



Engagement Policy for Invesco Quantitative Strategies



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1.0 Introduction: Invesco's IQS Approach to ESG Integration and Engagement

This policy sets forth the framework of IQS ESG approach including engagement, proxy voting, and guiding principles for ESG integration into investments.

Invesco is a signatory to the UNPRI - Principles of Responsible Investment and recognizes the importance of taking into consideration Environmental, Social and Governance ("ESG") criteria as part of a robust investment process in order to achieve long-term outcomes for our clients. Invesco also secured an A+ rating in 2017 and 2018 for Strategy & Governance.

The centralized and dedicated global team of Responsible Investment professionals deliver and equip investment teams with a best-in-class support platform of tools, research, resources, and training. The investment centres can tap into these resources to exercise its role to act as a fiduciary in the best interests of our clients and in addition to further encourage a strong corporate governance approach in our investee companies.

In the past decade, sustainability demands on financial assets - e.g. CO₂ footprint, corporate governance, regulatory and demographic changes - have risen in the market and Invesco Quantitative Strategies (IQS) has accommodated this. IQS has been one of the pioneers in considering ESG aspects for clients. With over twenty years of history in managing dedicated ESG mandates, we have continuously developed and broadened our experience in the implementation of customized ESG criteria based on clients' beliefs, which derive from open conversations with our clients. Having incorporated proprietary aspects of governance for many years, we offer a holistic ESG approach taking ESG factors into consideration systematically at various levels of our portfolio management process. In addition, IQS conducts an active dialogue with carefully-selected investee companies through engagement programmes and participates in investor-driven proxy voting enabled through Invesco's proprietary Proxy Voting Platform.

2.0 ESG Integration for Invesco Quantitative Strategies ("IQS")

Invesco Quantitative Strategies (IQS) has been one of the pioneers in considering ESG aspects for clients. With over twenty years of history in managing dedicated ESG mandates, we have continuously developed and broadened our experience in the implementation of customized ESG criteria based on clients' beliefs, which derive from open conversations with our clients.

In addition to the implementation of dedicated ESG policies, the team conducts an active dialogue with carefully-selected investee companies through engagement programmes and participates in investor-driven proxy voting enabled through Invesco's proprietary Proxy Voting Platform as further mentioned below.

The team offers an holistic ESG approach taking ESG factors into consideration systematically at various levels of their portfolio management process.

In terms of ESG metrics, the IQS team applies a constraint on negative ESG exposures ("ESG exposure control") for all our portfolios relative to the respective markets, to ensure that the portfolio's ESG exposure always meets at least the standard of the benchmark ESG exposure.

The ESG exposure control is used for the long-only as well as the long-short strategies of the IQS team. For the exposure calculation, an MSCI ESG composite score is utilized. This constraint is implemented in the optimization setup on GPMS across all of the strategies.

IQS further restricts investment in stocks that suffer sharp downgrades to their ESG scores, for a defined period of time ("Adverse ESG Momentum" stocks).

We have also integrated selected governance measures into our Quality factors. The Quality factors prefer companies with good controls and less aggressive accounting which are not "empire-builders" and are not financially constrained. In short, these are well-managed companies on measures which also correlate to good governance.

The IQS team has adopted a controversial weapons policy, which is applicable to all our managed funds, mandates and portfolios and seeks to limit investments in firms which manufacture land mines and cluster munitions.

