

Asset Liability Management

Integration of ESG and sustainability in strategic decision making

CFA Society Netherlands
12 October 2026

TRIPLE A
RISK FINANCE

Investment cycle



Integration of ESG and sustainability in strategic decision making

1. Regulatory guidance
2. Ways to incorporate ESG and sustainability in ALM
3. Deep dive



Expectations and guidance from the regulator



1. ESG risks must be an integral part of strategic analyses (ALM & SAA)

   This means that ALM studies must consider the impact of factors such as climate transition, biodiversity loss and social risks on long-term returns, liabilities and the risk budget.

2. Updated guide (July 2025): scenarios, stress tests and best practices for ALM/SAA

   → Scenario analyses must form part of ALM calculations.

   - Stress tests on climate and natural risks to determine their impact on solvency and returns.
   - Integration into the business model and strategy, governance, risk management and reporting.
     → ESG must be reflected from the strategic level (SAA) right through to implementation.
   - New best practices covering, amongst other things, transition pathways, natural risks, climate action plans and legal sustainability risks.

In January 2026, the Sustainable Finance Platform (established by DNB) published a handbook for institutional investors setting out best practices and academic insights with a view to integrating impact into the decision-making process.

Regarding strategic asset allocation, this handbook focuses primarily on the difference between:

- **Strategic Asset Allocation (SAA)**: The more traditional ALM approach, with decision-making and definition at the asset class level; Integrated SAA can incorporate ESG considerations into expected return and risk.
- **Total Portfolio Approach (TPA)**: Under this approach, the portfolio is viewed as a single entity, and the asset manager is given the freedom to invest across asset classes within this overarching framework; sustainability and ESG considerations can also play a role in this.



At present, there are four general ways in which ESG is, or can be, integrated within an ALM framework

1. **Integrating ESG into capital market scenarios**

   ESG can be incorporated into the economic assumptions by adjusting expected returns, volatilities and correlations of asset classes or sectors that are exposed to ESG risks.

2. **Integrating ESG into strategic allocation rules**

   When optimizing portfolios, the following can be considered

   - Minimum allocations to specific sustainable asset classes;
   - The use of ESG scores as an optimisation constraint.

3. **Quantitative impact analyses within the scope of ALM**

   The use of climate scenarios or other specific (shock) scenarios (e.g., a CO_2 price shock) or the high-level assessment of the ESG impact for each presented alternative.

4. **Governance integration within ALM**

   Making ESG objectives part of the policy frameworks and embedding them in risk budgeting (e.g., a separate CO_2 risk budget)

At present, there are four general ways in which ESG is, or can be, integrated within an ALM framework

1. **Integrating ESG into capital market scenarios**

   ESG can be incorporated into the economic assumptions by adjusting expected returns, volatilities and correlations of asset classes or sectors that are exposed to ESG risks.

2. **Integrating ESG into strategic allocation rules**

   When optimizing portfolios, the following can be considered
   - Minimum allocations to specific sustainable asset classes;
   - The use of ESG scores as an optimisation constraint.

3. **Quantitative impact analyses within the scope of ALM**

   The use of climate scenarios or other specific (shock) scenarios (e.g., a CO_2 price shock) or the high-level assessment of the ESG impact for each presented alternative.

4. **Governance integration within ALM**

   Making ESG objectives part of the policy frameworks and embedding them in risk budgeting (e.g., a separate CO_2 risk budget)

Although the concept is sound and has the potential to embed ESG risks in the core of the ALM framework, in practice this often leads to lively discussions and different viewpoints.

Hence, finding consensus on the assumed impact of ESG risks on asset categories between all stakeholders can prove to be difficult and results might become subjective.

That, however, does not mean that one should not keep an open mind within the assumption setting regarding worldviews in which economic growth and productivity is impacted by climate transition and ESG risks.

"Are the assumptions still valid in a world in which different dynamics are in play and how robust is the SAA when a different worldview materialises?"

At present, there are four general ways in which ESG is, or can be, integrated within an ALM framework

1. **Integrating ESG into capital market scenarios**

   ESG can be incorporated into the economic assumptions by adjusting expected returns, volatilities and correlations of asset classes or sectors that are exposed to ESG risks.

2. **Integrating ESG into strategic allocation rules**

   When optimizing portfolios, the following can be considered
   - Minimum allocations to specific sustainable asset classes;
   - The use of ESG scores as an optimisation constraint.

3. **Quantitative impact analyses within the scope of ALM**

   The use of climate scenarios or other specific (shock) scenarios (e.g., a CO_2 price shock) or the high-level assessment of the ESG impact for each presented alternative.

4. **Governance integration within ALM**

   Making ESG objectives part of the policy frameworks and embedding them in risk budgeting (e.g., a separate CO_2 risk budget)

ESG scores may still vary quite significantly dependent on the data provider and the methodology used. Furthermore, there is no publicly available and verifiable data for every asset.

Given these challenges, in practice it is not a viable alternative (yet) to use ESG scores or ESG data as an objective constraint within the optimisation.

Imposing minimum allocations to specific sustainable asset classes within the strategic portfolio does enable a direct and consistent link between ESG policy principles and strategic portfolio decisions.

At present, there are four general ways in which ESG is, or can be, integrated within an ALM framework

1. **Integrating ESG into capital market scenarios**

   ESG can be incorporated into the economic assumptions by adjusting expected returns, volatilities and correlations of asset classes or sectors that are exposed to ESG risks.

