statistics about ESG voting

## Asset managers

**Table 5:** Average support rate in % for ESG resolutions

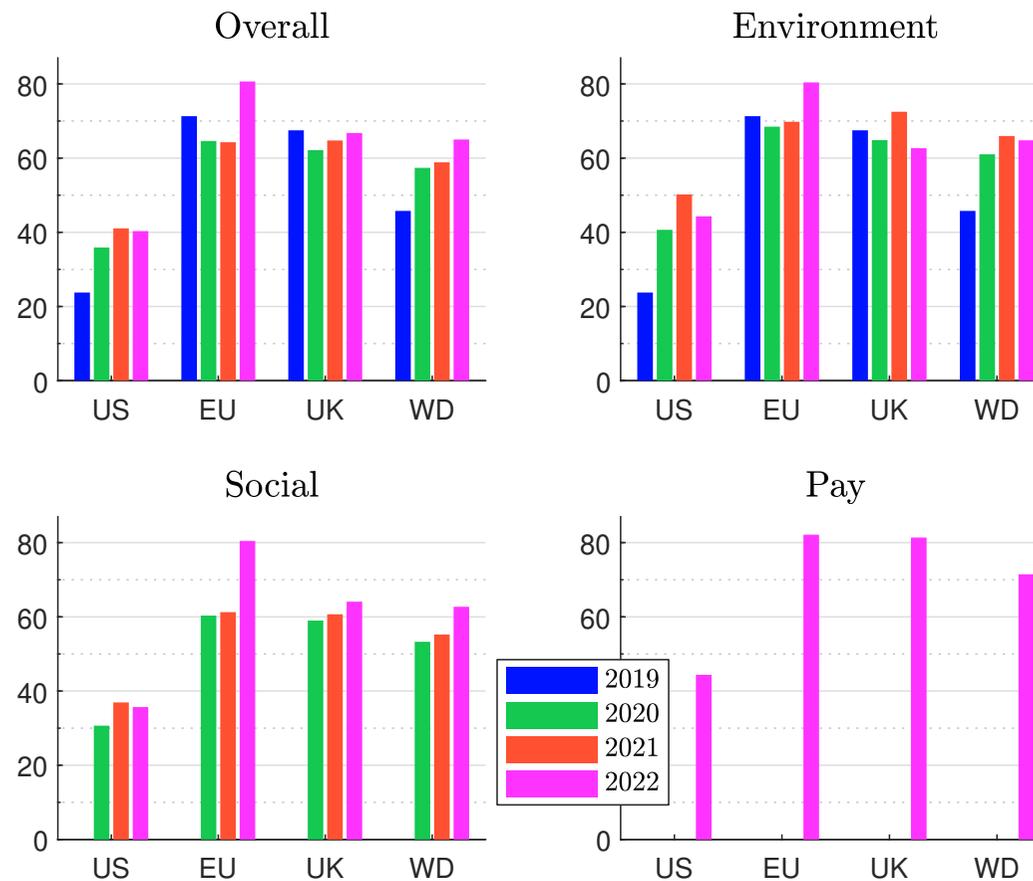
Topic	Method	2019	2020	2021	2022
Overall	Arithmetic	45.8	57.4	58.9	65.0
	Weighted	32.7	42.1	47.6	46.5
Environment	Arithmetic	45.8	61.0	66.0	64.8
	Weighted	32.7	44.7	55.8	48.8
Social	Arithmetic		53.3	55.2	62.7
	Weighted		39.0	43.7	44.3
Pay & politics	Arithmetic				71.5
	Weighted				47.8

Source: ShareAction (2019, 2020, 2021, 2023) & Author's calculations.

