



BUILDING STRONGER PORTFOLIOS

ESG Integration

Alternatives

July 2020

Alternatives – Macro Strategies

Our overall approach to ESG integration

We integrate ESG analysis into our process to mitigate potential negative risk scenarios as a result of issues related to ESG. The consideration of potential ESG risk is one of a number of key inputs to our investment decision-making that can influence the choice to buy, disinvest or adjust position sizing in a particular security. Our ESG integration consists of three main components: ESG scoring, fundamental analysis and active ownership.

- **ESG scoring:** Third-party scores provide an objective quantitative framework for the consideration of ESG risk. We leverage ESG scoring and the associated analysis from MSCI, using the ESG scores for equity and credit, and the country scores for sovereign debt, which feed into our factor analysis tool in Spectrum™, our proprietary portfolio and risk management system. Using this tool, we can see our portfolios' aggregate ESG scores, their component parts and the scores for the broader universe.
- **Fundamental analysis:** Our fundamental analysis draws on proprietary, broker and ESG-specific third-party research, as well as our understanding of inherent ESG factors in different countries, sectors, industries and activities. This analysis is documented in our research notes in Spectrum™ for reference and to monitor any shifts over time.
- **Active ownership:** The Macro Strategies team often engages with corporate management directly for companies where we have a large holding or area of interest, while the Investment Stewardship Team of J.P. Morgan Asset Management connects with companies on five key stewardship priorities and oversees proxy voting across the platform, including for our funds. Further, our colleagues across other asset classes engage with company management and share their insights. In sum, we believe that our active ownership enhances our ESG analysis and supports our ability to encourage companies on issues related to ESG.

Case study

Software & Services company

Investment thesis: One of our macro themes, widespread technology adoption, identifies a number of specific areas of opportunity, which currently include the shift to cloud computing. The company's large enterprise install base, tight integration across its application ecosystem and the value proposition it brings to the hybrid cloud put it in a prime position to become a more meaningful player in this fast-growing area. The company's integration with other technology platforms and services differentiates it from its competitors in the space.

Risk considerations:

- Increased competition in the enterprise market, limiting market share gains
- Pricing pressure preventing overall margin expansion potential
- Cloud growth cannibalizing the company's on-premise business
- ESG-specific: alleged bribery, suggesting potential corruption in practices

Additional ESG analysis:

- MSCI ESG industry-adjusted score: 10
- ISS ESG norms-based flag: Amber, for bribery and corruption case

Fundamental analysis

The company excels on an absolute basis in our view and relative to other companies in the Software & Services sector in the key areas of ESG consideration for the sector. Below is a summary of the analysis of each of the relevant ESG areas (EXHIBIT 11). We also evaluated the issue of corruption as a company-specific consideration, which is reflected in the company's amber rating by third-party ESG research provider ISS ESG.

EXHIBIT 11: SUMMARY, ANALYSIS OF RELEVANT ESG AREAS FOR A SOFTWARE & SERVICES COMPANY

Key issues in Software & Services	Company approach/commitment
Carbon emissions	Greenhouse gas reduction targets; commitment to becoming carbon negative for 2030; and aim to remove, by 2050, all the carbon the company has emitted directly or by electrical consumption since it was founded. Internal carbon tax increased (paid by business units to offset their emissions). A member of the Climate Leadership Council.
Corporate governance	Strong corporate governance, with practices generally aligned to shareholder interests.
Privacy & data security	Data security policies and annual budget of USD 1 billion for cybersecurity research and development. An advocate for privacy legislation, committed to General Data Protection Regulation (GDPR) compliance, having applied it globally.
Corruption & instability	Amber flag for company signaled ESG concerns related to alleged bribery in Hungary from 2013-15. Flag is lowest level amber at 6/10 (1-10 from best to worst). Anti-bribery programs and procedures in place.
Human capital development	Focus on managerial and leadership training initiatives for widespread employee development.
Opportunities in clean tech	Provider of IT infrastructure and services with energy and environmental benefits, offering cloud computing, data center efficiency solutions and energy management software tools.

Source: J.P. Morgan Asset Management.

Overall, we are comfortable that the company does not present material ESG risks. One ESG risk flagged in our analysis relates to alleged bribery. We believe that the risk of corruption to shareholder value is low due to enhancements made to compliance and internal controls following an alleged incident in Hungary in 2013-15. Furthermore, in response to the incident, the company paid a USD 9 million fine, with no further financial impact anticipated. The impact of this fine was relatively minimal in the context of the company's USD 1.5 trillion market cap and USD 53 billion net cash position as of March 31, 2020. The company also took remedial action in its Hungary business through contract terminations and disciplinary action for employees.

