
Integration of Environment, Social and Governance considerations is now an expected part of best practice Investment Management

The Sustainability Summit – ESG, SRI, Impact, Sustainability and Governance
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Our Journey to Integration

Building on our commitment to sustainable investing



Source of timeline data: J.P. Morgan Asset Management.

Our capabilities are aligned with client objectives

We offer over 100 strategies totaling ~\$300bn in assets across four categories as detailed below

ESG INTEGRATION

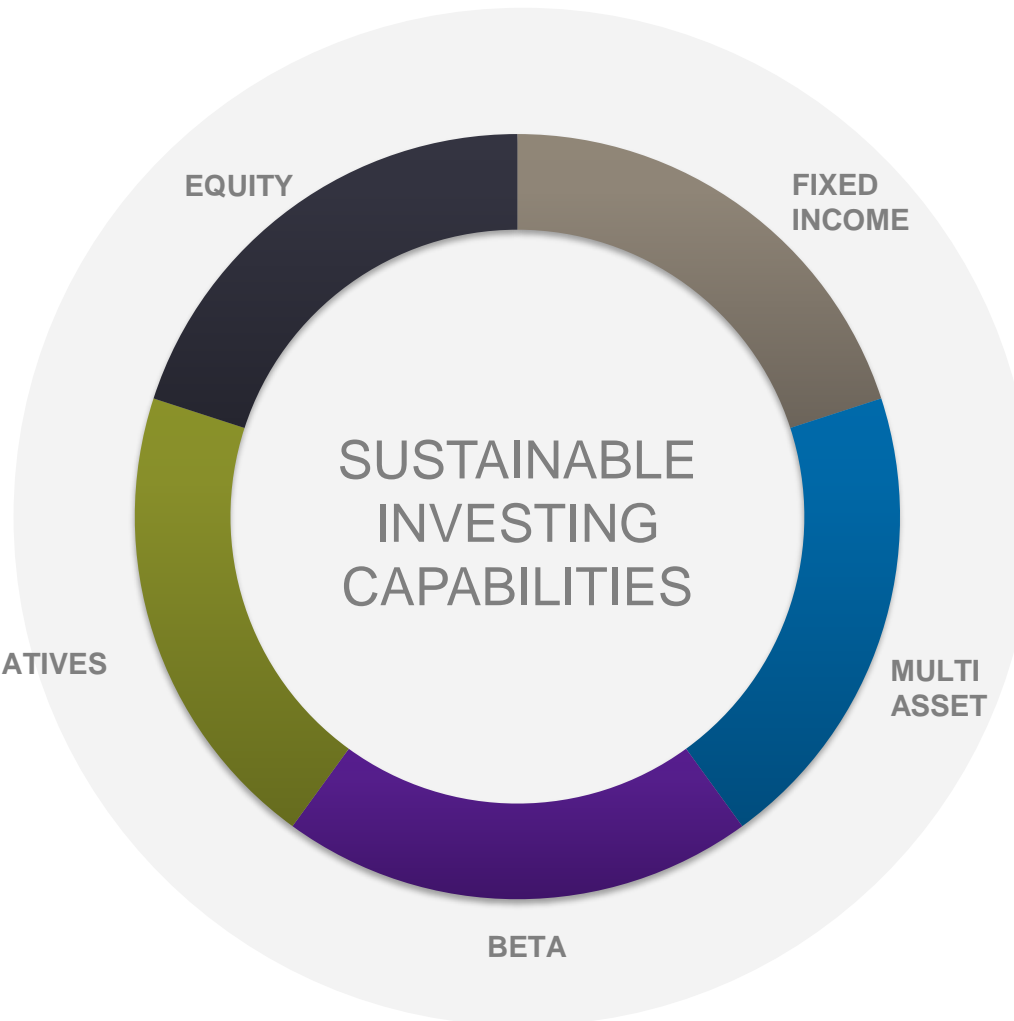
Systematic and explicit consideration of ESG factors in the investment decision-making process:

- Equities: U.S., European, EM, Global
- Global Real Estate
- Infrastructure
- Fixed Income: Global Investment Grade, Municipals

BEST IN CLASS/TILT

Investment in companies based on positive ESG performance relative to industry peers:

- Equities: U.S., European



VALUES/NORMS BASED SCREEN

Avoiding certain companies or industries that do not align with investor values or meet other norms or standards:

- Equities
- Fixed Income

IMPACT/THEMATIC INVESTING

Investments based on specific environmental or social themes or assets related to sustainability:

- Municipals
- Aging population
- Carbon reduction

As of September 30, 2017.