Holistic ESG consideration in our investment process

Integrating key aspects of ESG



We consider ESG at several layers in our investment process:

Standardised explicit and implicit incorporation of ESG key aspects into our investment process

Active dialogue with companies and investor-driven proxy voting using Invesco's proprietary Proxy Voting Platform

Offering optionality to implement additional, customized ESG criteria tailored towards the clients' needs

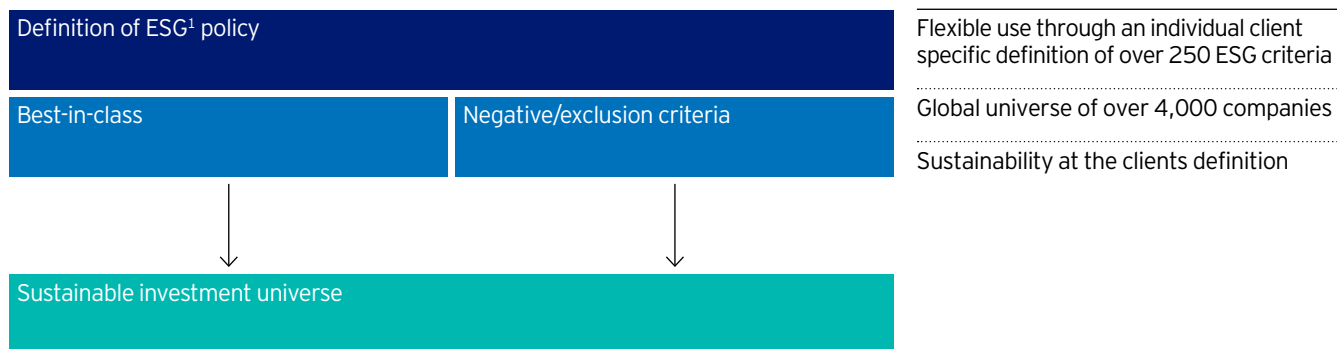
Source: Invesco Quantitative Strategies. For illustrative purposes only.

Bespoke ESG Integration and Screening

The IQS team manages accounts for clients who require inclusion or exclusion of companies based on their customised ESG criteria. Exclusion criteria and negative criteria serve to eliminate companies, sectors or countries that fail to meet the ESG principles selected by each such client. With positive criteria, companies, sectors or countries are identified which support sustainable economic development or have positively rated products or processes. IQS is also able to combine both approaches where required.

Customized ESG approach for Equities

Systematics of the Eiris Portfolio Manager



Source: Invesco Quantitative Strategies. For illustrative purposes only. ¹ ESG=Environmental; Social; Governance.

To implement those criteria in equity and multi-asset portfolios, IQS has access to a specialised database that covers over 4,000 listed companies worldwide. Companies are analysed on basis of 250 different criteria for all relevant ESG fields. These include environment, corporate governance, human rights, labour conditions etc.

Equities

A wide range of ESG issues can be assessed

Environment	Governance	Human rights	Solution companies	Stakeholder issues	Other ethical concerns
Environmental management	Board practice	Guidelines	Positive products	Stakeholder policy	Abortion
Environmental systems	Bribery and corruption	ILO standards	Positive services	Stakeholder systems	Alcohol
Environmental performance	Code of ethics	Child labour	Safety	Stakeholder reporting	Gambling
Nuclear power	ESG risk management	Forced labour	Healthcare	Employee issues	Firearms and armaments
Water use and pollution	Political donations	Discrimination	Environmental technology	Community involvement	Cluster munition
Biodiversity	Woman on the board	Union issues			Pornography
Climate change	Stakeholder responsibility				Tobacco
Greenhouse gases					Genetic engineering