# Statistics about ESG voting

## Asset managers

Figure 20: Arithmetic average support rate in % per country and year

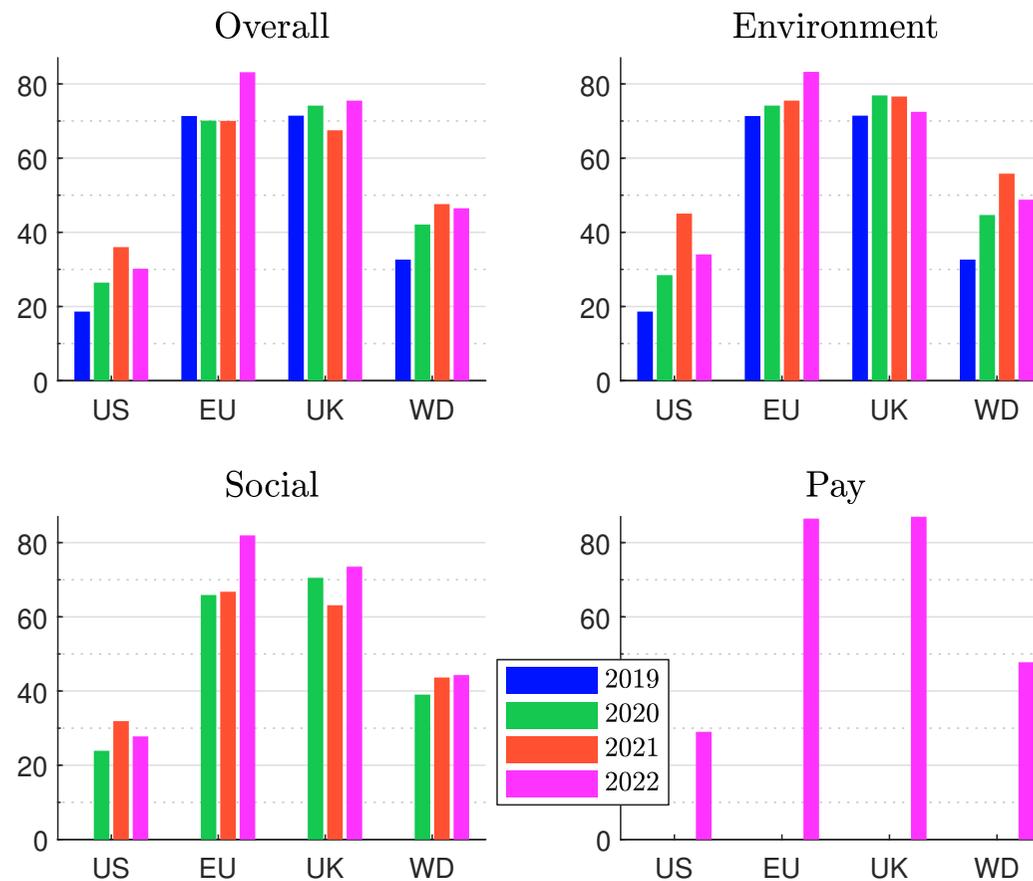


Source: ShareAction (2019, 2020, 2021, 2023) & Author's calculations.

# Statistics about ESG voting

## Asset managers

Figure 21: Weighted average support rate in % per country and year



Source: ShareAction (2019, 2020, 2021, 2023) & Author's calculations.

# Statistics about ESG voting

## Asset managers

Table 6: Best performers (2022, overall)

Rank	Name	Country	AUM	Overall	<b>E</b>	<b>S</b>	Pay
1	Achmea IM	Netherlands	251	100	100	100	100
1	Impax AM	UK	56	100	100	100	100
3	BNP PAM	France	761	99	97	100	100
3	MN	Netherlands	193	99	97	100	100
5	Candriam	Luxembourg	180	98	97	99	100
6	PGGM	Netherlands	331	97	93	100	97
7	Man	UK	149	96	98	94	98
8	Robeco	Netherlands	228	95	94	94	100
9	Aviva Investors	UK	363	93	88	96	100
10	Amundi AM	France	2 348	93	93	92	98
11	Nordea AM	Finland	333	91	93	89	90
12	Aegon AM	Netherlands	466	90	85	94	90
13	Federated Hermes	UK	672	89	88	87	90
14	Pictet AM	Switzerland	284	88	85	90	91
15	Legal & General	Switzerland	1 923	86	84	84	98

Source: ShareAction (2023) & Author's calculations.

# Statistics about ESG voting

## Asset managers

Table 7: Worst performers (2022, overall)

Rank	Name	Country	AUM	Overall	<b>E</b>	<b>S</b>	Pay
59	Goldman Sachs AM	US	2 218	35	56	24	24
60	Baillie Gifford	UK	455	31	29	29	45
61	SSGA	US	4 140	29	30	31	22
62	BlackRock	US	10 014	24	28	24	15
63	T. Rowe Price	US	1 642	17	26	11	18
64	Fidelity Investments	US	4 520	17	23	19	2
65	Vanguard	US	8 274	10	12	9	9
66	Dimensional Fund Advisors	US	679	4	6	5	0
67	Santander AM	Spain	220	4	0	5	6
68	Walter Scott & Partners	UK	95	3	0	6	0

Source: ShareAction (2023) & Author's calculations.

