Finding Sustainable Growth through an ESG Lens

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Insights

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A R T I S A N P A R T N E R S

Finding Sustainable Growth through an ESG Lens

Over the course of the Artisan Global Equity team's 25 years applying its investment philosophy and process, we have acquired significant experience assessing the sustainability of businesses and the quality and integrity of management teams. By focusing on sustainable growth, high-quality management teams and corporate governance, we have organically incorporated numerous environmental, social and governance (ESG) considerations into our philosophy and process. When conducting deep fundamental company analysis, we consider many factors, including those related to ESG risks that may materially impact potential returns and the range of investment outcomes. These may include environmental factors, such as climate change impacts, or social concerns including labor conditions, supply chain risks, and product quality or safety. We know that today, ESG is increasingly a factor in a company's ability to attract capital. For instance, companies perceived by investors and banks as weak on ESG issues or failing to show improvement in their sustainability may be penalized with a higher cost of capital and higher borrowing costs resulting in lower valuations. For this reason, we look to identify any ESG risks and opportunities facing the business that could impact future returns.

Sustainable Growth

Sustainable growth has always been a pillar of our investment philosophy and leads us to companies that are investing for the long-term. Compared to companies focused on maximizing near-term metrics, we believe companies having sustainable growth characteristics are more likely to align their products, services and corporate practices with broader, positive ESG considerations, such as environmental awareness, stronger employee relations and better corporate governance.

Corporate Engagement

Our investment philosophy and process also emphasize high-quality management teams, which helps us to screen out companies engaged in short-sighted, elevated risk, or exploitive corporate practices. We engage regularly with management teams on many topics, including ESG. During meetings with company managements and company site visits and through other correspondence, we seek to validate the consistency of business practices with management's disclosures and stated policies and engage on ESG issues, particularly corporate governance issues. Our goal is maximizing investors' returns, while management teams may have other nearer-term goals designed to rewards themselves at investors' expense. We pay close attention to the alignment of interest between management and shareholders in areas such as voting rights, incentives and compensation. We also frequently discuss environmental and social issues. As an example, we have met with mining companies with poor track records around pollution and labor policies, which disqualified the companies as sustainable investments under our process. Typically, we have screened these types of companies out of consideration.

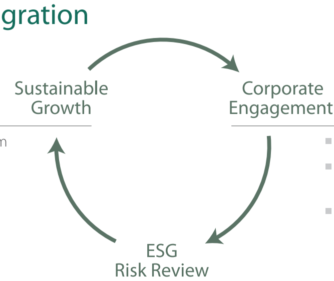
After making an initial investment, we continue closely monitoring our portfolio companies' ESG profiles, including by exercising our voting rights to influence corporate governance practices and fair treatment of minority shareholders. We subscribe to multiple proxy voting services as an additional step in monitoring these issues.

ESG Risk Review

In 2019, we instituted an ESG risk review process to further enhance our ESG efforts. We evaluated several third-party data providers and ultimately hired Refinitiv, that has developed a proprietary data-driven approach to measuring ESG practices. Refinitiv applies over 450 quantitative factors in evaluating and scoring companies along each of the E, S and G principles. These scores help us have a more informed discussion with management teams and provide a broader perspective on companies of interest. It also allows us to better engage with companies to understand how they are positioned and how they plan to make improvements in areas of concern. Further, when these scores indicate elevated risk, our team's Chief Operating Officer escalates the issue and works with the appropriate research analyst to revisit our investment thesis and reassess our estimate of the company's fundamental value.

Additionally, in 2020, we instituted more structure around these processes with the formation of the team's Investment Portfolio Committee (IPC). The members of the IPC include the team's portfolio managers, Mark Yockey, Charles Hamker and Andrew Euretig; the team's COO, Brett Meyer; and senior research analyst Claudia Corra. The IPC's primary functions, in addition to defining thematic research priorities, are evaluating portfolio risks, including those related to ESG, and overseeing the team's ESG integration.