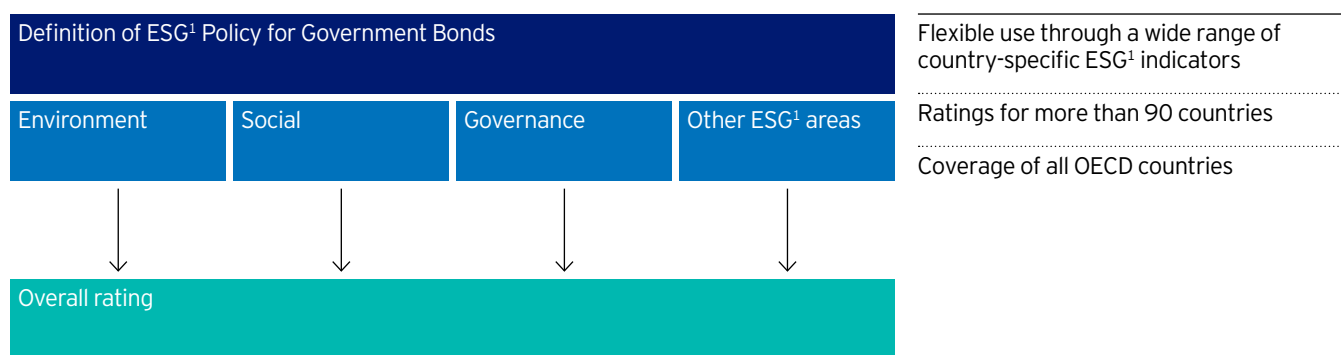
Source: Invesco; Eiris Portfolio Manager/Vigeo Eiris. Extract of sustainable criteria of the Eiris Portfolio Manager. For illustrative purposes only.

Best-in-Class strategies refer to the construction of an equity portfolio by the active selection of companies that rank among the leaders of their sectors in terms of ESG issues. IQS uses a ranking framework whereby no companies or sectors are automatically totally excluded from a given investment universe. Instead, all companies are provided with a score based on the points achieved in relation to various positive and negative factors. These point scores can be then used to develop a preference approach by either identifying companies which are best in sector or are over a certain threshold score.

Within IQS' multi-asset product range, we facilitate the application of sustainability criteria to sovereign bonds by using a country sustainability rating. To assess a country in terms of sustainability criteria, a large number of indicators are used from the arena of political and social issues as well as environmental issues. These are combined into an overall rating by our ESG consultant. In addition, details of how well countries perform on specific concerns, such as nuclear power as a percentage of nationally-produced energy consumption and religious freedom can also be provided.

Customized ESG approach for Government Bonds

The country sustainability rating covers all important ESG aspects



Source: Invesco. For illustrative purposes only. ¹ ESG=Environmental; Social; Governance.

Sovereign Bonds

A wide range of ESG issues can be assessed

Environment	Social	Governance	Other ethical concerns
Biodiversity	Human rights	State leadership	Death penalty
Climate change	Equal opportunities	Bribery and corruption	Military expenditure
CO ₂ emissions	Child labour	Civil rights	Spending on nuclear energy
Nuclear energy	Child mortality	Legislation	Nuclear weapons
Environmental pollution	Healthcare	Political stability	Religious freedom
Renewable energy	Labour standards		
Water use	Unemployment		
Infrastructure	Income distribution		
	Education spending		

Source: Invesco; Country Sustainability Rating/ Vigeo Eiris. Extract of sustainable criteria of the Country Sustainability Rating. For illustrative purposes only.

3.0 Stewardship for IQS strategies

3.1 Monitoring investee companies

The IQS investment process itself is built on the factors Momentum (Earnings Momentum and Price Momentum) as well as Quality and Value. The chart below outlines a list of the factors and their constituent elements used in the IQS investment process. All these data types are continuously monitored for investee companies in line with the availability of the data.

Factors Balanced, time-tested	Momentum		Quality	Value
	Earnings momentum	Price momentum		
Proprietary signals Quantifiable, predictive, complementary	<ul style="list-style-type: none"> - Earnings momentum - Earnings/sales revisions - Revisions against trend - Cash flow surprise 	<ul style="list-style-type: none"> - Specific momentum - Risk-adjusted momentum - Event momentum - Short interest 	<ul style="list-style-type: none"> - Net external financing - Net asset growth - Profitability and operating efficiency - Fundamental health - Accounting integrity 	<ul style="list-style-type: none"> - Cash flow yield - Gross profit yield - Earnings yield - Book yield - Dividend yield

Source: Invesco Quantitative Strategies. For illustrative purposes only.

