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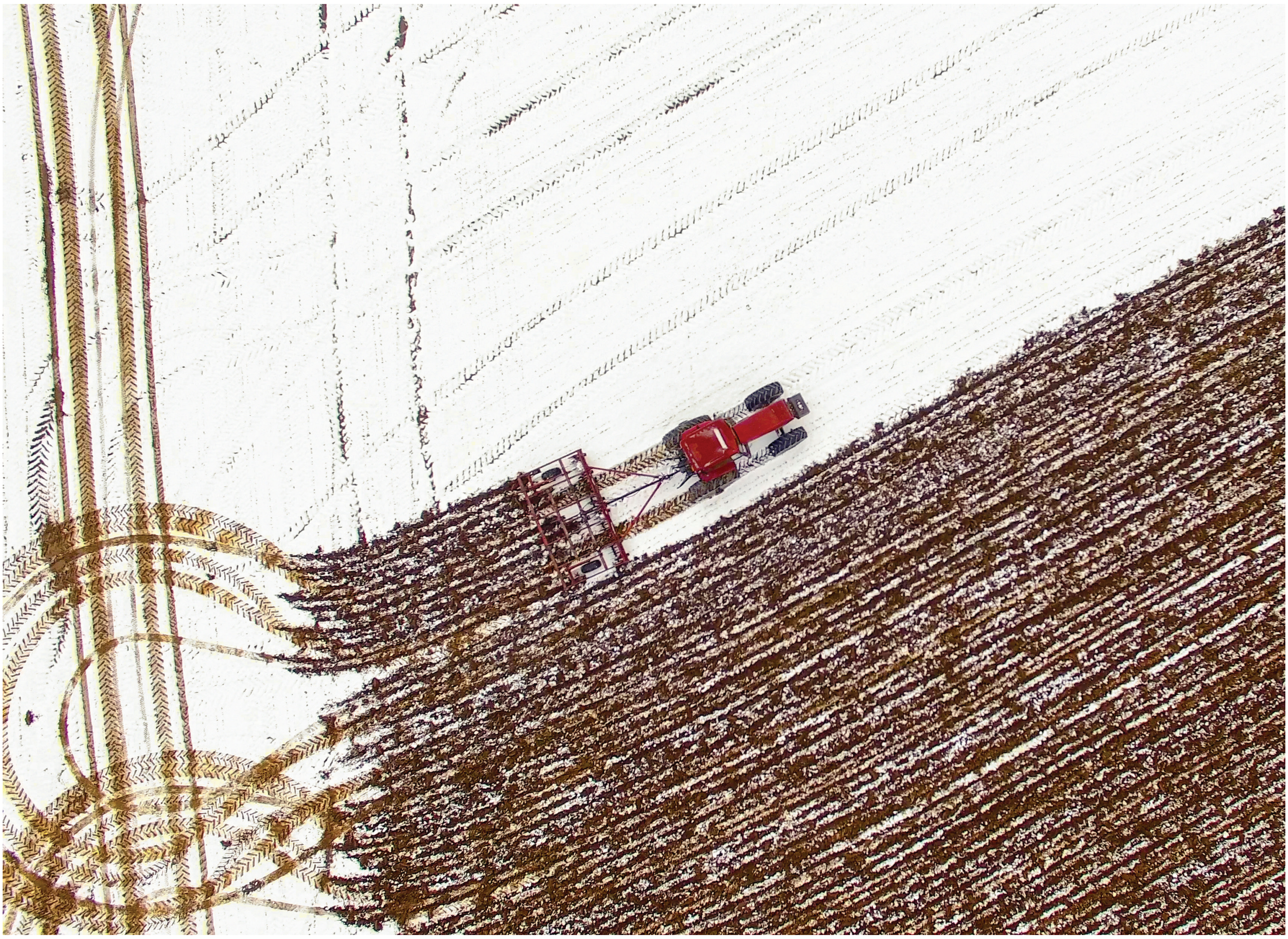
Quantitatively Speaking

ESG integration in quantitative investments



Introduction

Environmental, social and governance (ESG) investing has evolved. Once a nice-to-have it's now a need-to-have for many investors. Growing awareness of the effects of climate change and other environmental impacts as well as a multitude of new regulations on ESG and climate in particular have seen asset owners and asset managers alike embrace sustainability with a greater degree of urgency. According to the 2019 Global Sustainable Investment Review, globally, sustainable investing assets stood at USD 30.6 trillion.

