

Sustainable Core Fixed Income

SUSTAINABILITY DRIVERS PROFILE MATRIX



Second Quarter 2019

The Brown Advisory Sustainable Core Fixed Income strategy seeks to deliver risk-adjusted returns by incorporating ESG factors into our investment research. We believe this strengthens our bottom-up, credit-focused approach, with both fundamental and sustainable factors playing a role in our due diligence process and our ultimate decision to purchase bonds.

SUSTAINABILITY PROFILES FOR PORTFOLIO HOLDINGS (AS OF 06/30/2019)

COMPANY	IMPACT THEME	SUSTAINABILITY DRIVER
Albemarle Corp.	Sustainable Technology Innovation	Lithium products make up the largest and fastest-growing portion of Albemarle's business, mainly driven by increased demand for lithium-ion batteries for use in electric vehicles, mobile devices and grid storage. Lithium is unique in that it is light but able to store large amounts of energy, making it ideal for energy storage applications and renewable energy integration. This market is expected to grow at an annualized 30% rate through 2024.
Alexandria Real Estate Equities, Inc. (Green Bond)	Efficient Production & Conservation	Alexandria focuses on developing sustainable campus environments that promote health, wellness and productivity for leading life science and technology entities. Roughly 50% of total annual rental revenues come from LEED projects, and moving forward Alexandria targets minimum LEED Gold certifications for all new ground-up developments. This is bolstered by other sustainability initiatives throughout its portfolio to manage GHG emissions, waste, energy, and water use.
Allison Transmission Inc.	Sustainable Technology Innovation	Allison Transmission is a global leader in producing hybrid-propulsion systems, which use regenerative braking, converting a vehicle's kinetic energy into stored electric power to propel the vehicle or to operate auxiliaries. As of March 2018, studies have estimated that Allison electric hybrid buses have resulted in saving 41 million gallons of diesel fuel and prevented 406,465 metric tons of carbon dioxide from entering the atmosphere.
American Tower Corporation	Sustainable Technology Innovation	As one of the largest wireless tower operators, American Tower has earned a strong reputation in international markets from their strong environmental compliance track record, focus on driving alternative energy into its remote tower base, and its work to reduce carrier's dependence on highly inefficient generators. We believe that this has also helped it gain market share.
Analog Devices, Inc.	Sustainable Technology Innovation	Analog Devices capitalizes on its clean tech opportunities through integrated circuits for smart grid applications, ranging from energy meters, renewable generation systems and storage, to dynamic grid-integrated management and communications systems. Moreover, it is an industry leader in conserving water and reducing the use of toxic chemicals. Beginning in 2017, their Ireland and Philippines facilities started using 100% renewable energy.
AstraZeneca	Health & Wellness	AstraZeneca focuses on delivering pharmaceuticals to address the growing burden of non-communicable diseases, which are responsible for an estimated 70% of deaths worldwide. Through its tailored strategies across its emerging market portfolio, AstraZeneca extends access to largely underserved populations in low- and middle- income countries. Moreover, AstraZeneca understands the implications of pharmaceuticals in the environment and actively works to improve both the sustainability of its operations as well as of its products.
AvalonBay	Efficient Production & Conservation	AvalonBay invests in green buildings and energy efficiency initiatives, requiring all new mid- and high-rise buildings to receive third-party environmental certification. Moreover, it conducts urban revitalization and brownfield projects on land with former industrial uses. An estimated 50% of its new construction projects require environmental remediation, thereby reinventing communities and providing residents with more options for sustainable living.
Ball Corporation	Efficient Production & Conservation	Metal packaging is lighter-weight and infinitely recyclable when compared to alternatives such as glass, leading to share gains. Through design innovations, Ball has been able to reduce the weight of its 12oz aluminum can by 40% since the 1970s, which has helped many of its global beverage customers achieve their own sustainability goals.
Bank of America (Green Bond)	Clean Energy	Bank of America has provided more than \$87bn in financing for low-carbon business activities since 2007 and has committed to reaching \$125bn by 2025 which, if fulfilled, would make Bank of America the largest provider of green financing in the world. This Green Bond's proceeds are funding renewable energy and energy efficiency projects.
Boston Properties LP	Efficient Production & Conservation	Boston Properties has very strong green building targets, operational policies and tenant engagement activities, which include minimum Silver LEED ratings for new buildings and major extensions, a LEED professional training program and triple net leasing.