2. **Integrating ESG into strategic allocation rules**

   When optimizing portfolios, the following can be considered
   - Minimum allocations to specific sustainable asset classes;
   - The use of ESG scores as an optimisation constraint.

3. **Quantitative impact analyses within the scope of ALM**

   The use of climate scenarios or other specific (shock) scenarios (e.g., a CO_2 price shock) or the high-level assessment of the ESG impact for each presented alternative.

4. **Governance integration within ALM**

   Making ESG objectives part of the policy frameworks and embedding them in risk budgeting (e.g., a separate CO_2 risk budget)

Using stress test scenarios on climate and natural risks to determine their impact on solvency and asset returns is a standard part of the process for assessing the robustness of the SAA and portfolio alternatives.

Given the availability of data for asset classes other than government and corporate bonds and shares, this will need to focus on individual components of the portfolio (rather than the portfolio as a whole)

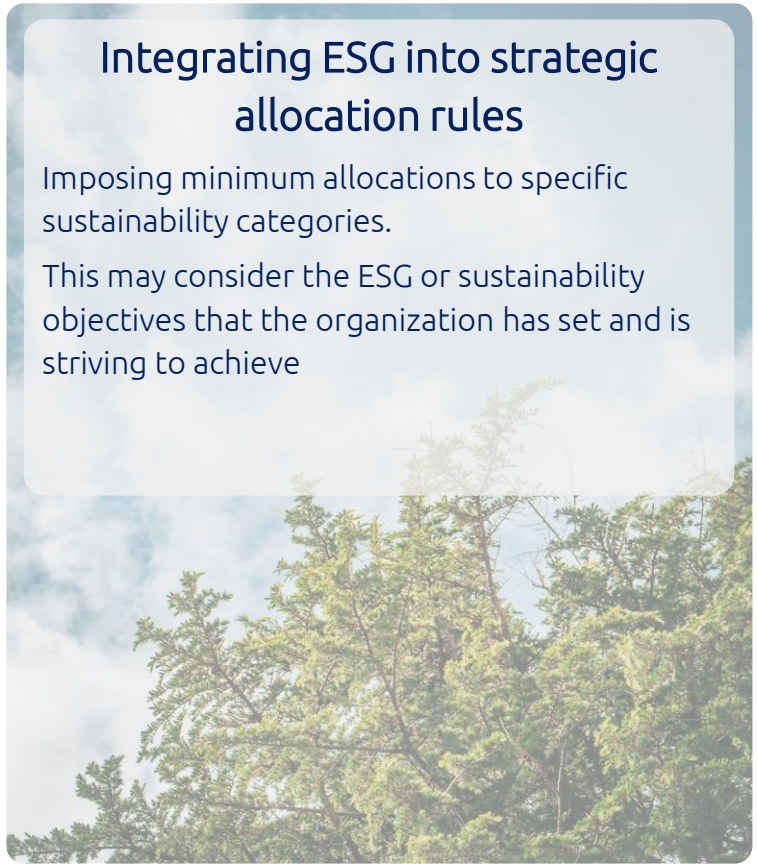
A closer look at the integration of ESG into ALM

Given the constructive ways of integrating ESG and sustainability into the ALM framework, we take a deeper dive into the opportunities offered by each of these approaches

Integrating ESG into strategic allocation rules

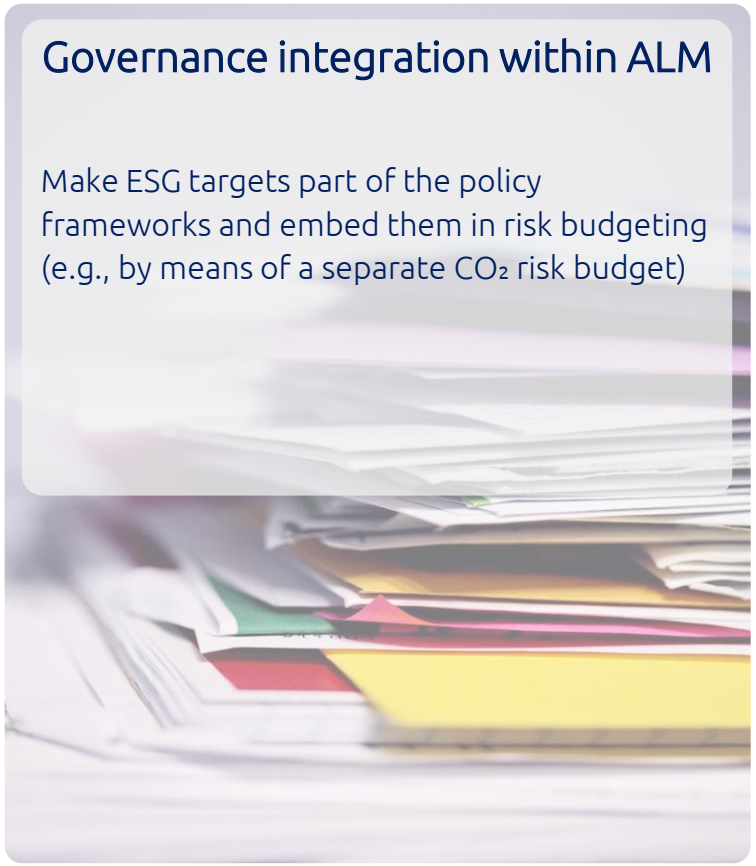
Imposing minimum allocations to specific sustainability categories.