The respective building blocks of the IQS factors are selected by use of an in-depth research process that assesses the long-term predictive ability of the factor components with respect to expected future returns. For example, the team calculates Information Coefficients that measure the correlation between a factor-based forecast and the subsequent returns. In particular, each single building block used in the respective factor definitions must have a positive expected contribution for the overall factor's expected returns.

These factors are used with proprietary definitions that we think have the potential to achieve better risk-adjusted returns than standard factor definitions. Technically, we believe that proprietary factor definitions have the potential to harvest more than just basic factor risk premiums, e.g. including factor premiums that exist due to structural behavioural biases. These proprietary factor definitions include for example the application of Price to Cashflow measures within Value, more sophisticated measures of Price Momentum and Earnings Momentum (mainly consensus earnings revisions) as well the consideration of particular quality components such as a fundamental health score (balance sheet strength) or net asset growth (where very high asset growth usually suggests poorer future performance). The IQS factor definitions are deeply research driven and fine tuning of factor definitions is an ongoing research focus.

Additionally, local specifications of the factor definitions apply. Some examples include the application of the dividend yield as a suitable Value measure in the UK, revisions against the trend as an additional Earnings Momentum measure in Japan or short interest as a component in the US Momentum factor. However, the main drivers of the respective factors are the same across all regions: Price to Cash Flow for Value, consensus earnings revisions for Earnings Momentum, 12 months risk-adjusted performance excluding the past 4 weeks for Price Momentum and a stable set of balance sheet and profitability measures for Quality.

Finally, the weightings of the factors differentiate to some extent across the regions. While in the US and in Europe the basic rationale is to establish factor exposures that tend to be almost equally distributed between Value, Momentum and Quality, the weighting of Value is higher in Japan, while the weightings for the Momentum factors are higher in Australia. This reflects regional particularities and again follows an in-depth research process.

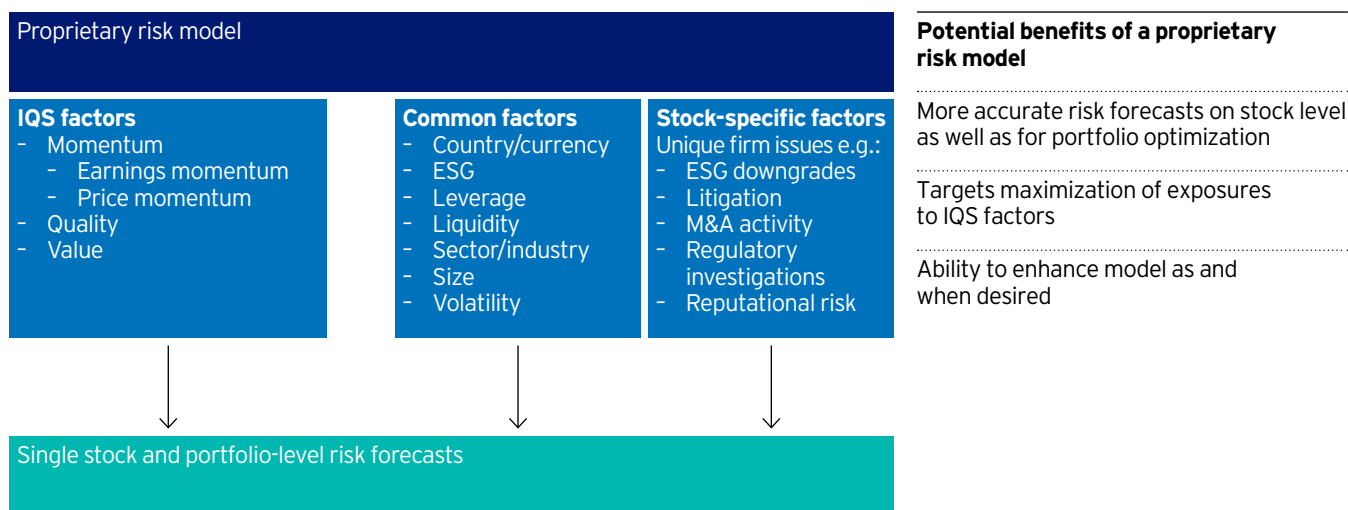
Risk Forecasting: a Factor-based approach