Since we invested in the company in July 2018, its price return has risen 82% vs. a 46% gain for the broader Software & Services sector.²⁴ Given that the company was given its Amber rating in November 2018, its return demonstrates that the alleged incident has had a minimal impact on shareholder value. While the company continues to have an amber flag from ISS Ethix, a provider of corporate governance and responsible investment information, we are comfortable that it has taken the necessary steps to strengthen its controls, that corruption is not a systemic issue with the potential to impact shareholder value and that the company remains Green for all other norms.

Active ownership:

Our J.P. Morgan Asset Management firm-wide Investment Stewardship Team chaired a roundtable with the company in 2019. Among the topics discussed: corporate culture, sexual harassment, diversity, biases in hiring and interviewing, staff turnover, privacy and data security, and carbon tax.

²⁴ Before dividends; data from Bloomberg as of June 16, 2020.

Alternatives – Infrastructure

Infrastructure assets play a critical role in the sustainable operations of communities, providing safe, clean, reliable, affordable and essential services that people depend upon in their daily lives. The safety of employees, customers and communities is central to an infrastructure company's ability to operate—otherwise known as the “social license.”

J.P. Morgan Asset Management's approach to direct infrastructure investment incorporates ESG considerations into the investment and portfolio management processes to better manage risk and generate sustainable, long-term returns. Active governance, through controlling ownership stakes and majority independent directors, is the first stage in designing and implementing ESG practices appropriate for a company and its stakeholders. Active governance enables effective engagement with, and oversight of, the risks and opportunities that can affect an infrastructure company over the long run and significantly impact its ability to achieve its long-term objectives.

The consideration of ESG risks and opportunities during infrastructure acquisition due diligence is fundamental to decision-making and includes, as applicable, analysis of: governance framework (generally majority control), organizational culture (including diversity and inclusion), health and safety performance, stakeholder engagement and community impact, environmental impacts of and on the target, cybersecurity and information protection, climate change risks and opportunities (transition and physical), anti-corruption and catastrophe resilience. Once an investment is made, identified ESG risks and opportunities are generally addressed in the 100-day post-acquisition plan, which includes priorities identified during due diligence and in plans for compensation alignment; ESG risks and opportunities are also part of ongoing governance frameworks.

We view ESG as an important element in forward-looking strategic positioning rather than a backward-looking compliance consideration. Recent specific examples of ESG initiatives in direct infrastructure include:

Case study:

Addressing climate risks/opportunities and preparing for the energy transition

In our approach to direct infrastructure investment, we continually evaluate and manage climate risks and opportunities. J.P. Morgan Asset Management's direct infrastructure team works with each investee company to understand the physical and transition risks of climate change, along with stranded asset risk and a range of regulatory, policy and political risks and opportunities.

In addition to working with investee companies to acquire over 4.8 gigawatts (GW) of renewable capacity, the direct infrastructure team works with nonrenewable investee companies that are taking innovative approaches to reducing reliance on fossil fuels. For example, a U.S. natural gas investee company introduced a renewable natural gas initiative in Maine. It is aimed at supporting the local economy, reducing GHG emissions and fighting climate change through the creation of renewable gas using cow manure, thereby increasing the company's ability to attract new customers who oppose the use of fossil fuels. Other renewable initiatives include a terminal business that partnered with a customer to develop and store biofuels, thus creating a new revenue stream while reducing exposure to fossil fuels. In another instance, a rail business converted locomotives from diesel to electric, extending their useful lives and, by extension, their financial contribution to the company. These initiatives are all components of our ongoing participation in a sustainable energy transition through investment in innovative technologies that mitigate climate change.

Case study:

Focus on Stakeholder and Community Engagement

J.P. Morgan Asset Management's direct infrastructure team believes stakeholder engagement is key to long-term sustainability. Working closely with investee companies, we identify their key stakeholders (customers, employees, contractors, companies in their supply chain, regulators, government officials and community groups) to understand the effect of such stakeholders on the company and the company's effect on such stakeholders. We aim to design engagement programs to build and maintain relationships, provide transparent communication and deliver meaningful benefits to stakeholders (such as contributing to philanthropic initiatives, educating customers on conservation efforts and providing internships and job opportunities in the local economy). For example, a U.S.-based investee company provided each employee with 20 hours of volunteer time off (VTO), resulting in 2,000 VTO hours in 2019 (twice as much as the previous year) as well as providing positive outcomes for the community, increased employee engagement and improved relationships with customers and regulators. The program has a clear impact on the company's financial prospects.