Under the umbrella of sustainable investing, there are a variety of approaches. In this paper, we focus on environmental, social and governance (ESG) integration, in particular the integration of ESG within our quantitative investment strategies.

So what do we mean by ESG integration? Put simply, it carries the aim of mitigating risks and/or improving returns through the integration of ESG factors within the research process.

UBS Asset Management (UBM AM) has stood at the forefront of integrating sustainability issues into our investment philosophy and processes. We've been investing sustainably for over two decades. During that time we've become a signatory to key codes of best practice globally, such as the Principles for Responsible Investment which we've supported for over a decade. In the 2019 assessment we received an A or A+ in all categories, most notably, receiving an A+ in the Strategy and Governance module for the second consecutive year.

Risk factor or alpha driver?

An ongoing debate continues around defining a common taxonomy, improving quality and availability of information and, importantly, reaching an understanding of the ways in which ESG integration impacts risk and returns.

The view that ESG issues are merely non-financial risks has moved on. Companies and investors alike have come to accept and embrace the importance that most ESG issues have for the corporate bottom line and, consequently, for investment risks and returns. This understanding reinforces the case for asset owners and asset managers alike to integrate ESG.

When deciding how to integrate ESG, a crucial question to answer is whether or not it is a factor and if the answer is yes, what type of factor. There is a wealth of academic and investor research which explores the extent to which ESG characteristics can help explain risks and returns. Studies would suggest that it is indeed a factor, albeit one that is less well defined, and with a shorter history, than say, the long-established value, size and quality of momentum factors (To learn more, please see 'The Sustainable Investing Handbook', MSCI and UBS Asset Management, 2018).

So, is ESG primarily a risk factor or an alpha factor?

On the surface, this seems to be an easy question to settle by comparing historical returns of ESG-integrated strategies versus their standard versions. But as usual, reality is more complicated.

Originally, ESG datasets tended not to be geared towards investors. Their audience was generally non-investment stakeholders, such as NGOs. Tremendous progress has been made by data providers in standardizing data and making it more digestible for investors. But the quality and availability of ESG data still lags fundamental data. And naturally, the ESG data history is often much shorter, which reduces the explanatory power of statistical tests. This becomes particularly apparent when comparing ESG datasets to traditional financial factors.

According to MSCI, there have been over 2000 research articles from both academics and financial professionals analyzing the link between ESG characteristics and risk and performance. Most research acknowledges that the application of ESG ratings can help reduce systematic and stock-specific tail risks, and most investors accept the respective evidence as significant.

Whether ESG is a risk premium similar to traditional factors such as value, quality or momentum – i.e. generating statistically significantly better performance over an extended period of time – is a more difficult question. According to MSCI, there is some evidence that ESG momentum, i.e. the change of ESG characteristics, was linked to performance, but a longer time series is needed to verify the existence of an ESG risk premium. And their findings are supportive of ESG characteristics having a positive effect on risk, in particular in mitigating tail risks. UBS AM's own research suggests that sustainability can lead to better risk-adjusted returns.

Our Quantitative Investments team embrace ESG integration in line with our long-standing investment philosophy. Any improvement to an investment process, and the inclusion of any new factors, needs to lead to improved returns and/or better management of risks. These insights are gained through proprietary empirical research, but must also be consistent with economic intuition. The latter helps avoid falling into data-mining traps or spurious correlations. In this spirit, we enhanced processes as we outline in the following sections.

ESG considerations for Quantitative Investments portfolios so far

While our Quantitative Investments strategies have not been fully ESG integrated until recently, we have long considered certain aspects of sustainable investing when managing our portfolios. Exclusion lists and stewardship are two examples.

Exclusions
UBS AM for instance generally applies restrictions to controversial weapons, including the Quantitative Investments team's strategies.

For our actively managed funds (retail and institutional) and segregated accounts UBS has implemented a process to prevent investments in companies involved in the development, production or purchase of cluster munitions and anti-personnel mines. We use an external advisor to identify these companies (list provided by ISS Ethix). The firm's Sanctions Compliance Committee issues a list of affected companies based on information provided by the external advisor. The external advisor provides input to a screening list of companies involved in the production, sale or distribution of cluster munitions and anti-personnel mines. The list is updated periodically. Changes are implemented by the responsible Portfolio Managers. Portfolios undergo regular pre and post-trade compliance checks.

