M.M.WARBURG & CO
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Smart ESG: Factor investing meets sustainability

The "environmental, social, and governance" concept (ESG) covers areas of responsibility pertaining to sustainability that are supposed to provide insight into the extent to which companies consider ecological and social issues in their decisions and allow them to influence corporate governance. Sustainable investing, i.e., taking into account ESG-compliant investment criteria in asset management, has become an unstoppable trend in recent years.

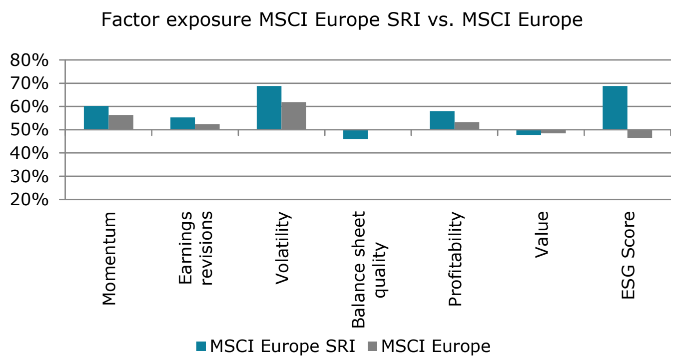
This trend began in the 1990s, when the topic was still charged with moral terms like "ethical" and "green" investments and mainly attracted faith-based investors. In particular, fears that losses of return might accompany sustainable investing put many investors off at first, but that has fundamentally changed in recent years. Today, sustainable investing criteria now guide an estimated USD 20 trillion, and hence 25%, of investment assets under management worldwide. And that is by far not the end of the story. For one thing, investors are increasingly realizing that sustainability by no means must lead to losses of return and that there need be no conflict of purpose between sustainability and returns. The idea behind this is that sustainably managed companies are better positioned in the long term and operate more profitably. For another, ESG is playing an increasingly important role in connection with efficient risk management. Taking sustainability criteria into account can significantly reduce reputation risks, operational risks, and event risks. So, it is no wonder that the empirical evidence shows that investment portfolios structured according sustainability aspects are subject to lower volatility and drawdown risks compared with conventional portfolios.

At the same time, social, political, and regulatory changes have led to higher demand for sustainable investments. A good example here is the 2015 United Nations Climate Change Conference in Paris, which has prompted well-known institutional investors like the Norwegian sovereign wealth fund and the Rockefeller Brothers Fund to virtually eliminate coal investments from their portfolios. Regulators are also attending to the topic of sustainability with more emphasis now. For example, the EU Commission is working on a catalog of criteria for the creation of uniform standards for sustainable investments. Moreover, the United Nations has defined Sustainable Development Goals (SDGs), to which institutional investors will have to pay more attention in the future. For insurers and institutions for occupational retirement provision (IORPs), a regulation (IORP II Directive) went into force at the beginning of the year that provides for reporting and information requirements regarding the inclusion of sustainability criteria and their integration into risk management. In sum, we may say that investors will no longer be able to circumvent the issue of sustainability in the future.

An extensive range of more and less sophisticated sustainable investment approaches has evolved along with this rapid development, with great support from improving data availability. ESG databases, like the one offered by MSCI, make it possible to filter and analyze investment universes with extreme differentiation according to various criteria.