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Children's Hospital Corp.	Health & Wellness	This "safety net" hospital serves three important social functions: taking care of the most critically ill children, taking care of children from low-income families and making sure a system of care is in place throughout the region to serve primary and sub-specialty pediatric care needs. In 2014, Boston Children's Hospital invested over \$127mm to improve the health and well-being of children and families in its community. The hospital also trains more pediatricians and has the largest research program of any other pediatric hospital.
Cigna	Health & Wellness	Recognizing the connection between personal health and the health of the environment, Cigna manages its environmental impact through its operational goals to reduce absolute greenhouse gas emissions by 20%, energy consumption by 15%, and water consumption by 10% by 2020 (from a 2013 baseline). Additionally, Cigna has made efforts to address the opioid epidemic and has created the Health Equity Council to mitigate health disparities in underrepresented groups.
Clorox Co.	Efficient Production & Conservation	Clorox proactively phases out substances that raise consumer and regulatory concerns. The Green Works line incorporates industry-leading natural, plant-based or biodegradable ingredients in cleaning and sanitary products with the largest U.S. market share in this segment.
CVS Health	Health & Wellness	CVS is a key player in the health care space and provides millions of Americans access to essential health care services. For instance, more than 50% of the U.S. population lives within 10 miles of a CVS MinuteClinic and in 2018, they had 5.2 million patient visits. Services provided by the MinuteClinics can cost as much as 90% less than urgent-care centers and hospital emergency departments. Moreover, CVS continues to broaden the scope and reach of its services offerings with a strong focus on helping patients manage chronic diseases and improve medication adherence.
Digital Realty Trust, LP (Green Bond)	Efficient Production & Conservation	Digital Realty is a leading global provider of data center, colocation and interconnection solutions and is committed to driving sustainable energy consumption within its data centers. It was the first REIT to issue a green bond and the proceeds were used to support the development of nine sustainable projects to achieve energy efficiencies in their data centers located in four countries that have received LEED, BREEAM or CEEDA certification.
Duke Energy Progress (Green Bond)	Clean Energy	Duke Energy is transitioning to a lower-carbon energy mix by retiring old coal-fired power plants and investing in cleaner energy alternatives, including renewables. As of 2017, Duke Energy Corporation had invested more than \$5 billion in commercial renewables over the past 10 years, owning or contracting 6,400 MW of wind, solar and biomass; and intends to invest an additional \$2.7 billion in new renewable energy over the next five years with a goal to own or contract 8,000 MW by 2020. Green Bond proceeds will help its subsidiary, Duke Energy Progress, achieve this goal, including through investments in solar and energy storage projects.
Ecolab, Inc.	Sustainable Technology Innovation	Ecolab, a leading provider of cleaning, food safety and health protection products and services, helps its customers to improve resource efficiency while boosting bottom-line results. In 2017 alone, Ecolab helped customers conserve more than 171 billion gallons of water, eliminate 44.7 million pounds of waste, and save 12 trillion BTUs of energy.
Equinix Inc.	Efficient Production & Conservation	The consolidation of IT infrastructure into Equinix's multi-tenant retail data center facilities produces economies of scale, thereby allowing the 9,800+ companies that collocate inside Equinix data centers to save on power costs and reduce their own environmental footprint relative to if they owned smaller, less efficient data centers. Moreover, through targeted energy efficiency and renewable energy initiatives, Equinix helps its customers achieve their unique sustainability goals. Notably, 77% of Equinix's energy needs are met through renewable sources with a long-term goal of achieving 100% renewables.
Graphic Packaging International	Sustainable Technology Innovation	Graphic packaging manufactures and sells paperboard, which is inherently more sustainable than many other alternatives due to its recyclability and to the fact that it is made of renewable materials, tree fibers. Over 75% of all paper-based packaging is recycled and it can be recycled multiple times. To further enhance the sustainability of its products, GPK uses a "design for environment" process that considers the full life cycle of the package and the product that it protects in order to develop new, more environmentally friendly packaging solutions.
Hasbro, Inc.	Efficient Production & Conservation	Hasbro achieved 100% renewable energy use and carbon neutrality across its U.S. operations for two consecutive years (2015-2016) and continues to implement energy saving initiatives. Additionally, it has phased out the use of PVC in its packaging and replaced it with bio-PET, a plant-based material derived from agricultural byproduct.
J.B. Hunt Transport Services, Inc.	Efficient Production & Conservation	A leader in intermodal transportation services (i.e. moving freight via a combination of railroad and trucking), J.B. Hunt helps its customers achieve significant fuel-cost savings and reduced carbon emissions compared to trucking-only shipping solutions.
Kaiser Foundation Hospital	Efficient Production & Conservation	Kaiser embeds environmental stewardship into its operations, recognizing the intersection between climate change and health. Given that hospitals are the second greatest commercial energy user, emitting roughly 8% of the United States' greenhouse gas emissions, Kaiser has committed to becoming "carbon net positive" by 2025. The Green Bond's proceeds will finance and refinance LEED Gold and Platinum buildings to support this goal.

