



# A circular transition for plastics



**Olivia Watson**  
Senior Thematic Investment Analyst,  
Responsible Investment

Plastics are a growing environmental problem and increasingly a focal point for policy at national and international level. In recent months, the UN has agreed to develop a global treaty on plastics which could include cuts in virgin plastic production, as well as increasing collection and recycling infrastructure. At a national level, in April the UK implemented a plastics tax which will apply charges of £200 a tonne to plastic packaging that contains less than 30% recycled plastic.

Plastic pollution is also increasingly recognised as interdependent with other environmental themes.

For example, the draft text for the upcoming UN COP (Conference of the Parties) on biodiversity includes a goal to “eliminate loss of plastic waste” as part of the 2030 global biodiversity framework. In the context of net-zero goals, NGOs and stakeholders also continue to draw attention to the contribution of plastic production, use, waste and recycling to global greenhouse gas (GHG) emissions.

We expect these drivers will continue to create momentum towards a transition to more circular plastics. This will include: reducing the use of virgin plastics; increasing the use of recycled plastics and alternative materials; creating different product delivery models; and scaling up plastic collection infrastructure and recycling technologies. Following earlier research we undertook on consumer goods and packagers, we expanded our focus to plastic producers and waste companies via a roundtable with fundamental equity and credit analysts to discuss the risks and opportunities of these developments.

## Plastic producers

Most plastics are produced by a handful of global petrochemical companies. The development of the industry has provided benefits to

society via improving food preservation and introducing lightweight products, among other things, but in doing so it has also introduced a reliance on low-cost virgin plastic into everyday life for people around the world through our clothing, cars, electronics and food packaging – with much of this material ultimately destined to become waste.

Plastic producers now find themselves at the early stages of a structural shift that will increase demand for recycled plastic – most notably for single-use packaging, but also for more durable products – as companies such as Renault, LG, Vestas, Inditex, Adidas and many others establish targets for the use of recycled plastic. These are in addition to the regulatory requirements and pledges already made by consumer goods and packaging companies around increasing the use of recycled plastic by 2025.

Taken together, our analysis of corporate targets across sectors suggests that recycled plastic could account for up to 8% of plastics demand by 2025, and up to 15% of global demand by 2030. In this scenario, demand growth for virgin plastic could shift from the GDP+ growth rates previously seen to less than 1.7%. Currently, however, recycled plastic production is not sufficient



to meet this demand, and chemical recycling technologies, which could increase volumes of material, are unlikely to do so before the latter half of this decade, based on capacity announcements made to-date.

In this context, a shift of this scale will require big changes for plastic producers. Companies that will be most resilient to these changes are likely to be those that have well developed circular strategies, as well as other advantages including: lower revenue dependence on non-recyclable plastic; a strategy and related targets for recycled production that is meaningful relative to the company's production volumes; evidence of multiple partnerships and efforts to pilot and scale new technologies, such as chemical recycling, that can enable the company to adapt and nimbly respond to technical or other challenges; the ability to maintain and grow customer relationships through the transition, by working with customers to develop new and possibly higher-value products and forms of packaging; and access to low-cost virgin plastic feedstocks that will remain economically competitive in a scenario of slowing demand growth for virgin plastic.

Our analysis of several plastic producers against these criteria shows a mixed picture, with companies' plans

for increasing recycled production accounting for anywhere between 1% and 22% of their estimated 2030 production. The range and depth of company partnerships in relation to new technologies such as chemical recycling also varies significantly.

## Waste and recycling

This shift to recycled plastic will also present big changes for the waste and recycling sector. The landscape of risks and opportunities across countries is variable given the different degree of recycling infrastructure, public education and collection rates. However, with rapidly growing regulatory changes and demand for recycled plastic, waste companies that are well positioned can reap the benefit of investment in new technologies, including advanced sorting technologies that can increase automation in facilities and recovery rates for materials, capturing the most value from waste plastic. Some waste companies may also benefit where they have opportunities to vertically integrate, increasing the degree of recycling and processing carried out on plastic collections.

To match increased demand, however, the scale of investments required will be vast: including improved collection and processing infrastructure, not just in developed markets with low

recovery rates (for example the US), but in emerging markets with less developed infrastructure. As with plastic producers, a review of companies' capital expenditure plans and future targets for increasing material recovery provides an indication of their plans and positioning for this transition.