Investment Process - ESG Integration



Sustainable Growth

- Seek companies investing with a sustainable long-term perspective
- These companies are typically aligned with positive ESG considerations
- Also identify global themes that intersect with areas of social importance:
  - Health care for agingpopulations
  - Nutrition and wellness
  - Expanded access to technology and financial services

Corporate Engagement

- Seek high-quality management teams
- Engage regularly with management teams, including on ESG topics, especially corporate governance
- Exercise our influence and voting rights to influence best practices in corporate governance, execute compensation and fair treatment of minority shareholders

ESG Risk Review

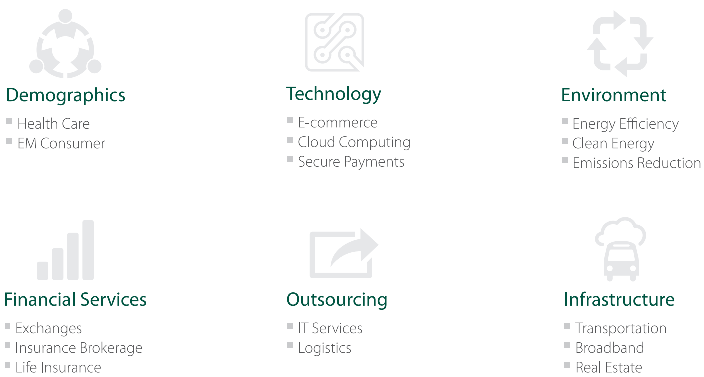
- Objective and independent review of ESG risks
- Use Refinitiv's quantitative scoring to evaluate each portfolio company on 400+ ESG metrics
- Escalation and re-evaluation of stocks with ESG scores indicating elevated risk

Our investment philosophy and process also emphasize high-quality management teams, which helps us to screen out companies engaged in short-sighted, elevated risk, or exploitive corporate practices.

A Thematic Approach to Identifying Sustainable Growth Opportunities

Companies with strong ESG records can present attractive long-term growth opportunities. As part of our search for sustainable growth, we identify broad secular growth themes that in many cases recognize issues of social importance, such as climate change, health care for aging populations, nutrition and wellness, and expanded access to technology. Indeed, many years ago, our research into the serious environmental consequences of air and water pollution led us to formally develop an investment theme centered on the environment.

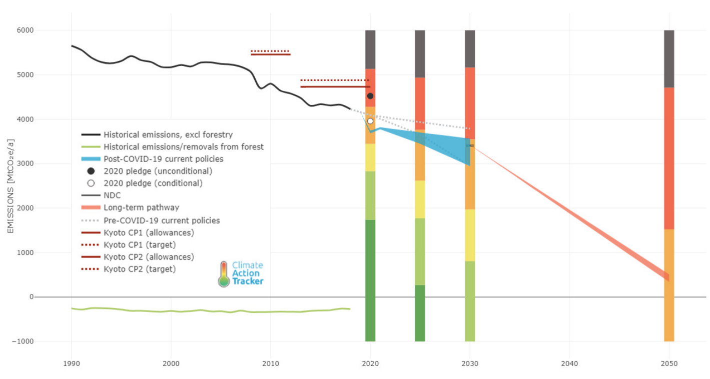
Investment Process - Global Themes



Our Environment Theme

The environment theme has remained prominent in our global and international portfolios. The increasing evidence that greenhouse gases created by human activity is driving climate change—including higher temperatures, more droughts, extreme weather and melting glaciers—has created a call to action for public and private-market solutions to slow these trends. Presently, the European Union is leading the way on climate change mitigation. In 2019, the EU proposed the European Green Deal—a set of policy initiatives aimed at achieving climate neutrality by 2050 (Exhibit 1). Achieving this objective will undoubtedly mean prioritizing energy efficiency and developing a power sector based largely on renewable resources.

Exhibit 1: Greenhouse Gas Emissions Are Down From 6bn Tons in 1990 but Have a Long Way to Go



EU	Main pledges and targets	
Paris Agreement	Ratified 2030 unconditional target(s) Coverage	Yes At least 40% below 1990 by 2030 [29% below 2010 by 2030] Economy-wide GHG coverage
Long-term Goals	Long-term goals	100% below 1990 by 2050

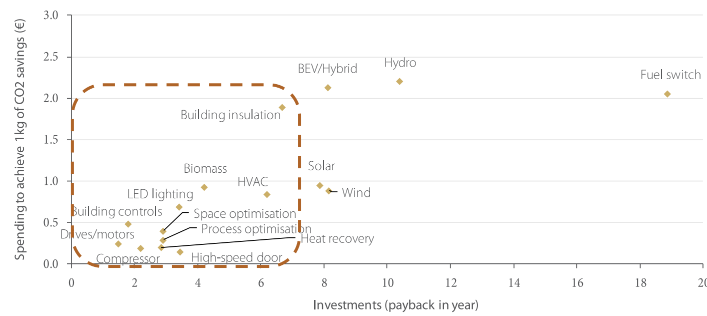
Source: climateactiontracker.org/countries/eu. As of 30 Sep 2020.