Our structured approach to managing portfolios lends itself well to accommodating customization. Some clients opt to exclude certain industries they deem undesirable from a societal or environmental perspective. Examples of client-led exclusions of sub-industries include aerospace & defense, casinos & gaming, distillers & vintners as well as tobacco. Rules-based and quantitative strategies are also well-suited to constructing optimal portfolios, even if a small part of the universe is excluded as per the respective client's preferences and restrictions.

The role of stewardship
Stewardship is an important way of helping to meet societal targets as well as adding financial value. In our latest Stewardship Report we define Stewardship as being:
"… an integral part of our fiduciary duty and investment process. Our aim is to align our stewardship approach with clients' investment beliefs, policies and requirements. We're committed to taking an active approach through a clear and structured program which encompasses the integration of ESG factors into four strongly interlinked activities:

– Investment decision making
– Engagement with corporate management
– Exercise of shareholders rights, and
– Advocacy with policy makers and standard setters. "

Two key activities within that definition are company engagement and voting.

In 2019, UBS AM engaged in dialogue with 358 companies across regions and sectors on their business strategy and governance, climate change action, human capital and much more. And when it comes to voting rights, UBS AM submitted votes at over 10,000 company meetings across 57 markets on topics like income and capital allocation, board elections, mergers and acquisitions, and climate change targets.

What impact has UBS AM's stewardship strategy had on these companies? Well so far we have helped improve the supply chain management practices for both a Japanese pharmaceutical company and a US food, beverage and tobacco company. Not to mention, working with a German utilities company to see how climate change should be an intrinsic element of their business strategy and increasing internal controls to avoid bribery and corruption for a Chinese financial company.

Materiality is about how sustainability topics have an impact on value drivers, including the potential scale of impact and imminence.

Our stewardship activities monitor and, where necessary, influence corporate conduct on matters believed to affect the long-term value of investee companies. The aim is to build relationships with company management to foster healthy dialogue and enhanced performance on a variety of ESG issues. Voting rights are also an important part of our fiduciary duty to clients and integral to both the investment process and our overall stewardship approach. We've been voting on a discretionary basis on behalf of our clients since 1995 and implemented our first internal voting policy in 1998. Over the past two decades we've also become a signatory to codes of best practice around the world.

Our approach to engagement and proxy voting is constantly evolving. The enhancement of our engagement strategy in recent years has allowed UBS AM to build a stronger dialogue with corporate management, particularly in relation to our thematic, reactive and investment led programs. This dialogue is helping us continuously improve our investment decision making process, and reflects increasing attention to ESG opportunities and external impacts in combination with a solid evaluation of sustainability risks.

ESG-Integration in our equity income suite

Our equity income strategies have a number of common distinct and consistent characteristics. They all focus on achieving a high level of income from various potential sources, such as dividends, share buybacks and covered call option writing. All of them combine the striving for yield with quality criteria as we believe that quality is a value-adding factor and can help to pick companies that can sustain their high yields. And all equity income strategies are defensive to varying degrees compared to the respective market capitalization based reference indices.