## Conclusion

Our analysis concluded with the recognition that there is a need for ongoing monitoring given the rapid developments on this theme. Continued research, collaboration and engagement across the fundamental and responsible investment thematic teams will help us to identify possible winners and losers and to encourage companies to continue to develop their circularity strategies.

### Source

- 1 <https://www.unep.org/news-and-stories/press-release/historic-day-campaign-beat-plastic-pollution-nations-commit-develop>
- 2 Columbia Threadneedle analysis of company disclosures. Plastic volumes by end use derived from Geyer, et al, 2017.

## Food & Materials transition engagement: plastics circularity

Company KBR

Sector & country Industrials, USA

**Why we engaged** To learn more about potential opportunities related to KBR's equity investment and joint venture with Mura, a provider of chemical recycling technology for mixed plastic waste.

**How we engaged** Columbia Threadneedle representatives from fundamental equity and responsible investment research met with KBR's President of Technology.

**What we learnt** Mura's chemical recycling technology uses supercritical water and is done at a lower temperature than traditional pyrolysis, resulting in lower energy intensity while achieving higher yields. This reduces the greenhouse gas emissions associated with chemical recycling. The first facility is being developed in 2022 in the UK, with active discussions with petrochemical companies on potential opportunities to co-locate future plants at their facilities. This would provide recycled feedstocks to existing petrochemical infrastructure, enabling more recycled plastic production.

**Outcome** We evaluated the new joint venture as part of the investment case and are monitoring developments and the possible upside the recycling technology may provide.

## Food & Materials transition engagement: plastics circularity

Company Biffa

Sector & country Industrials, UK

**Why we engaged** We wanted to better understand the competitive positioning of the company's plastic recycling business, and future opportunities.

**How we engaged** We held multiple discussions on strategy and visited a materials recovery facility to see first-hand its processing and recovery technology.

**What we learnt** We better understood the company's vertical integration approach for processing collections and recycled production, the benefits of its technology investments in sorting and materials recovery, and the opportunities and challenges the company faces in the context of the rapidly changing UK regulatory environment related to recycling and recycled content requirements for packagers.

**Outcome** We gained insights on the investment case linked to recycling opportunities.

## Food & Materials transition engagement: plastics circularity

Company Dow Inc.

Sector & country Chemicals, USA

**Why we engaged** Dow has significant revenues from durable and single-use plastic. We wanted to better understand the company's ambition on plastic circularity, and potential challenges in its product line up and approach.

**How we engaged** Multiple meetings with Dow representatives from investor relations, sustainability, climate change and managing counsel departments. Columbia Threadneedle representatives were from equity, credit, responsible investment research and stewardship teams.

**What we learnt** Dow's production of multi-layer, non-recyclable plastic packaging (19% of production) will not be straightforward to transition to recyclable alternatives as per the 2025 recyclability commitments. However, it is working on potential solutions which in the long run may provide higher margin opportunities. Even if full technical recyclability is achieved, however, it estimates the percentage of products actually recycled will be in line with the global average of circa 9%. This will present regulatory risks and costs as more taxes and extended producer responsibility schemes are likely to be brought in. The company did not disagree with Columbia Threadneedle's estimate of future demand for recycled plastic, but pointed to hurdles in growing the stream of waste plastic which can be used as feedstock, which will be a prerequisite to meeting this demand.

**Outcome** We were able to better quantify the company's long-term target for recycled plastic production. We think this will need to be strengthened over time to demonstrate a clearer pathway to circularity. Dialogue will continue, and we will continue to monitor Dow's progress.

Content originally appeared in Responsible Investment Quarterly Q1 2022.

To find out more, visit [columbiathreadneedle.com](https://columbiathreadneedle.com)



**Important information:**

**For use by professional clients and/or equivalent investor types in your jurisdiction (not to be used with or passed on to retail clients).** This is an advertising document. This document is intended for informational purposes only and should not be considered representative of any particular investment. This should not be considered an offer or solicitation to buy or sell any securities or other financial instruments, or to provide investment advice or services.