ESG in Infrastructure Investing

As an asset class, infrastructure provides direct exposure to ESG and plays a critical role in the essential functions and sustainability of communities and their environments

Long lived assets that are designed to provide stable long term returns

Critical assets that support people's lives and communities

Operate within complex regulatory, environmental, safety and customer service frameworks

Note: Socially Responsible Investments are subject to the risk that because social criteria exclude securities of certain issuers for non-financial reasons, investors may forgo some market opportunities available to those that don't use these criteria.

ESG Considerations in Infrastructure

ENVIRONMENTAL	SOCIAL	GOVERNANCE
<p>Climate Change</p> <p>Greenhouse gas emissions</p> <p>Renewable energy</p> <p>Air pollution</p> <p>Water security</p> <p>Waste generation and disposal</p> <p>Deforestation</p> <p>Habitat protection</p>	<p>Human rights</p> <p>Labor standards and working conditions</p> <p>Cybersecurity</p> <p>Gender and diversity</p> <p>Health and safety for employees, customers, community</p> <p>Stakeholder communications</p> <p>Employee engagement</p>	<p>Board composition</p> <p>Executive compensation</p> <p>Audit committee structure</p> <p>Accounting fraud</p> <p>Succession planning</p> <p>Bribery and corruption</p> <p>Lobbying activities</p> <p>Political contributions</p> <p>Whistleblower protection</p>

Management of Material ESG Matters

Focus on Material Non-Financial Matters to Ensure Ongoing Viability of Operations

Environmental: Effect on and of the company:

- Warming trend on a heating business may result in reduced revenue but may also increase demand, or reward for use of, for renewable energies
- Severe weather resulting in destruction of assets or extended downtime
- Habitat destruction; biodiversity impacts, wood chips (scarcity of fuel source)
- Compliance with regulations



Social: Stakeholder engagement: effect on and of the company:

- Cost of high employee turnover
- Health and safety issues (employees, contractors, customers, communities)
- Cybersecurity
- Reputation (regulators, customers, lenders, etc.)

Governance: Focus on ability to 'right the ship':

- Mechanisms may include policies and procedures, corporate culture, independent leadership, executive pay alignment, audits and internal controls, and contractual protections with service providers

Environmental Considerations: Heating Company

- **Effect of the environment on the company**
 - Global warming trends, droughts, etc: *take or pay obligations, effect on covenant coverage, effect on growth plans/underwriting*
 - Climate change – *opportunities to consider*
 - Severe storms
 - Weather preparedness plans and crisis management
 - Health and safety protocols
 - Business continuity plans
 - Supplier preparedness
 - Material contract default triggers
 - Insurance coverage
 - Incident response policy and internal and external communication plans
- **Effect of the company on the environment**
 - Reporting and regulatory requirements
 - Environmental permit compliance and ability to obtain/renew
 - Reductions of carbon emissions, little air pollution
 - Use of environmentally friendly materials
 - Use of domestic resources
 - Construction management and impact for new productivity products (pollution, waste, noise)
 - Responsible for suppliers/industrial partners and effect on environment

Social Considerations: Heating Company

Define stakeholder universe: monetary sources, regulators, suppliers, maintenance and service contractors, employees, offtakers, communities

- **Effect of stakeholders on the company**
 - License to operate and grow: regulators, offtakers, employees, communities, monetary sources
 - Reputation effects, M&A opportunities
 - Suppliers: potential to impact health & safety, reputation, cybersecurity, etc.
 - Communities can impact reputation if not revenues directly (example: social media)
 - Communicate with local municipalities, policy makers and regulators
 - Other municipalities who may want to sell
 - Connect to potential offtakers, communities and regulators on external issues

- **Effect of the company on stakeholders**
 - Employees: local employment, employee satisfaction, turnover (*company culture*)
 - Community impact
 - Community engagement, philanthropic initiatives
 - Reputation with regulators, customers, lenders, community
 - Health and safety for employees, customers, community and supply chain
 - Human rights and child labor laws
 - Diversity and inclusion
 - Cybersecurity threats: personal data, privacy rights, data intrusion
 - Process for checking on facilities (fleet of cars, dash cameras, security)

Governance Considerations: Heating Company

- Develop informed ESG oversight at management and the board and reflect approach in policies, procedures and processes
- Incorporate ESG in strategic planning and compensation alignment
- Provide trainings for ESG issues and initiatives
- Focus on implementation of policies
- Include ESG in risk oversight, management and mitigation
- Include ESG matters in material contracts with material suppliers and industrial partners



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