This may consider the ESG or sustainability objectives that the organization has set and is striving to achieve



Governance integration within ALM

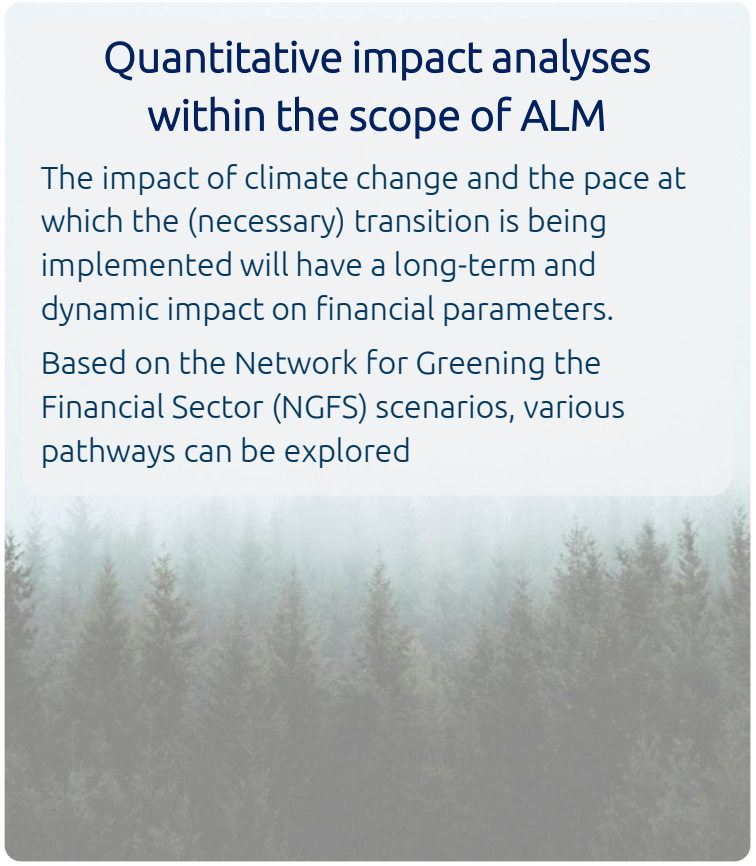
Make ESG targets part of the policy frameworks and embed them in risk budgeting (e.g., by means of a separate CO_2 risk budget)



Quantitative impact analyses within the scope of ALM

The impact of climate change and the pace at which the (necessary) transition is being implemented will have a long-term and dynamic impact on financial parameters.

Based on the Network for Greening the Financial Sector (NGFS) scenarios, various pathways can be explored



Integrating ESG into strategic allocation rules

The most pragmatic way to integrate ESG into the Strategic Asset Allocation is to include a minimum mandatory allocation to sustainable assets

- This can be done either through categories that are already implemented sustainably within the portfolio (for example, an allocation to equities via a sustainable benchmark) …
- … or by creating space within the portfolio for a specific impact investment (or an '*impact pocket*' within the portfolio, the specific composition of which has yet to be determined).

  This impact pocket may then contain various categories - such as private debt, private equity, agriculture, forestry, etc.

  These alternative (sustainable) categories must therefore be considered in the assumption setting at the outset of the ALM to arrive at a well-supported and thorough analysis.

Please note: This requires that, **prior** to the ALM study, specific objectives set out in policy or to which a commitment has been made need to be discussed and addressed; these might include specific themes, ESG objectives, CO_2 reduction targets, etc.

In many cases, this also relates to categories that are not yet included in the portfolio, which is why it is advisable to draw up **an investment case** prior to the ALM study

Integrating ESG into strategic allocation rules

Various asset classes offer the opportunity to incorporate impact considerations into decision-making. This can be achieved through explicitly sustainable instruments, via engagement, or via thematic funds.

It should be noted that not every asset class offers opportunities for specific themes or objectives, which makes mapping essential.

	Public markets		Private markets			
	Bonds	Equity	Private Debt	Real Assets		Private Equity
	Green / Social / Sustainability linked	ESG-integration / Thematic / Engagement	Corporate, Real Estate, Infra	Infrastructure	Real Estate	Thematic
Energy transition	Green bonds	ESG screening	Sustainable Mortgages	Renewable energy	Sustainable Real Estate	Venture Capital
Nature preservation	Social Bonds	Exclusion	Social Mortgages	Social infra (PPS)	Health related Real Estate	Energy / clean tech
Equality in society	Sustainibility-linked bonds	Engagement	MKB leningen	Circulair infra	Social housing	Healthcare
Healthy society	Nature / Blue bonds	Stewardship	Groene RE financieringen		Forestry	Agri and Food
			Project finance		Argiculture	Circulair economy

