



Sustainability as a risk premia factor during periods of crisis

Chief Investment Office

- I. ESG Scoring Criteria
- II. Pre- and Post-Pandemic Data
- III. ESG Impact on Industry Selection

Vienna, 11.06.2021

ESG Scoring Criteria

Macroeconomic Analysis

→ Environmental

- Climate Change
- Natural Capital
- Pollution & Waste
- Environmental Opportunities

- → Social
- Human Capital
- Product Liability
- Stakeholder Opposition
- Social Opportunities

→ Governance

- Corporate Governance
- Corporate Behavior

MSCI ESG Ratings

- Measure a company's resilience to long-term, industry-specific environmental, social and governance (ESG) risks
- Usage of a rules-based methodology
- Ratings range from leader (AAA, AA), average (A, BBB, BB) to laggard (B, CCC)

ESG Rating Applications

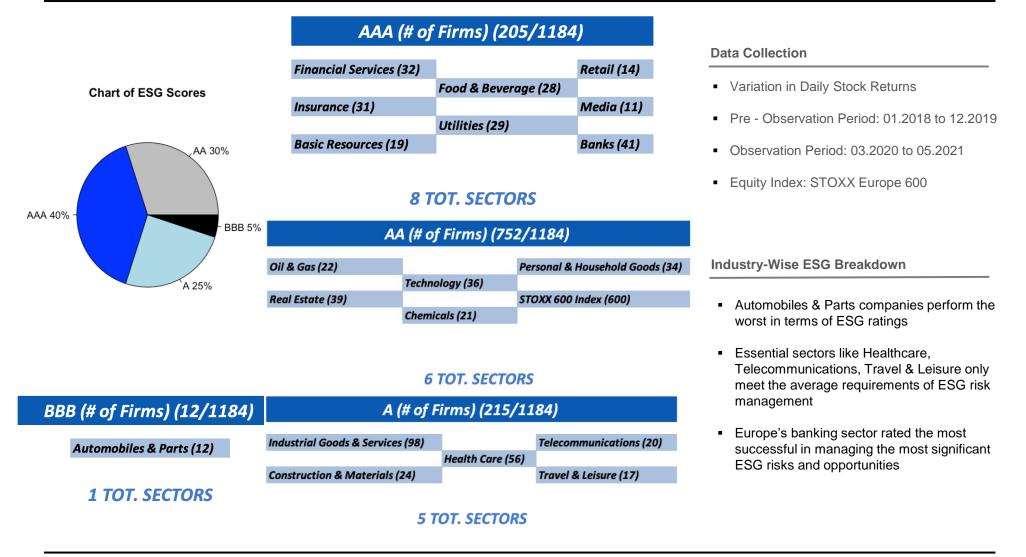
- Fundamental and Quant Analyses
- Portfolio Construction and Risk Management
- Benchmarking/Index-based Product Development
- Disclosure and Reporting for regulators and stakeholders
- Engagement and Thought Leadership



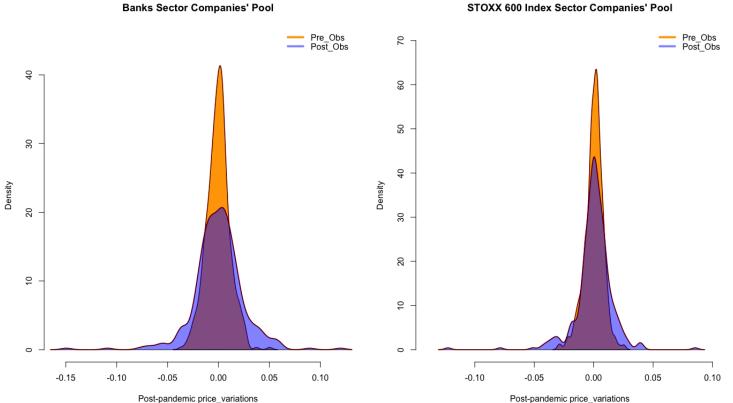
ESG ratings-based classification of European equities



Investigating the connection between sustainability and financial performance



Daily Stock Return Variation Graphs

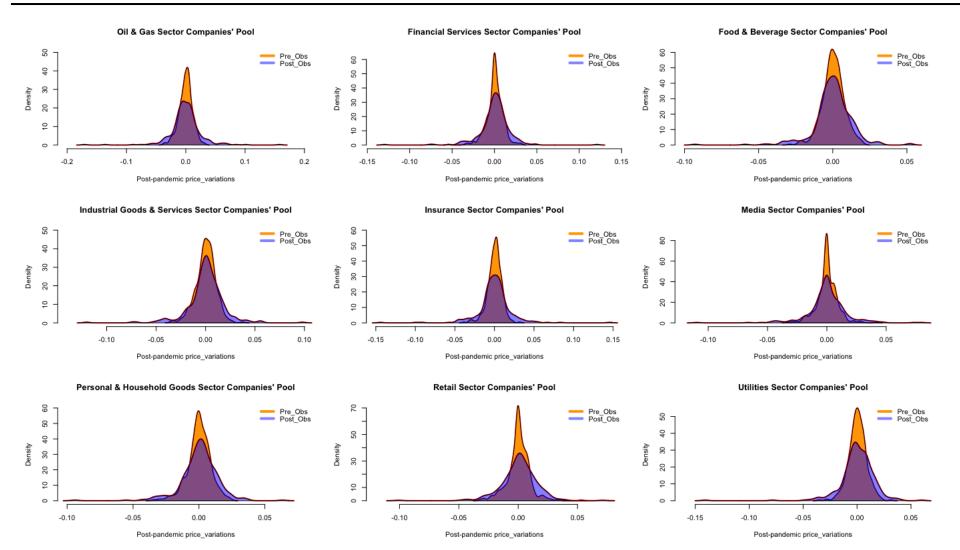


STOXX 600 Index Sector Companies' Pool



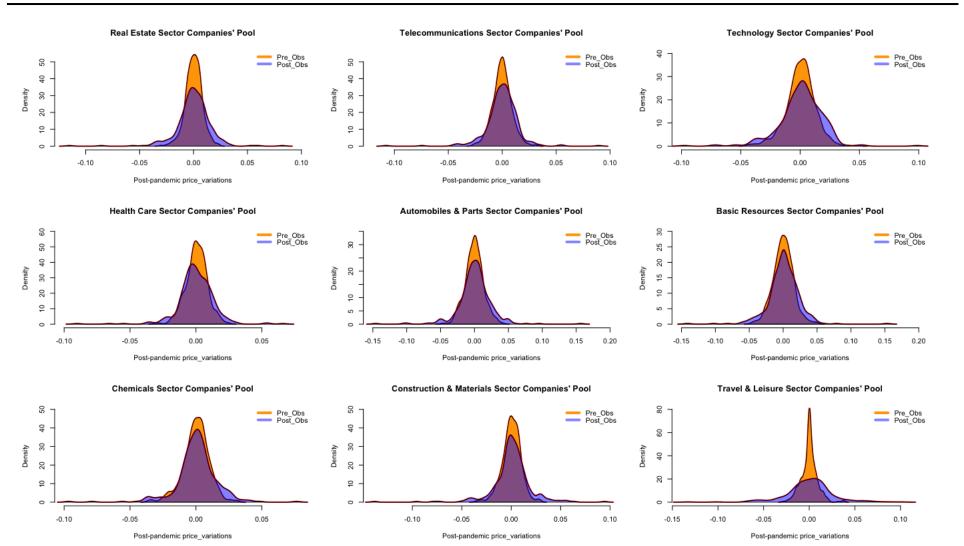
Daily Stock Return Variation Graphs



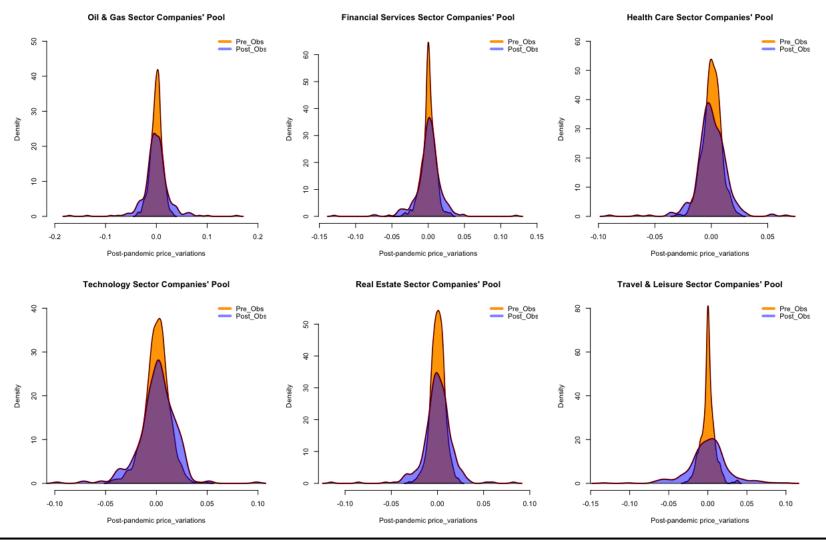


Daily Stock Return Variation Graphs





Daily Stock Return Variation Graphs





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| Observation Period | MSCI_ESG_Score | Alpha (Pre - Obs) | Alpha (Obs) | Beta (Pre - Obs) | Beta (Obs) | Differences in Alphas | Differences in Beta |
|-----------------------------|----------------|-------------------|--------------|------------------|------------|-----------------------|---------------------|
| Oil & Gas | 7,58 | -0,0002821038 | -0,000623679 | 1,026895 | 1,376493 | -0,0003415755 | 0,349598 |
| Financial Services | 8,57 | 0,0002681533 | 0,00010484 | 1,016361 | 1,087102 | -0,0001633131 | 0,070741 |
| Food & Beverage | 8,64 | 0,0001140614 | -0,000016401 | 0,659156 | 0,7209384 | -0,0001304622 | 0,061782 |
| Industrial Goods & Services | 6,01 | 0,0001024315 | 0,000326513 | 1,131581 | 1,110844 | 0,0002240812 | -0,020737 |
| Insurance | 9,61 | 0,0000451843 | -0,000320483 | 0,964845 | 1,245455 | -0,0003656673 | 0,280610 |
| Media | 8,59 | 0,0000177567 | 0,000077693 | 0,727899 | 0,9191973 | 0,0000599360 | 0,191298 |
