

Tales From the Emerging World

Reshaping Businesses Through a Circular Economy

EMERGING MARKETS EQUITY TEAM | MACRO INSIGHT | MAY 2023

The beaches of Nusa Lembongan in Indonesia, with their turquoise waters and squeaky-clean golden sands, are a popular tourist destination. Yet, only five years ago, the same beaches were littered with plastic and trash. As the condition of the beaches grew worse, the local community started a collaborative recycling initiative to recycle waste that has returned the beaches back to their pristine conditions. