



ESG Investment



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Key Takeaways

- ▶ Eliminating waste and pollution, circulating products and materials and regenerating nature are three basic principles at the heart of the circular economy that align with ClearBridge's fundamental ESG framework.
- ▶ New chemical recycling technologies are able to break down basic molecules of polyester-based materials such as soda bottles, carpet fibers and even clothing, until they are indistinguishable from materials made from virgin or nonrecycled content.
- ▶ Many ClearBridge holdings contribute to the circular economy as they execute on best practices or make improvements in recycling, reducing or improving the sustainability of packaging and reducing landfill waste.

Plastic Alchemy: Transforming Waste into Profit

The Ellen MacArthur Foundation lists three basic principles of the circular economy: eliminating waste and pollution, circulating products and materials, and regenerating nature. These principles align with some key parts of ClearBridge's fundamental ESG framework, notably factors such as resource efficiency, recycling, product life cycle management, renewable generation and land usage, which we engage on as part of ongoing company research. By reducing energy use, stress on the environment and pollution, the circular economy is also linked to mitigating climate change and conserving biodiversity.

Many ClearBridge holdings thus contribute to the circular economy as they either execute on best practices or make improvements in these areas. We have often highlighted Trex as exemplary of the circular economy. Trex is the market share leader of wood-alternative composite decking. Trex's low-maintenance and high-quality decking products are composed of 95% recycled wood fibers and plastic, making use of waste that would otherwise end up in landfills. Trex has continued to innovate and advance plastic recycling processes. Recently, as the demand for "clean streams" of plastic waste has increased in different parts of the economy, Trex has upgraded technology to be able to accept "dirtier" streams of plastic waste into the manufacturing process. This allowed Trex to begin using additional quantities of waste plastic that would otherwise never be recycled, without compromising product quality standards. Trex products are more durable and have a longer life than traditional

wood decking, therefore reducing overall raw material usage and end-product manufacturing. Finally, the quality and durability of the product saves consumers money through less frequent replacements and lower maintenance and upkeep costs.

Food waste is an avoidable crisis that has both environmental and societal costs.








Molecular Recycling Takes a Step Forward

While companies like Trex are making clear gains on plastic recycling, a circular economy that solves for plastics use remains a challenge. Regulatory bodies are stepping up requirements, such as the EU's new rules to reduce, reuse and recycle packaging, provisionally agreed upon in March 2024. Under the new rules, plastic packaging must also include minimum recycled content. Helping companies meet these new rules will be ClearBridge holding Eastman Chemical, which makes a range of advanced materials, chemicals and fibers for everyday purposes, among them plastics for food packaging.

In a recent engagement with Eastman Chemical we discussed two different chemical recycling technologies it has developed: polyester renewal technology (PRT) and carbon renewal technology (CRT). PRT recycles polyester-based materials such as soda bottles, carpet fibers and even clothing, breaking down their basic molecules until they are indistinguishable from materials made from virgin or nonrecycled content. CRT operates in a similar way but can take a broader range of plastic types and replaces the use of coal as a feedstock to make fibers. Combining these two technologies gives Eastman a competitive advantage in molecular recycling, as it can take most types of waste plastics (Exhibit 1). Ironically, securing feedstock (i.e., waste plastic) has been a bottleneck to scaling molecular recycling as competitor technologies not using Eastman's dual technologies often require the waste plastic to be separated purely according to grade, which waste and recycling companies do not readily offer. Eastman's dual technology approach allows it to accept most plastic grades, making it less reliant on waste companies' sorting.

Eastman's first recycling plant is now operational in Tennessee, which will supply its internal Advanced Materials lines while also proving out the technology. The company is already working toward a second plant in Texas that will have Pepsi as its anchor customer. In the second plant, not only will Eastman help Pepsi meet its recycled content goals, but it is also expected to receive long-term, take-or-pay volume commitments, for doing so. This should greatly improve earnings visibility, and in turn, potentially valuation.