| Personal & Household Goods | 7,78 | 0,0000407740 | 0,000283515 | 0,849918 | 0,819288 | 0,0002427407 | -0,030630 |
| Retail | 8,76 | 0,0001504254 | 0,000763821 | 0,767735 | 0,7944057 | 0,0006133958 | 0,026671 |
| Utilities | 8,57 | 0,0005605042 | -0,000354583 | 0,634395 | 0,8712368 | -0,0009150867 | 0,236842 |
| Real Estate | 7,40 | 0,0000916614 | -0,000445413 | 0,558108 | 0,8424029 | -0,0005370742 | 0,284295 |
| Banks | 10,00 | -0,0006531614 | -0,000233587 | 1,116895 | 1,319416 | 0,0004195748 | 0,202521 |
| Telecommunications | 6,76 | -0,0003061395 | -0,00031444 | 0,743659 | 0,8014009 | -0,0000083006 | 0,057742 |
| Technology | 8,26 | 0,0002958875 | 0,000514222 | 1,259043 | 0,990382 | 0,0002183347 | -0,268661 |
| Health Care | 6,69 | 0,0003769513 | -0,000135109 | 0,807545 | 0,6659113 | -0,0005120598 | -0,141634 |
| Automobiles & Parts | 5,12 | -0,0006382571 | 0,000754479 | 1,223175 | 1,358004 | 0,0013927363 | 0,134829 |
| Basic Resources | 9,33 | -0,0003461846 | 0,000960255 | 1,394297 | 1,267155 | 0,0013064399 | -0,127142 |
| Chemicals | 8,24 | -0,0000059416 | 0,000454126 | 1,081491 | 0,9172659 | 0,0004600672 | -0,164225 |
| Construction & Materials | 6,34 | 0,0001100126 | 0,000175805 | 1,058157 | 1,187153 | 0,0000657926 | 0,128996 |
| Travel & Leisure | 6,14 | -0,0003350842 | -0,000010792 | 0,796315 | 1,287489 | 0,0003242923 | 0,491174 |