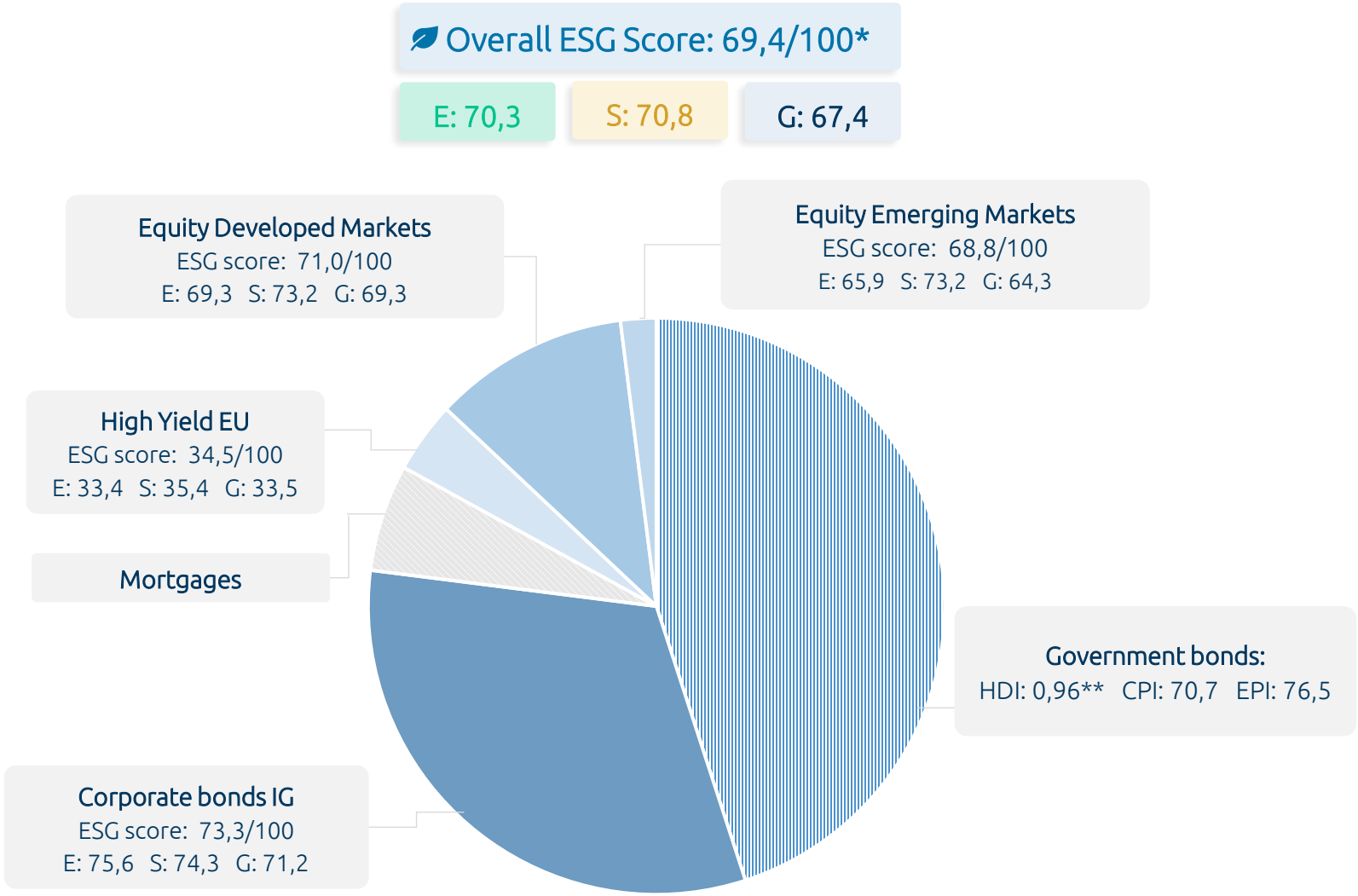
Make ESG targets part of the framework and metrics

Anchor point: Current portfolio

ESG scores are used to provide high-level insights into **the sustainability of the investment portfolio**.

These **ESG scores** provide an integrated measure of companies' performance in the areas of the environment, society and corporate governance. The scores can be presented both at the portfolio level (where available) and by underlying asset class.

For government bonds, additional indicators are used, including the Human Development Index (HDI), the Corruption Perception Index (CPI) and the Environmental Performance Index (EPI).



** Government bonds are not included in the calculation of the overall ESG score.*
*** This scale ranges from 0 to 1*

Make ESG targets part of the framework and metrics

Alternative investment portfolios

The current portfolio generally serves as an anchor point within the ALM analysis, against which the various portfolio alternatives will be assessed.

The traditional financial and risk framework can be supplemented with ESG metrics and information relating to sustainability.

This information is comparative rather than absolute; it serves as a supplementary decision-making tool alongside the existing financial and risk frameworks.

Please note: the same ESG information is not available for every asset class.