Being a multi-factor investment strategy, rigorous risk management is a highly efficient built-in feature of the IQS investment process per se. Risk assessment is an integral part of the portfolio construction process. The investment team uses a proprietary equity risk model as the basis of the risk assessment, considering all relevant risk factors. The team's proprietary risk model allows them to consider both standard risk factors (to be neutralised to the highest possible extent, e.g. country or sector risks) as well as intended risk factors that are linked to the model. As a result, intended factor exposures are maximised while unwanted risks are widely neutralised. In addition, the proprietary risk model is aligned with the multi-factor return forecasting model in a sense that it uses the same building blocks in order to avoid misalignment of return and risk forecasts.

In order to operate this risk model, risk information about investee companies is continuously collected from Axioma, a leading provider of enterprise risk management, portfolio management, and regulatory reporting solutions and analysed.

Factor-based approach to forecast risk

Alignment of return and risk provides greater transparency



Source: Invesco Quantitative Strategies. For illustrative purposes only.

The IQS factor definitions are deeply research driven and fine-tuning factor definitions is an ongoing research focus. As part of our quality factors, the IQS team considers a fundamental health score (balance sheet strength) and net asset growth (where very high asset growth usually suggests poorer future performance).

The portfolio management team reviews the data consistency before each trade and on an ongoing basis. If a portfolio manager detects that a company is in a special situation which can have adverse impact on the share price and which cannot be detected by the multi-factor model, the portfolio management team will follow clearly defined rules to divest or implement a risk neutral position to this company. Examples for these special situations are fraud or bribery controversies, and environmental incidents such as Tepco's nuclear damage in Japan or the oil spill "Deepwater Horizon" which affected BP.

Within the Quality analysis process, the Portfolio Manager will read news feeds which may impact a stock. If the stock is problematic either due to an event (e.g. Money laundering accusations) the Portfolio Manager will take action and request that all portfolio managers reassess at that particular stock. This will then be escalated to the Portfolio Management committee who make a decision whether to keep stock or not.

We aim to invest in companies which will deliver value across a business cycle and our analysis is accordingly directed to this longer time-frame.

3.2 Proxy Voting

Invesco's Proxy Voting Approach is governed by the Global Proxy Voting Policy available here, which is premised on respecting the fund manager's freedom to vote in what they believe is the best interests of the investors in the relevant fund or portfolio in order to achieve positive outcomes for our clients.

To this effect, Invesco maintains a proprietary global proxy administration platform, known as the "fund manager portal". The platform streamlines the proxy voting and ballot reconciliation processes, as well as related functions, such as share blocking and managing conflicts of interest issuers. This enables fund managers to vote in an efficient manner, increase transparency, share knowledge and effectively influence corporate practices and behaviours.

IQS adopts and applies a dedicated ESG voting policy across managed funds, portfolios and mandates.¹ Besides the support of shareholder proposals through Invesco's proprietary Fund Manager Portal, specific voting decisions on the following ESG topics are taken if applicable:

- Gender Pay Gap Proposals,
- Political contribution disclosure/political lobbying
- Disclosure/political activities and action data security
- Privacy and internet issues
- Report on Climate Change/climate change action and
- Gender Diversity on public boards.

Where none of the ESG topics listed above are affected, IQS will generally follow the voting decision taken by the biggest active equity holder ("Majority Voting") in the Invesco Group as this reflects the relationship and dialogue that active managers within the group have with investee companies. In this manner, we also seek to leverage the active-equity expertise and comprehensive proxy voting reviews conducted by teams employing active-equity strategies, which typically incorporate analysis of proxy issues as a core component of the investment process.