STOXX 600 Index

7,74

Statistical Analysis

Sharpe Ratio

| Industry/Sector | Sharpe Rat | io |
|-------------------------------------|------------|-------|
| Oil & Gas | 0,09 | -0,36 |
| Financial Services | 0,68 | 0,37 |
| Food & Beverage | 0,72 | 0,03 |
| Industrial Goods & Services | 0,46 | 0,46 |
| Insurance | 0,44 | -0,07 |
| Media | 0,45 | 0,14 |
| Personal & Household Goods | 0,36 | 0,47 |
| Retail | 0,65 | 0,82 |
| Utilities | 0,94 | 0,27 |
| Real Estate | 0,41 | -0,16 |
| STOXX 600 Index | 0,34 | 0,23 |
| Banks | -0,61 | -0,08 |
| Telecommunications | -0,38 | -0,13 |
| Technology | 0,53 | 0,65 |
| Health Care | 1,00 | 0,07 |
| Automobiles & Parts | -0,45 | 0,46 |
| Basic Resources | -0,08 | 0,56 |
| Chemicals | 0,29 | 0,55 |
| Construction & Materials | 0,48 | 0,35 |
| Travel & Leisure | -0,03 | -0,05 |



Statistical Analysis



Cornish-Fisher VaR(5%)

| Industry/Sector | Cornish-Fisher VaR(5%) | | |
|-------------------------------------|------------------------|---------------------|--|
| Oil & Gas | 1,89% | 3,98% | |
| Financial Services | 1,62% | <mark>2,8</mark> 0% | |
| Food & Beverage | 1,20% | 2,34% | |
| Industrial Goods & Services | 1,64% | 3,04% | |
| Insurance | 1,54% | 3,13% | |
| Media | 1,31% | 2,71% | |
| Personal & Household Goods | 1,47% | 2,45% | |
| Retail | 1,38% | 2,52% | |
| Utilities | 1,31% | 2,90% | |
| Real Estate | 1,25% | 2,80% | |
| STOXX 600 Index | 1,35% | 2,72% | |
| Banks | 1,84% | 4,04% | |
| Telecommunications | 1,39% | 2,47% | |
| Technology | 2,01% | 3,06% | |
| Health Care | 1,29% | 2,29% | |
| Automobiles & Parts | 2,20% | 3,60% | |
| Basic Resources | 2,37% | 3,55% | |
| Chemicals | 1,67% | 2,67% | |
| Construction & Materials | 1,56% | 3,37% | |
| Travel & Leisure | 1,31% | 4,22% | |