Alternatives – Private Equity

The objective of the Private Equity Group (PEG) of J.P. Morgan Asset Management is to identify and select attractive investments for its clients from a broad spectrum of private equity investment opportunities. Our ultimate objective: to provide attractive, risk-adjusted returns.

PEG abides by the group's own ESG policy as it looks to achieve this objective. The team's standard investment process includes due diligence on sustainability, a written investment memorandum and ongoing discussions with the portfolio managers of PEG with respect to sustainability issues. This process includes clarification and assessment of material environmental, social and governance risk factors. When investing in a third-party manager, PEG encourages the underlying third-party managers with which it invests to carefully consider these factors in their own investment due diligence. Sustainability considerations are an important component of both the initial due diligence and screening process and the ongoing monitoring of investments.

The investment strategy at the foundation of PEG has been developed and refined over 40 years and through a wide range of market and investment environments. Consistent with PEG's ultimate objective of providing attractive, risk-adjusted returns, specific companies and investment managers, or types of companies and managers, are not excluded from client portfolios solely on the basis of ESG criteria. However, PEG views issues related to sustainability as important factors that are likely to impact performance and therefore must be carefully considered as part of the investment review process. PEG believes that sustainability considerations should be reviewed holistically to account both for material risks and for potential opportunities that may make companies or underlying managers more or less attractive for investment.

Case study:

Addressing issues related to ESG in the manager selection process

For each investment opportunity, PEG assembles a deal team (typically three to five professionals) responsible for conducting due diligence. Here's an example of how that process might unfold. On one occasion, while conducting due diligence on a fund manager, the deal team learned that one of the assets within that fund manager's portfolio was located very close to the habitat of a protected species. It thus had the potential to threaten the biodiversity of wildlife. The deal team researched this issue, among other merits and risks of the investment; held discussions with PEG and the manager; and provided a mitigation analysis to PEG prior to investment. The underwriting of the investment included an ESG risk analysis ensuring that the manager and company were operating under applicable law. As a result, the company created a 200-meter buffer area to protect the habitat. This measure was important to PEG as an investor. Ensuring that a company operates within environmental and regulatory law provides long-term value to our own clients and underscores the importance of governance and a commitment to sustainability.

Case study:

ESG monitoring in a direct investment

During due diligence for an investment in an environmental waste management business in 2015, a potential environmental issue at one company site was identified as an area of concern. Our capital was used in large part to remediate the environmental concern, which had been a long-standing issue for the company that had not been adequately addressed. As such, a key part of our monitoring of this investment was to ensure that remediation was progressing toward completion. Overall, this company now has a key focus on safety and environmental compliance. Monitoring this outcome has been important to PEG for the purpose of carrying out the objectives for this investment and creating a strong financial return for clients.

Alternatives – Real Estate

The Real Estate team believes that continually improving the integration of our investing—and of our assets themselves—with ESG factors can ultimately improve the environment in which those assets exist and enhance their competitiveness in the real estate marketplace. We integrate ESG into investment decisions and have fully integrated sustainability objectives into our overall business strategy. These objectives are publicly posted on our website:

<https://am.jpmorgan.com/gi/getdoc/1383513210544>

We identify and evaluate ESG opportunities and risks before making new investments as part of our real estate asset due diligence process, and continue to evaluate ESG opportunities and risks for our existing investments. Our goal is to mitigate risks and capitalize on opportunities. Our ESG objectives and strategies include:

Environmental

- Consistently measuring, monitoring and improving environmental performance at the assets to meet reduction targets for energy use, greenhouse gas emissions, water use and amount of garbage waste.
- Targeting long-term reduction of energy use, GHG emissions, water use and total waste by 1.5% annually.
- Improving our assets' performance on ESG metrics by identifying low cost measures that can be implemented and making strategic capital improvements, while assessing new technologies.
- Achieving ENERGY STAR certification for eligible buildings annually.
- Evaluating and pursuing third-party green building certifications such as LEED and IREM Certified Sustainable Property, as well as health and wellness certifications such as WELL and Fitwel, wherever feasible.
- Incorporating ESG into our due diligence process for real estate acquisitions, including by considering any potential climate change impacts in the metropolitan statistical area (MSA) where the asset is located, such as flooding, extreme temperatures and droughts, and identifying local resiliency strategies.

Social

- Acting as a responsible corporate citizen and fostering responsibility among our key stakeholders, such as tenants and property managers.
- Being a socially responsible landlord, managing the operating costs of our buildings and improving the occupant experience by having more efficient, well-maintained buildings that provide a good environment for living, working and visiting.
- Engaging our employees and tenants through educational materials, sustainability programming and social events.
- Promoting the health and well-being of our employees, building occupants and communities. Property teams facilitate health and well-being for occupants through attending to indoor air quality, encouraging exercise opportunities, hosting events that educate occupants and engaging with the local community.
- Ensuring regular communication with our third-party property managers on sustainability best practices by providing resources, tools and training.