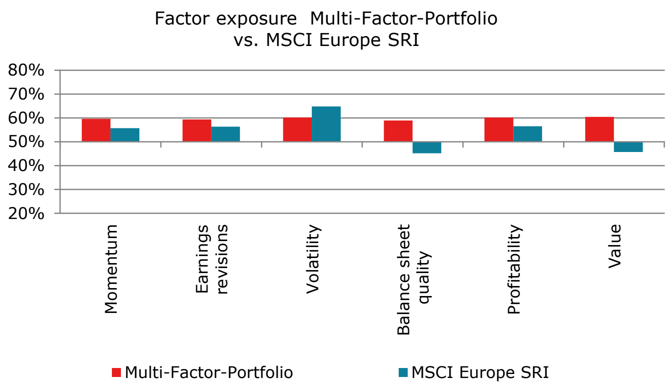
Among sustainable investment approaches, the two dominant ones are based on positive or negative lists for securities. The best-in-class approach selects companies that have the best ESG exposure within a defined group (index, sub-index, or industry group). The second approach relies on exclusion criteria, i.e., the investment universe is purged of companies that meet certain criteria (e.g., tobacco production or violation of human rights). Both approaches succeed in improving ESG quality at the portfolio level, but they pose the risk of return losses by implementing tough restrictions that go as far as excluding entire industries. In particular, they both suffer from the defect of not sufficiently taking into account further fundamental criteria important for the development of stock prices and the portfolio. We can see this when we study the commonly used sustainability indexes for factors that explain returns.

In a well-defined portfolio, all factors should be represented with an exposure as high and balanced as possible. To check that, we express both factor intensity and ESQ quality numerically, perform a ranking for the individual stocks and the portfolios derived from that, and center the results between 0% (worst exposure) and 100% (best exposure). As the criterion of ESG quality, we rely on a measurement offered by MSCI that compresses a large number of sub-criteria from the areas of environmental, social, and corporate governance into one key figure. If we now look, for example, at the MSCI Europe SRI Index, which emerges from the index universe of the MSCI Europe when the best-in-class approach is applied, we see in the chart below that it improves ESG quality compared with the MSCI Europe, but that the fundamental factor profile still needs optimizing. The chart does confirm our initial claim that taking account of sustainability contributes to reducing risks (a bar above 50% stands for low volatility) and the companies are more profitable on average. But it also shows that the companies in the index are expensive on average and exhibit lower balance sheet quality.

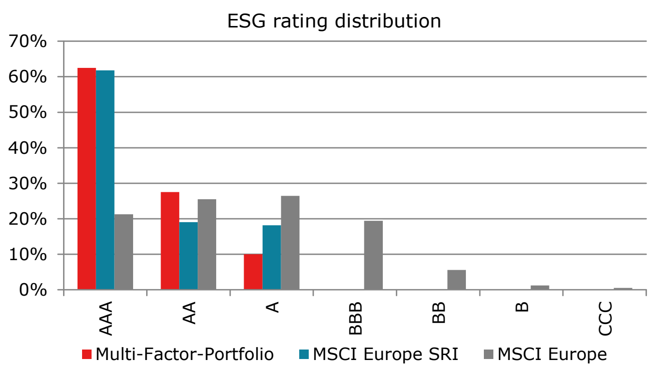


In the following, we therefore present an investment approach that takes up this weakness and relies on directly integrating ESG criteria. It is based on a symbiosis of sustainability and factor investing. To this end, we integrate ESG criteria into our long-standing multi-factor approach, which depicts the return-explaining factors presented above, starting from the individual stocks in the investment universe and their fundamental properties and proceeding to a portfolio, and applies them to the simultaneous collection of factor premiums.

A first possibility of combining these two approaches consists in proceeding from an investment universe "filtered" according to sustainability criteria and constructing the multi-factor portfolio from that. To that end, we apply our own optimization routine for constructing factor portfolios to the index universe of the MSCI Europe SRI to further improve the unsatisfactory fundamental profile of that index. The effort succeeds, as the factor chart shows.