Statistical Analysis

Skewness, Kurtosis

| Industry/Sector | Skewness | İ | Kurtosis | |
|-------------------------------------|----------|-------|----------|-------|
| Oil & Gas | -0,30 | -0,31 | 3,61 | 13,96 |
| Financial Services | -0,61 | -0,74 | 6,14 | 16,36 |
| Food & Beverage | -0,26 | -1,24 | 3,87 | 12,14 |
| Industrial Goods & Services | -0,31 | -0,74 | 3,90 | 11,26 |
| Insurance | -0,66 | -0,26 | 4,96 | 16,02 |
| Media | -0,03 | -0,56 | 5,68 | 11,13 |
| Personal & Household Goods | -0,44 | -1,02 | 4,23 | 10,03 |
| Retail | 0,12 | -0,84 | 6,44 | 9,80 |
| Utilities | -0,19 | -2,26 | 4,27 | 20,89 |
| Real Estate | -0,24 | -1,09 | 3,93 | 13,69 |
| STOXX 600 Index | -0,48 | -1,50 | 4,33 | 16,93 |
| Banks | 0,12 | -0,47 | 3,89 | 9,26 |
| Telecommunications | 0,11 | -0,76 | 3,72 | 14,53 |
| Technology | -0,26 | -0,57 | 4,28 | 7,94 |
| Health Care | -0,19 | -0,74 | 3,57 | 11,58 |
| Automobiles & Parts | 0,00 | -0,16 | 3,42 | 12,25 |
| Basic Resources | 0,05 | -0,24 | 3,64 | 11,70 |
| Chemicals | -0,39 | -0,86 | 4,07 | 10,13 |
| Construction & Materials | -0,32 | -1,16 | 4,09 | 13,47 |
| Travel & Leisure | 0,29 | -0,29 | 5,23 | 6,65 |
| | | | | |



Financial Performance



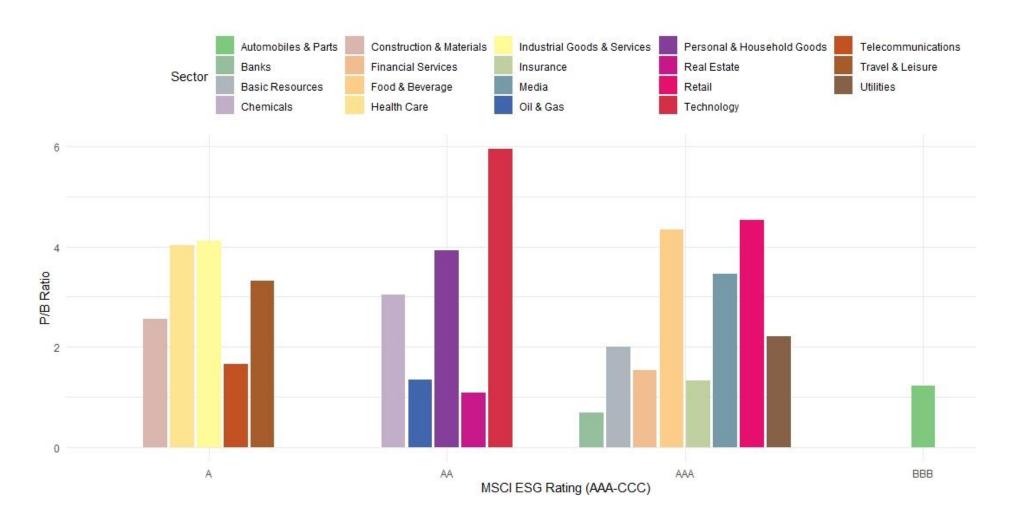
Annualized Returns, Annualized Volatility