Exhibit 1: Eastman Chemical’s Molecular Recycling Methods

Plastic Type	Common Uses	Eastman Molecular Recycling	
		PRT	CRT
 PETE	Bottles, Textiles, Carpet, Films, Forms	Yes	Yes
 HDPE	Thicker Bottles, Containers	No	Yes
 PVC	Pipes, Wiring, Sheeting	No	Not Yet (2 nd Generation)
 LDPE	Film, Bags	No	Yes
 PP	Medical	No	Yes
 PS	Food Containers, Utensils	No	Yes
 OTHER	Baby Bottles, Water Jugs	No	Yes

Source: Eastman Chemical.

Sustainable Food Needs Sustainable Plastic

As the case of Eastman Chemical suggests, plastic is central to sustainable food. Accordingly, companies in the food industry can advance the circular economy through practices such as recycling, reducing or improving the sustainability of packaging and reducing landfill waste. Canadian grocer Loblaw can make an impact with all three of these practices.

In a recent engagement with Loblaw, we discussed its goal of making 100% of its control brand and in-store plastic packaging recyclable or reusable by 2025. This would put it in compliance with the Golden Design Rules (GDR), a set of rules established by the Consumer Goods Forum, made up of leading international retail and consumer goods companies, to benchmark packaging design, emphasizing the reduction of materials and the removal of problematic elements.

Noteworthy steps along the way have involved changes to Loblaw’s protein packaging, which used to come in polystyrene foam trays; the vast majority now are packaged in clear recycled PET trays, which are accepted in all the municipalities in which the store operates and allow for greater detectability in the recycling stream. The shift to PET trays for mushrooms led to 39.9 million trays entering the recycling stream in 2023. Removing the plastic window from 10 kg potato bags allowed 23 million bags to be more easily recycled in 2023. In

Producer responsibility incentivizes brand owners to increase the recyclability of their packaging while empowering them with control over the recycling systems.

addition, extending expiry dates for its PC Money Account and PC Mastercard physical cards should prevent more than 10,000 kgs of plastic waste in the next 12 years.

Loblaw's advances in these areas also speak to its power to use its size to change the industry, as it communicated its GDR standards to hundreds of control brands and national brand vendors, effectively dictating a new national industry standard for plastic packaging. While navigating recycling standards and practices that vary from municipality to municipality, to improve recycling rates overall Loblaw supports extending producer responsibility, a system that give brand owners responsibility of both the cost and performance of recycling systems, incentivizing them to increase the recyclability of their packaging while empowering them with control over the recycling systems themselves.

Food waste is an avoidable crisis that has both environmental and societal costs, and linking food as an organic resource in a circular economy can reduce land use and better support growing populations. Loblaw has set a goal to send zero food to landfill by 2030, a goal supportive of Sustainable Development Goal 12: Responsible Consumption and Production, in particular target 12.3, to halve global food waste by 2030. The company is currently ramping up data collection on food waste but achieved over 78,000 metric tons of diverted food waste in 2023, with most going to composting, animal feed and redistribution of food surplus to food charities.

Supplying the Auto Aftermarket

LKQ is also focused on recycling heavy materials. LKQ is the largest wholesale distributor of alternative parts for the auto aftermarket in North America and Europe. It provides "like kind and quality" (LKQ) auto parts as lower-cost alternatives to those provided by auto OEMs. It is the largest wholesale distributor of collision parts (used to repair vehicle exteriors) in the U.S. and Canada and the largest distributor of mechanical parts (used to repair internal components) in Europe. LKQ also runs its own salvage and recycling operations. As the world's largest recycler of cars at end-of-life, recovering 90%+ of the materials from scrap cars for reuse or recycling, LKQ supports resource efficiency and responsible consumption as an investable theme.

In a recent engagement with LKQ we had an extensive discussion about how it has become increasingly efficient over time at inventorying and selling more parts from its salvage vehicles, which reduces the amount of parts going for scrap and increases LKQ's margins, as it earns higher revenues from same fixed cost of goods.

Circular Economies Span All Sectors

One powerful aspect of the circular economy is how, although with differing dynamics and levels of challenges, every sector may contribute. ClearBridge will continue to share key company advances

and engagements on the topic as our holdings innovate to operate more efficiently and enable a more resilient economic system, with fewer emissions and less waste.

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