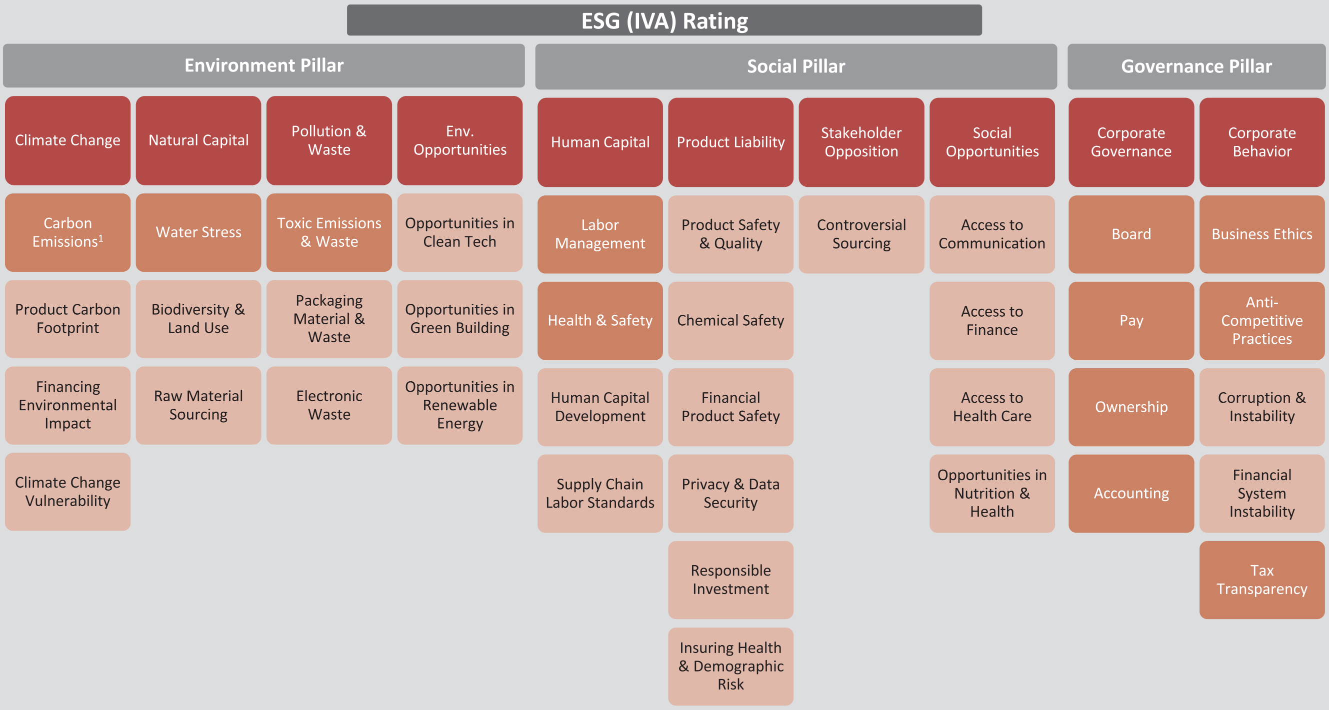
When integrating ESG criteria in stock selection models, it is crucial to evaluate criteria that are designed to identify financially relevant issues. In our approach, we focused on criteria that are closely related to quality in order to avoid altering the strategies' client promise and to complement the existing and time-tested approach.

Additionally, we considered materiality in order to only pick the most effective ESG scores to complement the high-yield-high-quality scores. UBS AM’s materiality analysis was developed by our sustainable investment research team working in collaboration with our analysts. The frameworks are based on the recommendations of the Sustainability Accounting Standards Board, the weighting methodologies of our data providers, and in discussion with individual credit and equity analysts. Materiality is about how sustainability topics have an impact on value drivers, including the potential scale of impact and imminence.

This materiality analysis covers a variety of key issues across the range of sustainability factors, including corporate governance, products, business ethics, and labour.