| Industry/Sector | Annualized Return | | Annualized Vol | |
|-------------------------------------|-------------------|---------|----------------|--------|
| Oil & Gas | 1,63% | -15,09% | 17,59% | 41,59% |
| Financial Services | 10,21% | 10,58% | 15,11% | 28,86% |
| Food & Beverage | 8,39% | 0,73% | 11,59% | 20,95% |
| Industrial Goods & Services | 7,20% | 13,43% | 15,52% | 29,42% |
| Insurance | 6,14% | -2,52% | 13,97% | 34,28% |
| Media | 5,99% | 3,86% | 13,29% | 26,65% |
| Personal & Household Goods | 4,83% | 10,64% | 13,58% | 22,44% |
| Retail | 9,57% | 19,56% | 14,69% | 23,91% |
| Utilities | 12,15% | 6,87% | 12,94% | 25,55% |
| Real Estate | 4,91% | -4,22% | 11,97% | 25,88% |
| STOXX 600 Index | 4,16% | 5,68% | 12,40% | 25,05% |
| Banks | -11,03% | -3,18% | 17,98% | 39,18% |
| Telecommunications | -5,17% | -3,05% | 13,68% | 24,30% |
| Technology | 10,18% | 19,04% | 19,31% | 29,42% |
| Health Care | 12,64% | 1,43% | 12,64% | 21,92% |
| Automobiles & Parts | -9,43% | 18,06% | 21,04% | 39,14% |
| Basic Resources | -1,78% | 21,19% | 23,36% | 37,79% |
| Chemicals | 4,49% | 13,84% | 15,55% | 25,12% |
| Construction & Materials | 7,06% | 11,09% | 14,77% | 31,35% |
| Travel & Leisure | -0,37% | -1,99% | 13,77% | 40,78% |

Financial Ratios Comparison (1/2)



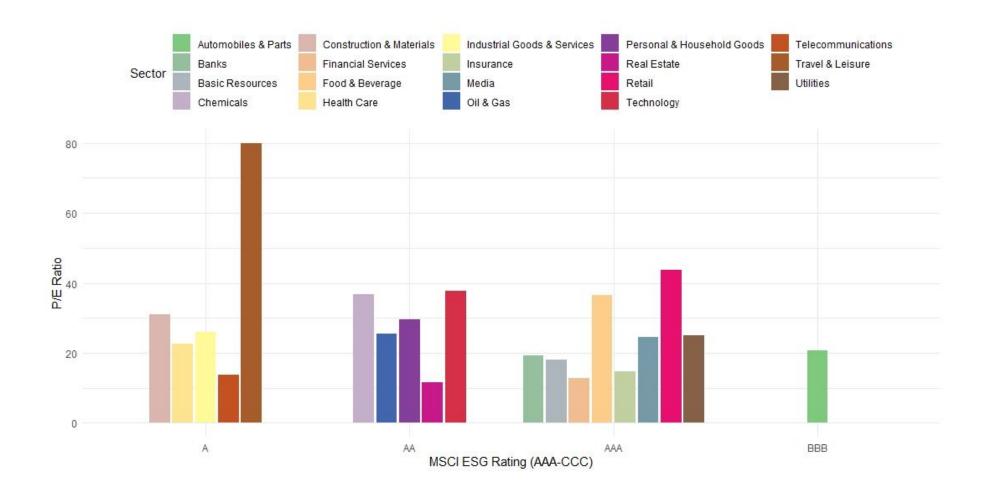
P/B Ratios



Financial Ratios Comparison (2/2)



P/E Ratios





- A research by Amundi in 2018
- ESG filter-applied portfolios outperforms the ones with no such screening
- Best strategy is to buy best-in-class stocks and sell poor performance in one of the main ESG factors.
- This generated extra yields of 3.3% and 6.6%, in the North America and Eurozone, respectively.
- Ultimately, the findings describe ESG indexes as not direct affecting factors in stock prices, but rather the performance of the best and the worst companies in ESG investments.



- The potential links between ESG Ratings and financial indicators should be further investigated
- These scores should be analysed carefully, since there exist different methods of calculation (e.g. banks)
- Economic stimulus is benefiting the recovery process
- However, we believe high ESG scores would increasingly contribute to future investment decisions

Thank you for your attention!

Appendix



Sources

| Source Name | Link | Date of Retrieval | Used for |
|---------------|-------------------------------------------------------------------------------------------------------|-------------------|-----------------|
| Yahoo Finance | https://finance.yahoo.com/ | 11.05.2021 | Data Collection |
| Blackrock | https://www.blackrock.com/ch/individual/en/products/product- list#!type=all&tab=overview&view=view | 11.05.2021 | Data Collection |

Thank you for listening!