Smart Buildings

The COVID-19 pandemic has given the EU additional motivation to accelerate already planned green investments as it seeks to bolster the 27-nation bloc's economy. Of the EU's €1.8 trillion euro stimulus package, €1.1 trillion is budgeted for a recovery plan, funding initiatives over 7 years (2021-2027), with 25% allocated toward climate action. A priority under the European Green Deal and the recovery plan is its *Renovation Wave* initiative aimed at accelerating the renovation of existing buildings to decarbonize the building stock. Buildings are the largest single energy consumer in Europe, accounting for roughly 40% of EU energy consumption and about 36% of greenhouse gas emissions. Further, 75% of building stock is considered energy inefficient. Moreover, the labor-intensive nature of building renovation should help sustain millions of high-paying jobs to support the EU's economic objectives while also aiding in the achievement of its climate goals. Building-focused capital expenditures are also attractive from a business perspective as they offer relatively quick paybacks (Exhibit 2).

Exhibit 2: Average Payback in Years

Average payback in years and in spending for 1kg CO_2 reduction.



Source: Redburn, company. As of 4 Jun 2020.

We believe these multiyear building renovation capital expenditures should serve as substantial tailwinds for companies that supply these markets and have made several investments in what we call our smart buildings sub-theme within the broader environment theme. Examples are NIBE Industrier, Johnson Controls and Siemens.

NIBE is a Sweden-based global heating technology company whose climate division (70% of EBIT) focuses on the design and manufacturing of heat pumps—an essential product in the sustainability and energy efficiency trends. A heat pump is the only heating technology that can use static/ambient energy and convert one unit of energy input from outdoors into four units of energy output (heat) indoors. Heat pumps are well-penetrated in a country like Norway, where cheap electricity is driven by vast wind power; however, other parts of Europe and the US are in the early innings of heat pump adoption as governments push this greenhouse gas-friendly heat source via regulations and subsidies. Heat pumps are not a new technology, but the world has awakened to the fact that this technology is essential in the global attempt to reach specific greenhouse-gas targets.

Johnson Controls is an operator in the building services market, providing building controls, HVAC systems, fire and safety, and power solutions. We believe Johnson Controls' solutions for enhancing buildings' energy efficiency and sustainability should see greater demand as government regulations and stimulus plans increasingly address the sources of climate change. Additionally, in a post-pandemic world, we believe new air quality standards and demand for touchless technologies, remote monitoring and digital automation will drive a new investment cycle in renovating existing commercial office buildings.

Siemens is an engineering and manufacturing company focused on electrification, automation and digitalization. The company is transitioning from a classic German industrial conglomerate that is complicated and overdiversified into a holding company structure with three high-quality verticals (Digital Industries, Smart Infrastructure and Mobility). With its decision to spin-off 55% of Siemens Energy in September 2020, we believe the remaining higher-margin enterprise should re-rate in line with peers and improve management's ability to focus on driving growth and operational performance in the remaining business lines. Siemens Energy is a leading provider of equipment and services for both fuel-efficient conventional and renewable energies. In addition to a margin turnaround story, Siemens Energy has meaningful exposure to the secular growth in renewables due to its 67% stake in wind energy company, Siemens Gamesa—generating approximately 35% of total company sales.

Data Centers

Like buildings, data centers are a large consumer of power globally. Just one data center can consume more electricity than a small city. In fact, approximately 2% of world electricity is being consumed by data centers. Considering the tens of billions of dollars annually invested by big tech companies like Facebook, Google and Alibaba, data centers will consume 10% of world electricity in 10 years, based on our calculations. Our research in this area led us to Vertiv Holdings. Vertiv is a leading provider of power, thermal and infrastructure management equipment and solutions for the global data center market. Vertiv is a unique asset because of its future potential. Formerly a private company and before that a part of Emerson, Vertiv was recently purchased by GS Acquisition Holdings. Given new management's strong track record as operators, we believe there is substantial margin-expansion potential. We also believe the company is well-positioned to benefit from the secular growth in data traffic and the need to reduce operating costs while addressing the environmental implications of data center industry growth.