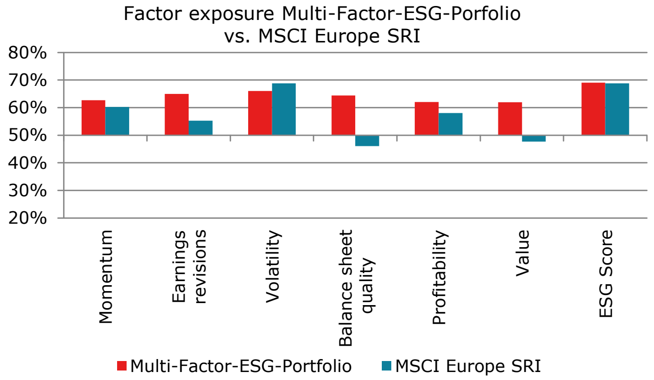
But how does the multi-factor portfolio's ESG quality look now? To answer this, we refer to the ESG rating distribution of the stocks in the portfolio and in the MSCI Europe SRI and MSCI Europe indexes. That reads comparably to the rating classification of bonds and likewise comes from the ESG database of MSCI.



While the MSCI Europe follows an equal distribution to BBB and still contains stocks in the lower rating segments, the MSCI Europe SRI and the multi-factor portfolio exhibit by design only stocks from the investment grade category. Our portfolio is not only fundamentally attractive and balanced, but can even improve the rating distribution further. Here, a generalization emerges that solidly positioned companies and portfolios already have a certain degree of ESQ quality.

In a second approach, however, we now go a step farther and apply our methodology directly to an "unfiltered" starting universe like the MSCI Europe, but take into account ESG as a further factor in the framework of our optimization routine to derive a multi-factor portfolio extended to include sustainability. We set no restrictions at all, but guide the trade-off between the fundamentals and ESG factor to obtain a high and balanced fundamental factor profile that is also sustainable at the portfolio level.

Including ESG criteria in the optimization makes stocks with an unfavorable sustainability profile less attractive for the portfolio, but it does not enable one to entirely avoid having individual stocks that violate sustainability criteria get into the portfolio because of attractive fundamental properties. One can counteract that by weighting the ESG criteria more heavily in the optimization process or by iteratively eliminating undesired candidates in several optimization passes.



Since the approach described above works free of restrictions, higher factor intensity can be achieved without diluting ESG quality. Actually, however, this approach's flexibility goes even further. Several individual features can be included at once with great precision and in consideration of customer preferences and simultaneously be optimized with fundamental factors. As a result, one obtains customized portfolios that accord with the individual client's interpretation of sustainability.

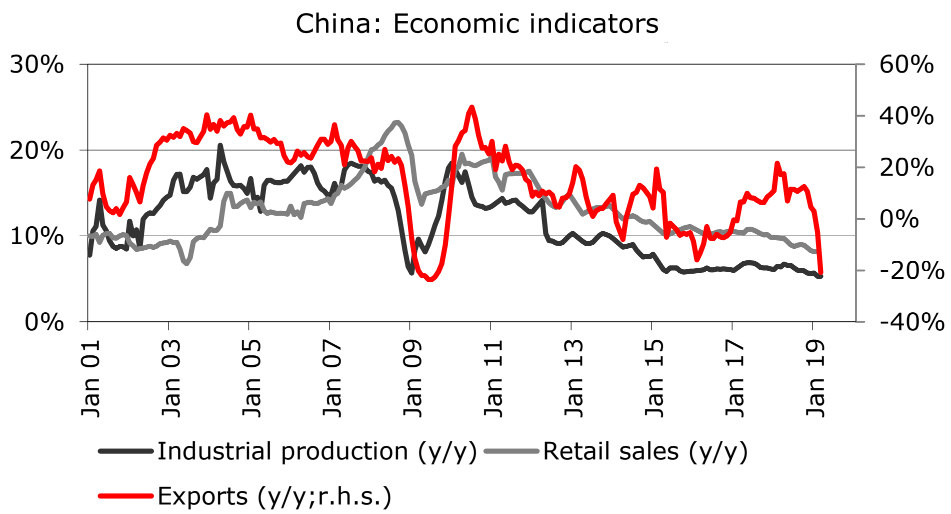
While sustainability was still a fad in its early days, society has meanwhile profoundly grasped that sustainable economic activity contributes across generations to preserving values and resources and that sustainably managed companies are better positioned in the long term. Conversely, this means that companies that disregard sustainability principles run the risk of putting off investors and bearing significantly higher costs of capital. In this context, the asset management industry faces the challenge of developing efficient concepts for increasingly integrating sustainability into their investment strategy. The systematic investment concept presented here combines elements of factor investing with ESG into a cohesive portfolio approach and points to a new way of dealing with the topic of sustainability in asset management.