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Keysight Technologies, Inc.	Sustainable Technology Innovation	Keysight Technologies provides electronic design and test solutions to communications and electronics industries, and has capitalized on opportunities to grow in the clean tech market. Keysight provides power management technologies (e.g., batteries, power supplies, power meters and sensors) that enable energy that is normally consumed to be returned to the grid cleanly, saving costs from energy consumption and cooling, while not interfering with the grid.
Kroger Co.	Sustainable Agriculture & Natural Resource Management	Kroger rapidly increased its offering of organic and natural products, and its private-label Simple Truth is the largest natural brand in the U.S. It is one of the few food retailers to use anaerobic digesters to process food waste from its manufacturing facilities and grocery stores, which significantly reduces waste costs and carbon emissions.
Land O Lakes Inc.	Sustainable Agriculture & Natural Resource Management	Land O Lakes' extensive sustainability efforts are driven by the need for productivity improvements to feed a growing population, desire to increase efficiency and increasing demand for more sustainable farming practices. It touches half of the harvested acres of row crops in the U.S. and recently partnered with the Environmental Defense Fund to launch a new business unit, SUSTAIN. This new endeavor focuses on using ag-tech to turn a decision agriculture skill set to precision conservation to help farmers increase efficiency while improving soil health and water quality.
Mauser Packaging Solutions (BWAY Holding Co.)	Sustainable Technology Innovation	Mauser Packaging Solutions brings sustainable packaging solutions to a variety of industries around the globe. By maximizing the use of recycled content in its new packaging and reconditioning old packaging, Mauser actively reduces the environmental impacts throughout the complete lifecycle of its products.
MidAmerican Energy (Green Bond)	Clean Energy	MidAmerican Energy is a regulated utility with a "100% Renewable Vision". Green Bond proceeds are financing its 551 MW Wind X and 2,000 MW Wind XI projects in Iowa. Upon completion, it will have invested \$10.3bn in 6,007 MW's of wind-powered generation capacity, enough to generate enough energy to meet the needs of ~90% of its Iowa retail customers. No other U.S. rate-regulated utility owns more wind-powered generation capacity.
NextEra Energy Capital	Clean Energy	NextEra Energy is the world's largest producer of wind and solar energy with approximately 16% U.S. market share in onshore wind and 11% in solar. Benefiting from its first-mover's advantage and regulatory tailwinds, the NextEra Energy Resources business unit (29% of revenues) helps utilities and corporations across the U.S. increase their exposure to renewable energy. Moreover, the utility portion of its business, Florida Power and Light, has demonstrated a commitment to increasing its solar power generation capacity while keeping costs to customers down.
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NXP Semiconductors	Sustainable Technology Innovation	NXP Semiconductors is a supplier of high-performance mixed-signal semiconductor solutions that has expertise in security, connectivity and low-power capability. They help make the world smarter, safer and more efficient. Specifically, they enable LED lighting application, safer and more efficient cars, low-power notebook computers and secure payments. Additionally, they have internal initiatives to improve operational efficiencies to further drive sustainability within its business.
Regency Centers (Green Bond)	Efficient Production & Conservation	Regency has a green leasing scheme to decrease operations and maintenance costs and targets using LEED as the standard in all current and new developments. This Green Bond's proceeds are financing their existing and new properties to ensure LEED certification.
Trimble	Sustainable Agriculture & Natural Resource Management	Trimble uses technology to help customers increase productivity, lower operational costs, enhance compliance, boost safety, and reduce environmental impact in industries including agriculture, transportation, and construction. For example, Trimble's technology enables an estimated ~30% reduction in agricultural water usage, ~20% increase in fuel efficiency within the transportation sector, and up to 50% less re-work and resulting waste from construction.
Verisk Analytics, Inc.	Sustainable Technology Innovation	Verisk is a leading provider of climate and environmental-risk data to the insurance and reinsurance industries. Once a small sideline providing data to the government, climate-data provision is now a thriving business for Verisk fueled by strong demand from insurers around the world. Verisk has also recently become a leading provider of commercial intelligence to the renewable energy sector.
Verizon Communications (Green Bond)	Efficient Production & Conservation	Through its IoT solutions, Verizon has committed to saving more than two times the amount of global emissions from its operations by helping customers become more energy efficient and sustainable. In 2017, Verizon's solutions enabled the avoidance of at least 7.7 million metric tons of CO2e, representing approximately 138% of emissions associated with its operations. At the same time, Verizon reduced its carbon intensity by 28%. Green Bond proceeds will finance investments in renewable energy, energy efficiency, green buildings, sustainable water management, and biodiversity and conservation.
West Fraser Timber Co.	Sustainable Agriculture & Natural Resource Management	Wood is a renewable resource with a low carbon footprint compared to other common building materials. To ensure the long-run availability of this important resource, West Fraser certifies 100% of its land to Sustainable Forestry Initiative (SFI) standards. Moreover, its investments in alternative energy further reduce its environmental impacts while also reducing operating costs. Over 50% of its energy requirements are currently met from its own biomass.