**Investing involves risk including the risk of loss of principal. Your capital is at risk.** Market risk may affect a single issuer, sector of the economy, industry or the market as a whole. The value of investments is not guaranteed, and therefore an investor may not get back the amount invested. International investing involves certain risks and volatility due to potential political, economic or currency fluctuations and different financial and accounting standards. Risks are enhanced for emerging market issuers.

**The securities included herein are for illustrative purposes only, subject to change and should not be construed as a recommendation to buy or sell. Securities discussed may or may not prove profitable.** The views expressed are as of the date given, may change as market or other conditions change and may differ from views expressed by other Columbia Threadneedle Investments (Columbia Threadneedle) associates or affiliates. Actual investments or investment decisions made by Columbia Threadneedle and its affiliates, whether for its own account or on behalf of clients, may not necessarily reflect the views expressed. This information is not intended to provide investment advice and does not take into consideration individual investor circumstances. Investment decisions should always be made based on an investor's specific financial needs, objectives, goals, time horizon and risk tolerance. Asset classes described may not be appropriate for all investors. **Past performance does not guarantee future results, and no forecast should be considered a guarantee either.**

Information and opinions provided by third parties have been obtained from sources believed to be reliable, but accuracy and completeness cannot be guaranteed. This is an advertising document. This document and its contents have not been reviewed by any regulatory authority.

**In Australia:** Issued by Threadneedle Investments Singapore (Pte.) Limited ["TIS"], ARBN 600 027 414. TIS is exempt from the requirement to hold an Australian financial services licence under the Corporations Act and relies on Class Order 03/1102 in marketing and providing financial services to Australian wholesale clients as defined in Section 761G of the Corporations Act 2001. TIS is regulated in Singapore (Registration number: 201101559W) by the Monetary Authority of Singapore under the Securities and Futures Act (Chapter 289), which differ from Australian laws.

**In Singapore:** Issued by Threadneedle Investments Singapore (Pte.) Limited, 3 Killiney Road, #07-07, Winsland House 1, Singapore 239519, which is regulated in Singapore by the Monetary Authority of Singapore under the Securities and Futures Act (Chapter 289). Registration number: 201101559W. This advertisement has not been reviewed by the Monetary Authority of Singapore.

**In Hong Kong:** Issued by Threadneedle Portfolio Services Hong Kong Limited 天利投資管理香港有限公司. Unit 3004, Two Exchange Square, 8 Connaught Place, Hong Kong, which is licensed by the Securities and Futures Commission ("SFC") to conduct Type 1 regulated activities (CE:AQA779). Registered in Hong Kong under the Companies Ordinance (Chapter 622), No. 1173058.

**In Japan:** Issued by Columbia Threadneedle Investments Japan Co., Ltd. Financial Instruments Business Operator, The Director-General of Kanto Local Finance Bureau (FIBO) No.3281, and a member of Japan Investment Advisers Association.

**In the USA:** Investment products offered through Columbia Management Investment Distributors, Inc., member FINRA. Advisory services provided by Columbia Management Investment Advisers, LLC. Collectively, these entities are known as Columbia Management.

**In the UK:** Issued by Threadneedle Asset Management Limited. Registered in England and Wales, Registered No. 573204, Cannon Place, 78 Cannon Street, London EC4N 6AG, United Kingdom. Authorised and regulated in the UK by the Financial Conduct Authority.

**In the EEA:** Issued by Threadneedle Management Luxembourg S.A. Registered with the Registre de Commerce et des Societes (Luxembourg), Registered No. B 110242, 44, rue de la Vallée, L-2661 Luxembourg, Grand Duchy of Luxembourg.

**In Switzerland:** Issued by Threadneedle Portfolio Services AG, Registered address: Claridenstrasse 41, 8002 Zurich, Switzerland.

**In the Middle East:** This document is distributed by Columbia Threadneedle Investments (ME) Limited, which is regulated by the Dubai Financial Services Authority (DFSA). For Distributors: This document is intended to provide distributors' with information about Group products and services and is not for further distribution. For Institutional Clients: The information in this document is not intended as financial advice and is only intended for persons with appropriate investment knowledge and who meet the regulatory criteria to be classified as a Professional Client or Market Counterparties and no other Person should act upon it.

**Columbia Threadneedle Investments is the global brand name of the Columbia and Threadneedle group of companies.**