Weekly Outlook for March 18-22, 2019

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Release
DE: ZEW economic expectations	-24.7	-24.1	-17.5	-15.0	-13.4	-13.5	March 19
DE: ZEW current situation	70.1	58.2	45.3	27.6	15.0	14.8	March 19
DE: Producer prices m/m	0.3%	0.1%	-0.4%	0.4%	0.2%		March 20
DE: Producer prices y/y	3.3%	3.3%	2.7%	2.6%	2.9%		March 20
DE: PMI, manufacturing – flash	52.2	51.8	51.5	49.7	47.6	48.2	March 22
DE: PMI, services – flash	54.7	53.3	51.8	53.0	55.3	54.8	March 22
EUR19: Consumer confidence – flash	-5.9	-6.6	-8.3	-7.9	-7.4	-7.1	March 21
EUR19: PMI, manufacturing – flash	52.0	51.8	51.4	50.5	49.3	50.1	March 22
EUR19: PMI, services – flash	53.7	53.4	51.2	51.2	52.8	52.6	March 22

MMWB estimates in red

Chart of the Week: China – New Year's hangover or new crisis?



It looked for a long time as if the trade dispute with the United States and weaker economic data in Europe could not affect China. The country could boast solid data for the real economy until autumn 2018. However, the data has been worsening since October. Chinese economic growth already slowed in 2018 overall, with real GDP increasing by 6.6% year-on-year (2017: 6.9%), in line with government "planning." Growth in the fourth quarter only came to 6.4%. The imposed trade restrictions and global economic slowdown are having an ever more negative impact. Exports initially still benefited from anticipatory effects in 2018, but those have dissipated. Consumer spending has also waned significantly. Chinese Prime Minister Li Keqiang has issued a growth target of only 6.0-6.5% for 2019. To achieve that, the leadership in Beijing intends to stem an impending lull with tax cuts and investments in the billions. Now, many of the economic datapoints reported for January and February have declined surprisingly sharply. Exports fell by 20.7% compared with last year, and industrial production increased by "only" 5.3%, the weakest rate since 2002. The survey-based unemployment rate has also risen to 5.3%, compared with 4.9% in December. However, since at the same time real estate investment increased and retail sales appeared sluggish but stable, one should not assume that the economy is in the midst of a more severe downturn. Moreover, economic data from China are often subject to strong fluctuations due to celebrations of Chinese New Year, which take place from late January until past mid-February and usually occasion considerable losses of business. We therefore assume for now that China is just having a New Year's hangover, but we will keep a close eye on future economic data.