Asset category	ESG info available?	Current (%)	Alternative A (%)	Alternative B (%)	Alternative C (%)
Equity Developed	✓	15,0	25,0 ↑	15,0	15,0
Equity Emerging (ESG screened)	✓	25,0	15,0 ↓	20,0 ↓	45,0 ↑
Credits Investment Grade	✓	10,0	10,0	0,0 ↓	10,0
Credits High Yield	✓	10,0	10,0	20,0 ↑	0,0 ↓
Emergings Market Debt	✓	10,0	10,0	15,0 ↑	0,0 ↓
Money Market	✗	6,5	6,5	6,5	6,5
Government bond	✗	23,5	23,5	23,5	23,5
Total allocation (%)		*100,0*	*100,0*	*100,0*	*100,0*
ESG info available (%)		70,0	70,0	70,0	70,0
Coverage - Available data (%)		78,0	78,2	68,4	95,4
Coverage - Total portfolio (%)		54,6	54,8	47,8	66,8

ESG insights per alternative portfolio

Informative and guiding

1. **Use of multiple ESG indicators (KRIs)**
   A set of complementary ESG KRIs is shown for each portfolio alternative

2. **Comparison between portfolio alternatives**
   ESG indicators are standardised and presented side by side.
   This provides insight into…
   - … where focus shifts due to different allocations
   - … which ESG dimensions are affected either positive or negative
   The focus is on direction and relative differences, not on absolute precision.

3. **Interpretation: what does this say about policy?**
   The ESG insights make explicit:
   - which policy priorities are implicitly reinforced or weakened;
   - where tensions or synergies arise between return, risk and ESG;
   - which choices are deliberate and which are unintended.

4. **Guidance for implementation**
   The analysis serves as a starting point for further ESG integration, for example:
   - refining mandates or guidelines for each asset class
   - the targeted use of engagement, selection or investments
   - determining where minimum allocations or additional ESG criteria make sense

› **ESG scores for each portfolio alternative are intended to highlight differences, clarify policy choices and provide direction for further ESG integration when implementing the investment policy.**

	Current	A	B	C
ESG info available (%)	70,0	70,0	70,0	70,0
Coverage - Available data (%)	78,0	78,2	68,4	95,4
Coverage - Total portfolio (%)	54,6	54,8	47,8	66,8
ESG Score	69,8	69,5	68,2	72,0
Environmental Pillar Score	8,5	68,3	66,4	70,5
Social Pillar Score	72,3	71,7	70,6	74,7
Governance Pillar Score	67,3	67,3	65,8	69,0
CO_2 intensity (1+2)	8,0	8,8	8,9	4,7
CO_2 intensity (1+2+3)	60,3	67,9	57,0	39,4
Emissions Score	76,3	75,5	74,6	79,9
Resource Use Score	76,4	76,6	74,2	79,4
Environmental Innovation Score	50,8	50,5	46,8	53,9
Workforce Score	76,3	75,2	74,4	79,3
Community Score	75,0	74,4	74,3	77,5
Human Rights Score	68,4	69,4	66,4	68,8
Product Responsibility Score	67,3	65,9	66,0	71,0
Management Score	69,4	69,2	67,6	71,8
CSR Strategy Score	71,4	72,4	69,4	72,1
Shareholders Score	57,4	57,5	57,4	57,0

ESG insights per alternative portfolio

Informative and guiding

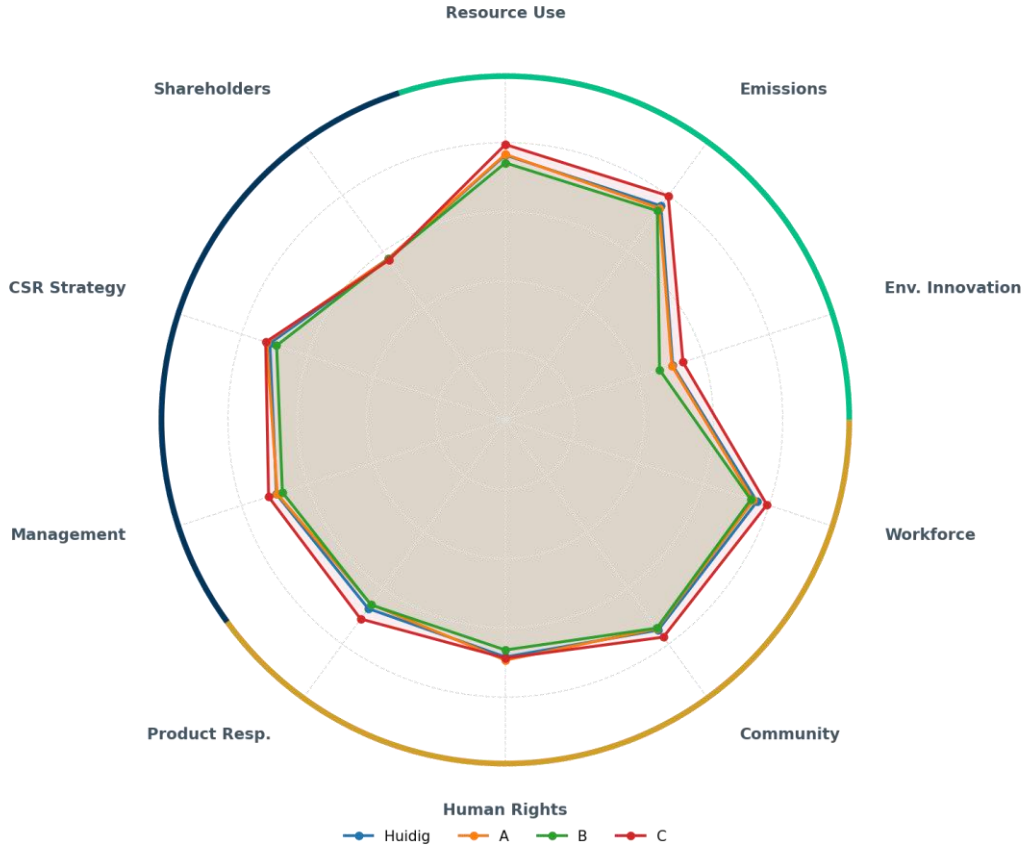
1. **Use of multiple ESG indicators (KRIs)**
   A set of complementary ESG KRIs is shown for each portfolio alternative

2. **Comparison between portfolio alternatives**
   ESG indicators are standardised and presented side by side.
   This provides insight into…
   - … where focus shifts due to different allocations
   - … which ESG dimensions are affected either positive or negative
   The focus is on direction and relative differences, not on absolute precision.