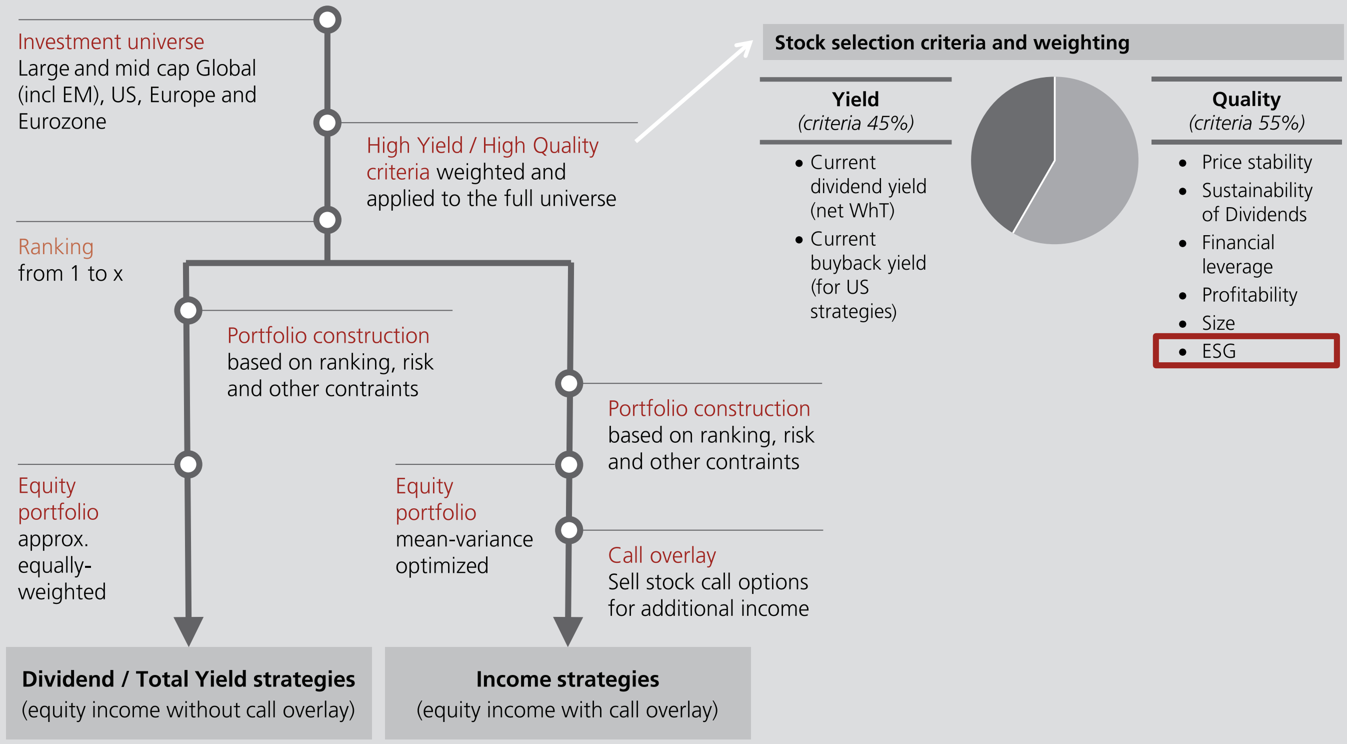
We relied on MSCI's ESG key issue hierarchy as outlined below. Amongst the 10 themes, our research found Human Capital and Corporate Governance to be the most relevant and material ones. We therefore included these two scores into our high-yield-high-quality stock selection model.

MSCI ESG ratings model hierarchy



Source MSCI. Summary of Changes Effective Q4 2016: Introduction of Tax Transparency under Corporate Behavior Theme

Integration into existing high-yield-high-quality investment process



Source: UBS Asset Management. For illustrative purposes only. Applies to equity income strategies managed by the Quantitative Investments team.

Corporate governance is well documented to be an important ESG consideration that can help improve risk-adjusted returns. Furthermore, research suggests that the governance score is positively correlated to quality factors and to low risk. It is therefore a natural extension to also use corporate governance scores for stock selection.

Human Capital captures the risk of not having balanced and productive human capital and includes aspects such as labor management, health & safety, human capital development, supply chain labor standards and controversial sourcing. Some or all of these factors are relevant in nearly every sub-industry. The importance of the individual topics within the Human Capital theme depends on the sector. For instance, working rights and conditions may be more important in a manufacturing business, occupational health & safety in oil & gas production, whereas culture may be more relevant in financials. Human Capital developments overall cover some of the most financially relevant issues for companies. Therefore, it is complementary to traditional quality factors and should be considered in stock selection.

For each score, we do not only consider the score level for stock selection, but also the change in score, the "momentum". This is important as research supports the notion that firms with improving scores mean a company is becoming less susceptible to systematic risks. Lower systematic risks should lead to a reduction in a company's cost of capital and that should improve its valuation. Also, an improving score is expected to help mitigating drawdown risk.

In summary, just as strong or improving traditional quality characteristics such as low debt to equity or high profitability are believed to lead to better risk-adjusted returns in the long term, high or improving scores in Corporate Governance and Human Capital should also support risk-adjusted returns.

Integration in our core quantitative models

Combining ESG and common factors is more complex than integrating ESG into passive portfolios, as investors may seek to gain ESG exposure while not impairing the strategy's investment objective by reducing exposure to target factors. Therefore, a balance must be struck between the importance of ESG and factor exposures.

Also, while empirical evidence is not overwhelmingly supportive of the thesis that ESG tilts lead to return improvements, it is well-established that ESG integration can improve risk management and therefore risk-adjusted returns.