Where there is no active equity holder in the Invesco group, IQS will usually follow the ISS recommendation, subject to the engagement approach outlined below. If a client has a different view, IQS would follow the client view for their segregated holdings. IQS also has the choice to vote contrary to Invesco and ISS recommendations but this happens rarely and only if it is in the interest of the investors.

Portfolio managers for accounts employing Majority Voting still retain full discretion to override Majority Voting and to vote the shares as they determine to be in the best interest of those accounts, absent certain types of conflicts of interest, which are discussed elsewhere in this Policy.

3.3 Engagement

IQS enters regularly into dialogue with carefully selected target companies via the Global Engagement Service of Vigeo Eiris. The potential target companies are selected by IQS and a final selection of the companies to be engaged with is then agreed with Vigeo Eiris. In general we look to engage on topics related to our IQS Priority ESG Themes, which are Climate Change, Human Rights, Supply Chain Management, Water and Bribery/Corruption.

We select investee companies which are at a size and stage making them likely to be influenceable. The objective is to identify weaknesses in the company's sustainability management and discuss these with management to enable the companies to achieve a better ESG performance in the medium to long term. Discussions can take place via telephone calls, personal meetings and written communication. Engagements are followed through over a period of years where necessary.

IQS' engagement priorities can be differentiated between the following two methods:

1. Theme-based engagement, which aims to encourage companies to expose and reduce systemic risks in areas such as bribery reporting; climate change; human rights management systems; supply chain labour policy and water scarcity.
2. Norms-based engagement, which aims to prompt companies to observe internationally-recognized standards and conventions and correspondingly improve their company guidelines.

Vigeo Eiris undertakes a detailed assessment of the themes for each company that the IQS team has selected. This is based upon a long established and rigorous methodology and involves assessing the level of risk that a company is exposed to in any one area and then analysing how the company mitigates these risks.

¹ The integrated ESG voting policy will be fully implemented by end of 2019 and is currently only being applied on selected funds and mandates.

This is done via an examination of a variety of indicators across three key areas as:

1. the extent of a company's policy;
2. the strength of the management systems put in place to enforce this policy;
3. the level of public reporting on corporate performance.

If a company is exposed to a high level of risk on a priority theme and has demonstrated no evidence or only limited evidence of incorporating policies, management systems and reporting, then it may be identified as a 'laggard' with regards to its sector peers and recommended for engagement on this theme.

Companies which are on the Adverse ESG Momentum Stock list will always be considered as potential engagement targets. Depending upon their location and the likelihood of re-investment, we may start an engagement with Vigeo Eiris or participate in a collaborative engagement with a lead investor local to the company.

IQS and other Invesco EU investment centres share and compare engagement targets and results to maximise our combined effectiveness.

Engagement Escalation and Collaboration

IQS would conduct further engagement on a case by case basis depending on the response of the investee company and considering the set investment priorities and IQS Priority ESG Themes. Dis-investment from a particular investee company by IQS would be considered in case the engagement has not led to positive results, the investee company has not provided a response and/or there was no better behaviour appearing. Such cases are defined as Unsuccessful Engagements and these companies are placed on an Engagement Watchlist which is shared with other Invesco investment centres. Where a company is on the Engagement Watchlist, it will be flagged in our Global Proxy Voting System for careful consideration of any relevant voting and in particular the possibility of voting against the company will be considered by the relevant fund managers. IQS also engages collaboratively with other Shareholders from time to time, usually when Vigeo Eiris or another investor has submitted a proposal to do so.

4.0 Management of Conflicts of Interest

In relation to conflicts of interest that exist in its stewardship and proxy voting activities, Invesco has adopted the Global Policy Statement on Corporate Governance and Proxy Voting which can be found [here](#) in addition to other regional conflict of interest policies which are available upon request from the respective Invesco entities.

Important information

Invesco Asset Management Deutschland GmbH, An der Welle 5,
60322 Frankfurt am Main. Authorised and regulated by the
Bundesanstalt für Finanzdienstleistungen (BaFin).

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