3. **Interpretation: what does this say about policy?**
   The ESG insights make explicit:
   - which policy priorities are implicitly reinforced or weakened;
   - where tensions or synergies arise between return, risk and ESG;
   - which choices are deliberate and which are unintended.

4. **Guidance for implementation**
   The analysis serves as a starting point for further ESG integration, for example:
   - refining mandates or guidelines for each asset class
   - the targeted use of engagement, selection or investments
   - determining where minimum allocations or additional ESG criteria make sense

› **ESG scores for each portfolio alternative are intended to highlight differences, clarify policy choices and provide direction for further ESG integration when implementing the investment policy.**



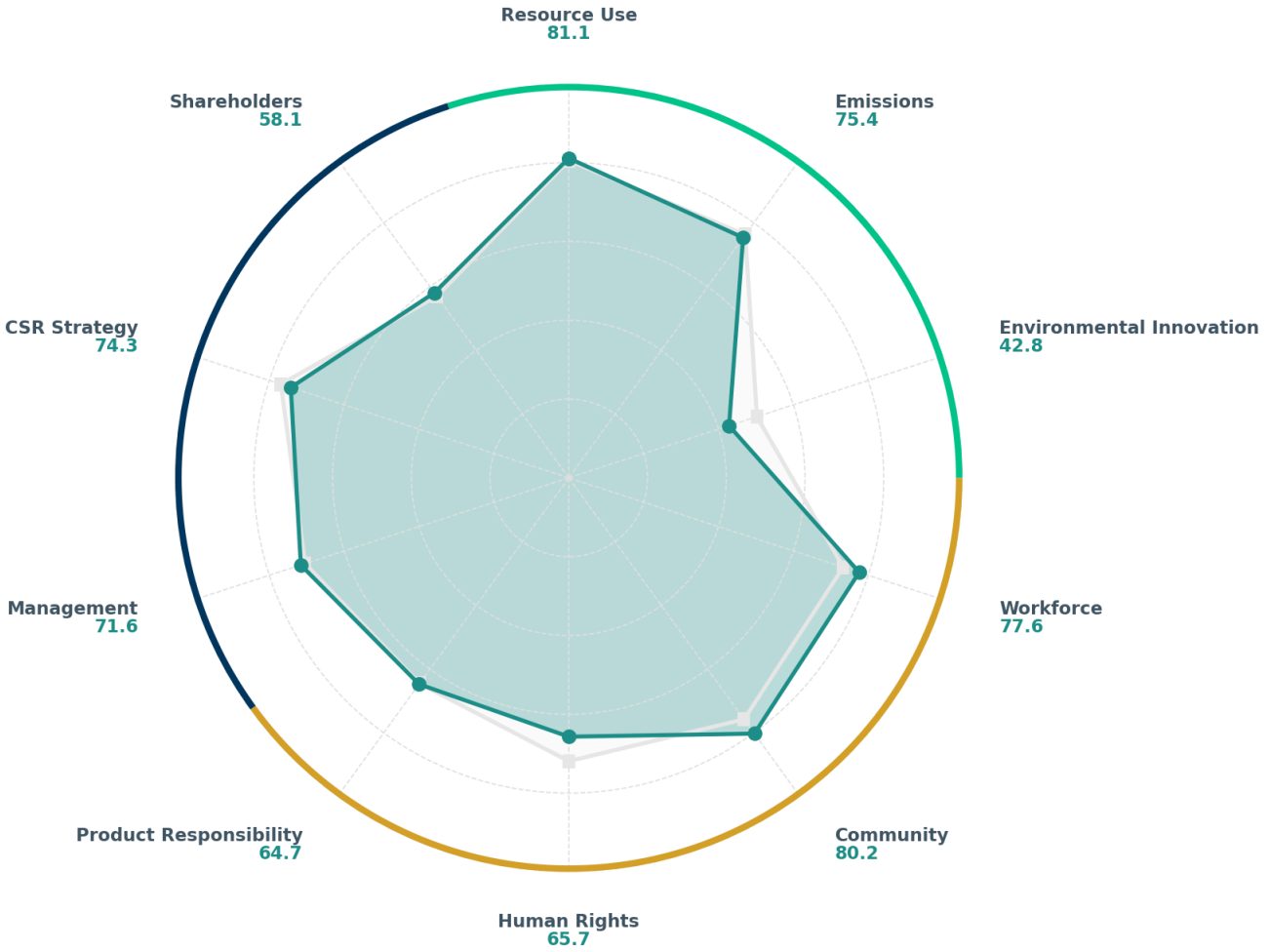
ESG insights per individual asset class

Equity Developed: ESG characteristics compared to the benchmark

In addition to aggregation at portfolio level, the available information can also be used to focus on specific categories.