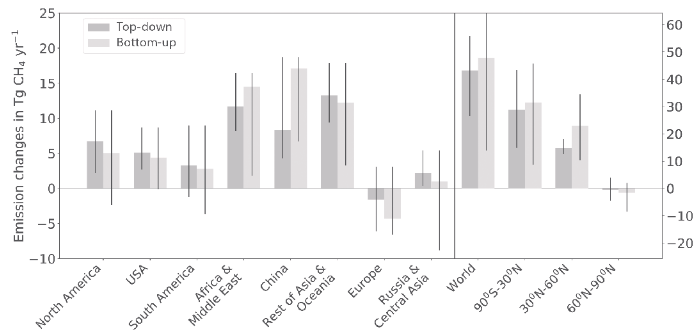
Industrial Gases

We've long invested in industrial gases companies Linde and Air Liquide due to their attractive sustainable growth characteristics, as well as their innovative capabilities around energy efficiency. These companies supply customers across a variety of industries with gases such as oxygen, nitrogen and hydrogen. Among their uses are clean-coal technology, hydrogen fueling, improved energy efficiency and nitrogen oxide emissions abatement. Though categorized in the commodities-oriented and highly cyclical materials sector, their business models are highly stable and defensible. These companies are leaders within a consolidated global industry yielding strong pricing power and with high barriers to entry where the technical and capital requirements to compete in the industry deter new entrants. They also have strong bargaining power given their product offering is essential to end users—so much so that major customers, ranging from steelmakers to hospitals, require them to build and operate large-scale gas units adjacent to their facilities and directly connected via pipeline. In exchange, customers enter long-term (e.g.,15- to 20-year) take-or-pay contracts. As a result, they enjoy the benefits of high switching costs for major customers, as well as cash flow predictability.

Sustainable Agriculture and Aquaculture

After carbon dioxide, methane is the biggest contributor to global warming and climate change. Methane emissions have soared over the past decade. The largest regional contributors to the increase have been China, Africa and the Middle East, and the rest of Asia (Exhibit 3).

Exhibit 3: Change in Methane Emissions Between 2000-2006 and 2017



Source: Global Carbon Project; Jackson R. B. et al. (2020) Increasing Anthropogenic Methane Emissions Arise Equally from Agricultural and Fossil Fuel Sources. Environmental Research Letters, https://doi.org/10.1088/1748-9326/ab9ed2.

Via its Clean Cow project, Dutch multinational life sciences and materials company DSM has spent the past decade developing a new feed additive called Bovaer® that has been shown to reduce methane emissions from cows by approximately 30%. A single cow is estimated to generate three tons of CO_2 equivalent annually. An estimated one billion cows globally generate roughly three billion tons of CO_2 equivalent—approximately 9% of global emissions. Based on our total addressable market (TAM), market penetration and pricing assumptions, we believe Bovaer® has a $1.2bn market opportunity in the EU and New Zealand markets alone.

DSM's innovation engine and sustainability focus extend beyond agriculture into aquaculture. Veramaris, DSM's 50-50 joint venture with specialty German chemicals company Evonik, seeks to address the problem of overfishing caused by growing seafood consumption. Veramaris has developed the technology to produce algae-based omega-3 fatty acids that can be used to replace a portion of the 16 million metric tons of fish processed annually into fish oil and fishmeal needed for aquaculture, especially salmon farming. We believe the Clean Cow and Veramaris businesses should help augment already favorable growth dynamics in the company's nutrition business—its largest segment generating about 65% of sales and be significant contributors in fighting climate change.

Renewables

We believe renewables will also play an important part in meeting growing energy needs while achieving greenhouse gas emissions targets. Europe is currently experiencing a tug of war between these two currents. According to the Energy Information Administration, power consumption is expected to double from 2020 to 2050, while at the same time (as outlined by European Green Deal), the goal is cutting the bloc's greenhouse gas emissions to "net zero". In order to achieve this lofty goal, the growth in renewable energy generation is the most cost-effective way to decarbonize the power sector.