DESCRIPTIONS OF IMPACT THEMES

Economic Development and Social Inclusion

Affordable Housing	Offering housing options to low- and moderate-income families.
Economic Mobility and Community Development	Increasing employment opportunities and financial inclusion for underserved communities.
Education	Reducing barriers to education for underserved groups.
Diversity, Inclusion, Equality	Supporting race and gender equity; empowering marginalized populations.

We at Brown Advisory worked to build unified themes for our sustainable and impact portfolios that were applicable across equity and fixed income securities alike. In our pursuit, we worked closely to align our goals with the goals of the U.N. Sustainable Development Goals (SDGs). We believe that our framework aligns with the goals and spirit of the SDGs, but also relies on our proprietary ESG research capabilities that impact our investment decisions.

Health and Well-Being

Health and Wellness	Promoting health and well-being, and improving access to and quality of health care.
Clean Water and Sanitation	Improving access to clean drinking water and sanitation services; solving infrastructure challenges; managing freshwater ecosystems.

Environment

Sustainable Technology Innovation	Innovating products and services that deliver sustainability results (e.g., energy-efficient products, sustainable transportation).
Efficient Production and Conservation	Reducing use of energy or raw materials, increasing use of renewables, etc., through internal operations.
Clean Energy	Developing, operating or delivering clean energy from wind, solar and other renewable sources.
Sustainable Agriculture and Natural Resource Management	Responsibly managing natural resources, minimizing or reversing land degradation, and protecting biodiversity.

SUSTAINABLE DEVELOPMENT GOALS



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