By comparing the current portfolio with, for example, the benchmark (whether it is sustainable), it is possible to gain an understanding of where potential areas for attention lie within the current implementation, or where the current portfolio is outperforming the benchmark.

These insights may provide grounds for taking a closer look at the implementation of the current portfolio or for entering into discussions with the asset manager.

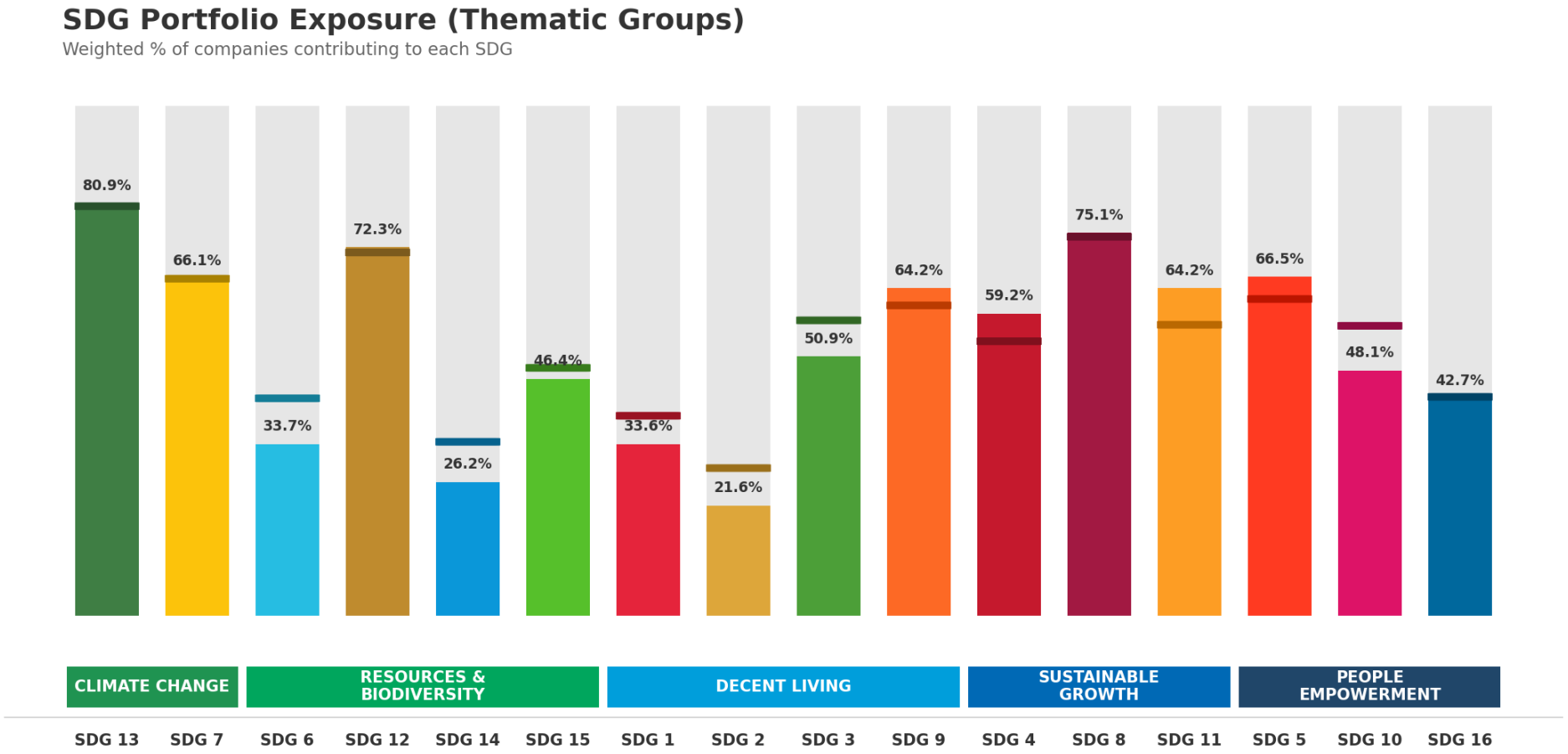


Pillar	Metric	Portfolio Score	Benchmark Score
Environmental	Resource Use	81,13	80,51
Environmental	Emissions	75,35	76,27
Environmental	Environmental Innovation	42,81	50,25
Social	Workforce	77,58	73,32
Social	Community	80,22	75,74
Social	Human Rights	65,68	71,88
Social	Product Responsibility	64,72	64,49
Governance	Management	71,57	70,42
Governance	CSR Strategy	74,26	76,9
Governance	Shareholders	58,08	57,01

SDG insights per individual asset class

Credits Investment Grade: SDG characteristics compared to the benchmark

In addition to ESG characteristics, it is also possible to compare the SDG characteristics of specific asset classes with the benchmark.
This, too, provides insight into potential areas for attention within the current portfolio or where the current portfolio is outperforming the benchmark.



Quantitative impact analysis in ALM

What are the current limitations of strategic scenario analysis?