Governance, including code of ethics

- Guiding and managing accountability for our sustainability efforts at our assets (and on our team) through our ESG Taskforce.
- Ensuring timely and accurate disclosure to investors of our ESG objectives, strategies and performance results at our properties.
- Leading the industry in ESG practices through participation and membership in industry groups such as GRESB, UN PRI, the U.S. Green Building Council, the International Council of Shopping Centers, the Urban Land Institute, National Association of Real Estate Investment Managers (NAREIM) and the National Council of Real Estate Investment Fiduciaries.

J.P. Morgan is a member of GRESB (formerly the Global Real Estate Sustainability Benchmark), a provider of ESG benchmarks for real assets. We have participated in its annual assessment, which measures and monitors the real estate industry's progress in incorporating ESG factors, since the survey's inception and have increased our overall score since 2015. In 2019, the J.P. Morgan Asset Management Strategic Property Fund ranked in the top quartile of its peer group, third out of 47. The fund also achieved five out of five Green Stars, placing us in the top quintile of over 1,000 participants.

Case study:

Sustainability at Dallas, Texas: McKinney & Olive

McKinney & Olive is a 20-story, Class A+ office building. Construction was completed in 2016 and LEED Core and Shell certification and U.S. Green Building Council certification, were pursued. We feel our philosophy of developing, owning and operating efficient assets produces assets that have a higher net operating income, lower vacancy, lower occupancy cost for tenants as well as better tenant satisfaction. We believe these all lead to higher valued assets and better returns over time for our clients. The McKinney & Olive property has achieved the prestigious LEED v4 for Building Operations and Maintenance: Existing Buildings Gold certification. Project highlights include:

Location and transportation

- Reduced emissions from conventional commuting trips by 23%, attributable to occupants' use of fuel-efficient vehicles.

Sustainable sites

- Implemented a Site Management policy with practices including composting 100% of landscape debris, applying organic fertilizer based on soil testing, monitoring irrigation systems biweekly for leaks and using manual methods for weed control.
- Reduced heat island effect on the parking garage by adding sails that cover 88% of the top level of the parking deck.

Water efficiency

- Reduced indoor plumbing water use by 35% compared with standard fixtures by installing high efficiency fixtures that reduce water usage by approximately 939,500 gallons per year, resulting in an annual savings of about USD 9,000.
- Reduced outdoor water use by 68% by having on-site native and adaptive vegetation, as well as a high efficiency irrigation system with weather-based electronic controls and a pressure compensating drip system.

Energy and atmosphere

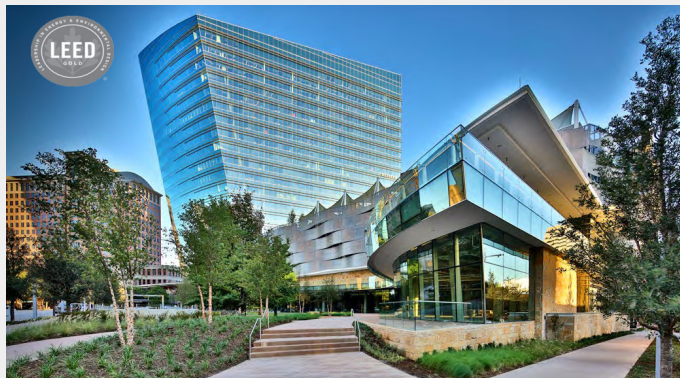
- Earned the U.S. Environmental Protection Agency's ENERGY STAR certification with a score of 90, placing it in the top 10% in energy efficiency among similar properties.
- Implemented low cost energy conservation measures that we estimate save 273,490 kilowatt-hours (kWh) every year, resulting in an annual savings of approximately USD 22,000 and an annual reduction of 204 metric tons of CO₂—equivalent to the emissions produced by 31 homes annually from electricity usage.

Materials and resources

- A lamp-purchasing plan reduced mercury content in the building's lamps to less than 35 picograms per lumen-hour.

Indoor environmental quality

- Purchased 100% sustainable cleaning products during the performance period, including Green Seal®-certified chemicals and paper products with recycled content.
- Utilized high grade air-conditioning filters. All outside air is filtered with MERV 8 pre-filters and MERV 13 final filters, resulting in improved air quality for building occupants.



BUILDING STRONGER PORTFOLIOS

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