Market Data Overview

Stock marktes	As of 15/03/2019 12:58	Change versus 08/03/2019 -1 week	14/02/2019 -1 month	14/12/2018 -3 months	14/03/2018 -1 year	31/12/2018 YTD
Dow Jones	25710	1.0%	1.1%	6.7%	3.8%	10.2%
S&P 500	2808	2.4%	2.3%	8.0%	2.1%	12.0%
Nasdaq	7631	3.0%	2.7%	10.4%	1.8%	15.0%
DAX	11691	2.0%	5.4%	7.6%	-4.5%	10.7%
MDAX	25194	3.7%	5.3%	13.1%	-1.9%	16.7%
TecDAX	2658	1.2%	3.7%	5.5%	-0.8%	8.5%
EuroStoxx 50	3384	3.0%	6.3%	9.4%	-0.2%	12.7%
Stoxx 50	3113	2.8%	5.3%	9.4%	4.2%	12.8%
SMI (Swiss Market Index)	9482	2.3%	3.7%	8.8%	6.9%	12.5%
Nikkei 225	21451	2.0%	1.5%	0.4%	-1.5%	7.2%
Brasilien BOVESPA	98605	3.4%	0.6%	12.8%	14.6%	12.2%
Russland RTS	1187	0.6%	2.7%	6.3%	-5.1%	11.3%
Indien BSE 30	38024	3.7%	6.0%	5.7%	12.4%	5.4%
China Shanghai Composite	3022	1.7%	11.1%	16.5%	-8.2%	21.2%
MSCI Welt (in €)	2096	1.3%	1.9%	7.6%	7.3%	12.6%
MSCI Emerging Markets (in €)	1048	0.9%	0.4%	7.5%	-6.0%	9.8%
Bond markets						
Bund-Future	164.13	-26	-241	93	619	59
Bobl-Future	132.43	-1	-70	9	183	-9
Schatz-Future	111.85	2	-2	-5	-3	-9
3 Monats Euribor	-0.31	0	0	0	2	0
3M Euribor Future, Dec 2017	-0.29	0	-4	-8	-37	0
3 Monats $ Libor	2.61	1	-8	-19	47	-20
Fed Funds Future, Dec 2017	2.34	-2	-4	-25	-13	0
10 year US Treasuries	2.62	0	-4	-27	-19	-6
10 year Bunds	0.09	1	-2	-17	-50	-16
10 year JGB	-0.04	0	-2	-7	-7	-4
10 year Swiss Government	-0.31	10	3	-13	-34	-7
US Treas 10Y Performance	587.75	-0.1%	0.4%	3.5%	4.4%	1.2%
Bund 10Y Performance	640.58	-0.1%	0.2%	2.2%	6.5%	2.1%
REX Performance Index	489.91	-0.1%	0.0%	0.6%	2.4%	0.5%
US mortgage rate	0.00	0	0	0	0	0
IBOXX AA, €	0.59	-2	-5	-29	-15	-29
IBOXX BBB, €	1.59	-8	-14	-45	26	-47
ML US High Yield	6.79	-17	-16	-63	29	-122
JPM EMBI+, Index	832	0.8%	0.3%	5.4%	2.0%	5.1%
Convertible Bonds, Exane 25	7134	0.0%	1.3%	2.5%	-2.4%	3.5%
Commodities						
CRB Spot Index	418.27	1.0%	1.6%	0.8%	-6.3%	2.2%
MG Base Metal Index	317.43	1.1%	3.8%	5.7%	-9.0%	7.7%
Crude oil Brent	67.03	1.9%	4.5%	11.2%	3.6%	26.2%
Gold	1304.07	0.4%	-0.5%	5.3%	-1.6%	1.8%
Silver	15.21	-1.0%	-2.4%	4.0%	-8.2%	-1.9%
Aluminium	1877.25	1.8%	3.1%	-1.6%	-9.3%	0.8%
Copper	6416.00	-0.1%	4.5%	4.7%	-7.7%	7.9%
Iron ore	85.98	1.0%	-2.7%	26.6%	18.2%	24.2%
Freight rates Baltic Dry Index	677	4.3%	7.8%	-51.7%	-42.1%	-46.7%
Currencies						
EUR/ USD	1.1318	0.9%	0.4%	0.3%	-8.5%	-1.2%
EUR/ GBP	0.8532	-1.1%	-3.3%	-5.1%	-3.7%	-4.9%
EUR/ JPY	126.39	1.3%	1.0%	-1.4%	-4.1%	0.4%
EUR/ CHF	1.1361	0.3%	-0.1%	1.0%	-2.9%	0.8%
USD/ CNY	6.7129	-0.1%	-0.9%	-2.8%	6.2%	-2.4%
USD/ JPY	111.72	0.5%	1.1%	-1.5%	5.1%	2.0%
USD/ GBP	0.75	-1.8%	-3.6%	-5.3%	5.2%	-4.0%

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