The scope for scenario analysis relating to ESG and sustainability is currently focused primarily on the impact of **climate change** and CO_2 emissions

There are a number of challenges involved in integrating a broader ESG perspective into scenario analysis, including:

- Insufficient maturity of S and G factors
- Limitations in data quality and reporting
- …

This issue should therefore be addressed as part of the implementation of the strategic portfolio



Source: Sustainable Finance Platform

Quantitative impact analysis in ALM

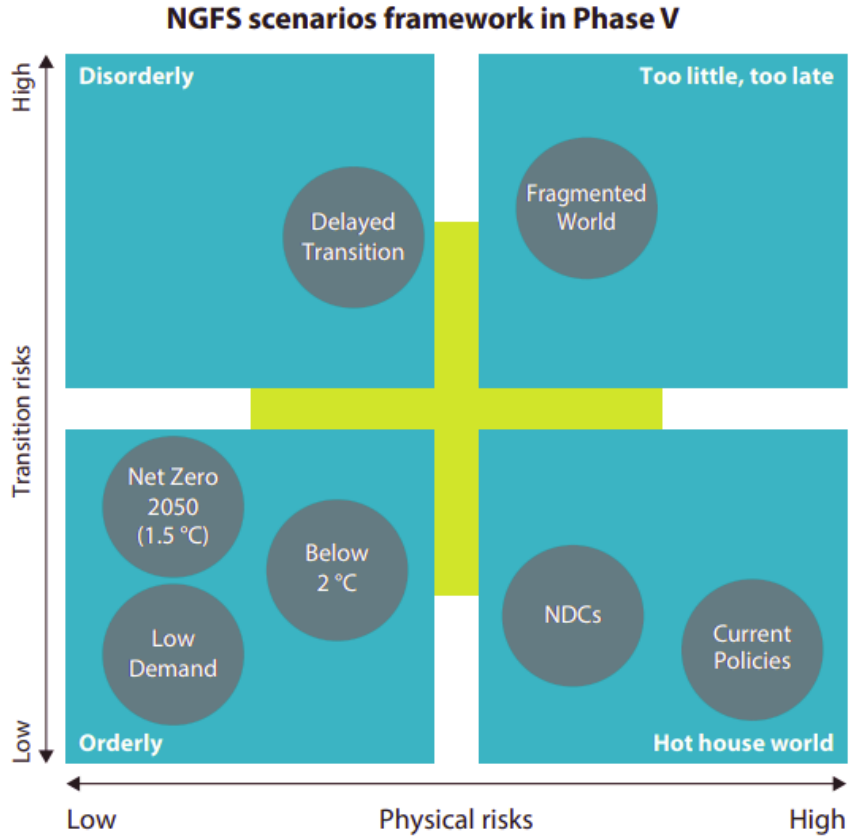
Strategic scenario analysis

Providing insight into the impact of climate change and the (necessary) climate transition presents a number of challenges

- In particular, because historical statistics are lacking and climate data is incomplete or fragmented, ***forward-looking scenario analysis*** is required to quantify financial risks related to the climate transition (including both transition risks and physical risks).
- Some scenarios need to be considered over a longer time horizon, as the impact does not unfold within the traditional ALM/ORSA time horizon.

Objective

- To verify the robustness of the current Strategic Asset Allocation and the portfolio alternatives under consideration.
- Climate scenarios should always be considered in conjunction with other forward-looking scenarios that focus on global developments (such as the current geopolitical unrest).



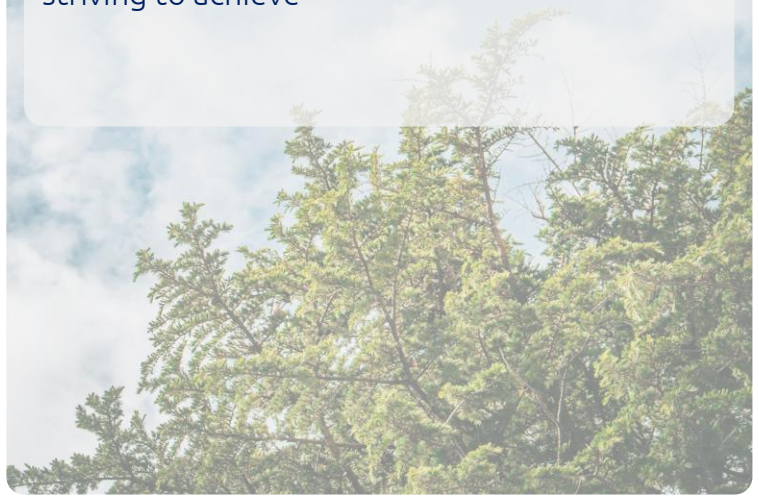
NGFS
Central Banks and Supervisors Network for Greening the Financial System

Summary

Integrating ESG into strategic allocation rules

Imposing minimum allocations to specific sustainability categories.

This may consider the ESG or sustainability objectives that the organization has set and is striving to achieve



Governance integration within ALM

Make ESG targets part of the policy frameworks and embed them in risk budgeting (e.g., by means of a separate CO_2 risk budget)



Quantitative impact analyses within the scope of ALM

The impact of climate change and the pace at which the (necessary) transition is being implemented will have a long-term and dynamic impact on financial parameters.

Based on the Network for Greening the Financial Sector (NGFS) scenarios, various pathways can be explored



ESG integration within ALM



Address

Hoogoorddreef 54
1101 BE Amsterdam Zuidoost

TRIPLE A
RISK FINANCE

Contact

+31 20 707 3640
info@aaa-riskfinance.nl