# Statistics about ESG voting

## Asset managers

**Table 8:** Ranking of the 25 largest asset managers (2022, overall)

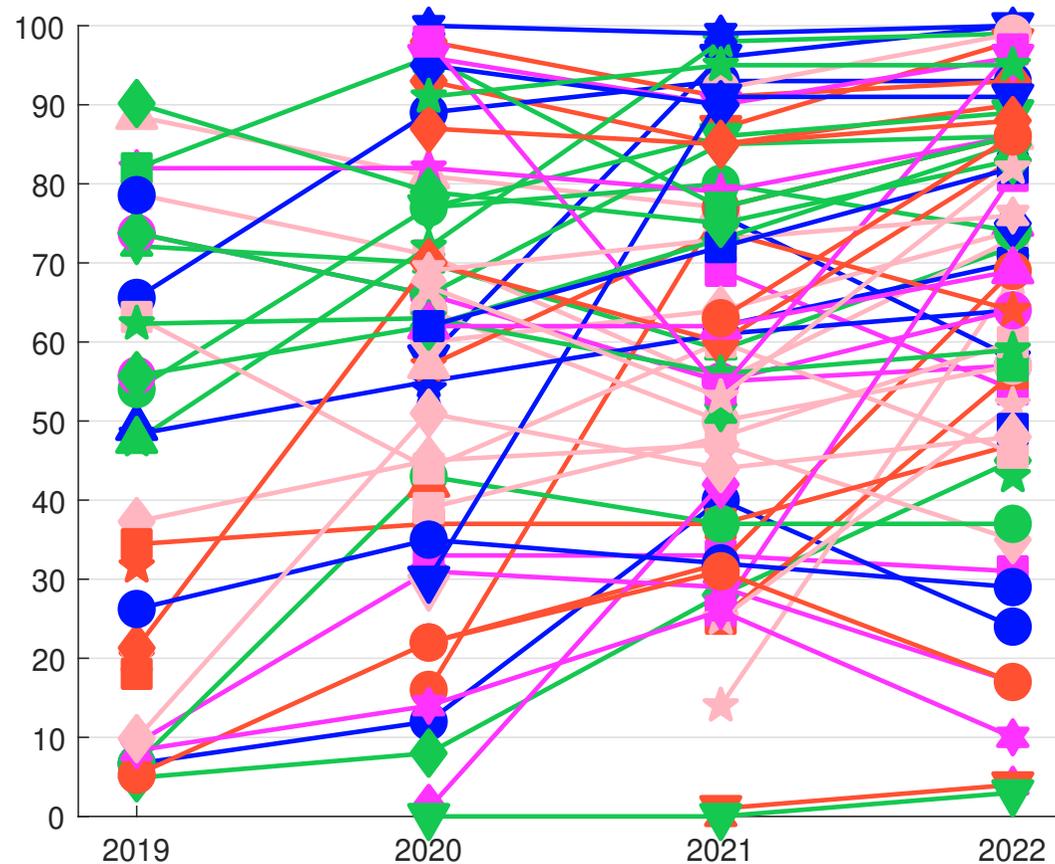
Rank	Name	Country	AUM	Overall			
				2019	2020	2021	2022
22	BlackRock	US	10 014	7	12	40	24
25	Vanguard	US	8 274	8	14	26	10
23	Fidelity Investments	US	4 520	9	31	29	17
21	SSGA	US	4 140	26	35	32	29
18	J.P. Morgan AM	US	2 742	7	43	37	37
16	Capital Group	US	2 716	5	8	28	45
2	Amundi AM	France	2 348	66	89	93	93
20	Goldman Sachs AM	US	2 218	37	45	47	35
3	Legal & General	UK	1 923	82	96	77	86
24	T. Rowe Price	US	1 642	5	22	31	17
15	Invesco	US	1 611	34	37	37	47
12	Morgan Stanley IM	US	1 566			55	64
14	Wellington Management	US	1 426	10	51	44	48
7	Northern Trust AM	US	1 348	21	70	60	83
13	Nuveen AM	US	1 271	62	63	56	59
8	UBS AM	Switzerland	1 216	90	79	75	83
4	DWS	Germany	1 055	74	66	85	86
10	AXA IM	France	1 009	79	71	55	73
6	Schroders	UK	991	56	62	73	85
17	AllianceBernstein	US	779				43
5	Allianz GI	Germany	766	89	81	77	86
1	BNP PAM	France	761	48	72	98	99
19	Columbia Threadneedle	US	754				37
9	Manulife IM	Canada	723				75
11	APG AM	Netherlands	721	72	70	59	72

Source: ShareAction (2019, 2020, 2021, 2023) & Author's calculations.

# Statistics about ESG voting

## Asset managers

Figure 22: Evolution of the support rate in % per asset manager



Source: ShareAction (2019, 2020, 2021, 2023) & Author's calculations.

# Statistics about ESG voting

## Asset managers

### Main findings

- 1 *“49 additional resolutions would have received majority support if the largest asset managers had voted in favour of them.”*
- 2 *Voting performance has been stagnant in the US and the UK compared to 2021, while European asset managers have shown a large improvement.*
- 3 *Asset managers across the board are hesitant to back action-oriented resolutions, which would have the most transformative impact on environmental and social issues.”*

# Statistics about ESG voting

## Asset managers

**Figure 23:** Ranking of the 36 say on climate resolutions with respect to the support rate in %



Source: ShareAction (2023) & Author's calculations.

# Statistics about ESG voting

## Asset managers

### 3 case studies of Say on Climate resolutions

- Electricité de France or EDF (French energy company): 99.9%
- Barclays (British bank): 80.8%
- Woodside Energy Group Ltd. (Australian energy company): 51.03%

# Statistics about ESG voting

## Asset owners