It is for these reasons that we decided to integrate ESG by neutralising ESG risk when constructing our proprietary factors – also called return drivers. Neutralisation of ESG in the construction of the refined return drivers helps mitigate the risk that our portfolios load on negative ESG, or stocks that carry high ESG risks.

The initial step in the portfolio construction process remains our proprietary, regional multifactor stock selection models. Each model consists of a series of investment themes—called return drivers—that can be captured by fundamental or market data. These return drivers are: Valuation, Growth, Capital Usage, Profitability and Market Behavior. The team recognizes that the return drivers created from the multifactor stock selection models have exposure to the market (i.e., beta exposure), exposure to each other (i.e., the Valuation return driver is exposed to the Growth return driver) and exposure to other aggregate risk factors as well as ESG risks. As a result, the process is further improved by creating refined return drivers from the output of the sector/ industry-specific multifactor models. These refined return drivers have unit exposure to their respective underlying return driver, zero exposure to the other return drivers, zero market exposure, and zero ESG exposures, creating a pure insight into an investment theme. With this process step, we control for sources of risk, including ESG risk, and identify the specific component of our return drivers.

Exposures before ESG integration

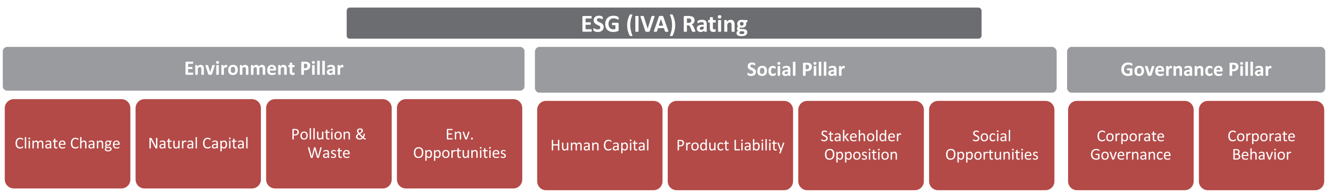
Refined return drivers	Return drivers					Risk factors				Exposure
	Valuation	Capital Usage	Profitability	Growth	Market Behavior	Size	Midcap	ResVol	Beta	ESG
Valuation	1	0	0	0	0	0	0	0	0	0.02
Capital Usage	0	1	0	0	0	0	0	0	0	0.04
Profitability	0	0	1	0	0	0	0	0	0	-0.01
Growth	0	0	0	1	0	0	0	0	0	-0.06
Market Behavior	0	0	0	0	1	0	0	0	0	0.04

Exposures after ESG integration

Refined return drivers	Return drivers					Risk factors				
	Valuation	Capital Usage	Profitability	Growth	Market Behavior	Size	Midcap	ResVol	Beta	ESG
Valuation	1	0	0	0	0	0	0	0	0	0
Capital Usage	0	1	0	0	0	0	0	0	0	0
Profitability	0	0	1	0	0	0	0	0	0	0
Growth	0	0	0	1	0	0	0	0	0	0
Market Behavior	0	0	0	0	1	0	0	0	0	0

Source: UBS Asset Management, MSCI
Notes: EMU Quantitative model, universe MSCI EMU IMI. For illustrative purposes only.

To estimate the ESG exposure which we neutralise in the refinement process step, we rely on MSCI's overall ESG score. This score includes all three pillars and 10 ESG themes.



After creating the refined return drivers which have no exposures to each other, to systematic risks or to ESG exposures, the process then combines the refined return drivers using risk and return forecasts to create a risk-adjusted expected return for each security in the investment universe.

The final step is to construct the portfolio based on the stock-level risk-adjusted return expectations, risk and transaction cost estimates.

In conclusion, we mitigate ESG risk by reducing ESG exposures to zero when constructing our refined return drivers which are the basis to construct a stock-level signal of attractiveness. Our Quantitative portfolios should thus be less exposed to relative ESG risks compared to the broad market.

Conclusion

In this paper we've outlined the way in which we approach the evaluation of ESG factors and the integration of ESG in the context of our quantitative portfolios. This is an evolving process – the framework we have developed is a first step and we will continue to work on how to best embed and integrate sustainability into our processes.

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