EDP (Energias de Portgual) is a provider of electricity generation, supply and distribution, supplying electricity and gas to ~11.4 million customers, primarily in Portugal, Spain and Brazil. Approximately two-thirds of EDP's EBITDA derives from renewable resources (i.e., wind and hydroelectric). It's mix of energy production is 41% wind, 32% hydroelectric, 14% combined-cycle gas turbines (CCTG) and 12% coal. While not based on renewables, CCTG-powered plants are highly efficient—using a gas and a steam turbine together to produce up to 50% more electricity from the same fuel than a traditional simple-cycle plant. The waste heat creates steam, which is routed to the steam turbine, significantly increasing the overall power output without any increase in fuel. CCTG plants can also be fueled by solar power, further reducing emissions.

The stocks mentioned are holdings in the portfolios the Artisan Global Equity Team manages, highlighting investment opportunities we believe should benefit from the increasing focus on reducing greenhouse gases.

			Artisan Global Equity Strategy	Artisan Non-U.S. Growth Stategy
Smart Buildings	Nibe Industrier AB (Sweden)	A global heating technology company. The company's climate business (70% of EBIT) focuses on the design and manufacturing of heat pumps.	●	
	Johnson Controls International PLC (United States)	An operator in the building services market, providing building controls, HVAC systems, fire and safety, and power solutions.	●	
	Siemens AG (Germany)	One of the world's largest industrial conglomerates that manufactures a wide range of industrial and consumer products.	●	●
Data Centers	Vertiv Holdings Co (United States)	A leading provider of power, thermal and infrastructure management equipment and solutions for the global datacenter market.	●	
Industrial Gases	Linde PLC (United Kingdom)	One of the world's largest industrial gas providers, supplying customers across a diverse range of industries.	●	●
	Air Liquide SA (France)	A global leader in the consolidated industrial gases industry supplying industrial and health care gases, including nitrogen, argon, carbon dioxide and oxygen.	●	●
Sustainable Agriculture & Aquaculture	Koninklijke DSM NV (Netherlands)	A Dutch multinational life sciences and materials company that is a leading global player in animal and human health markets as a provider of key food and feed additives, including vitamins, food ingredients and enzymes.		●
Renewables	EDP – Energias de Portugal SA (Portugal)	A provider of electricity generation, supply and distribution, primarily in Portugal, Brazil and Spain.	●	●

Experienced & Deep Investment Team

The Artisan Global Equity Team's approach combines the benefits of strong leadership with the creative ideas of experienced analysts. The team believes this approach allows it to leverage a broad set of perspectives into a dynamic portfolio.

Strong Leadership

- The portfolio management team, which includes Mark Yockey, Charles Hamker and Andrew Euretig, averages 27 years of investment experience.
- As founder of the Global Equity team, Mr. Yockey has adhered to the same philosophy and process since 1995.

Experienced Analysts

- Investment leadership is supported by a team of 11 research analysts and 6 associate analysts.
- Each analyst has significant experience within their sectors or regions of expertise.

Time Tested, Disciplined Investment Process

Artisan's Global Equity investment team uses a dynamic bottom-up approach that blends company specific research and secular themes to identify companies that exhibit sustainable growth and that are priced at reasonable valuations.

Global Themes

- The team identifies long-term secular growth trends with the objective of investing in companies that have meaningful exposure to these trends.
- The team's fundamental analysis focuses on those industry leaders with attractive growth and valuation characteristics that will be long-term beneficiaries of the trend or structural change.

Sustainable Growth

- The team applies a fundamental approach to identifying the long-term, sustainable growth characteristics of potential investments.
- The team seeks high quality companies that are well managed, have a dominant or improving market position and competitive advantages compared to industry and regional peers.

Valuation

- The team assesses the relationship between its estimate of a company's sustainable growth prospects and the company's stock price.
- The team uses multiple valuation metrics to establish price targets.

For more information: Visit www.artisanpartners.com

Investment Risks: **Current and future portfolio holdings are subject to risk. International investments involve special risks, including currency fluctuation, lower liquidity, different accounting methods and economic and political systems, and higher transaction costs. These risks typically are greater in emerging markets. Securities of small- and medium-sized companies tend to have a shorter history of operations, be more volatile and less liquid and may have underperformed securities of large companies during some periods. Growth securities may underperform other asset types during a given period. These risks, among others, are further described in Artisan Partners' Form ADV, which is available upon request.**

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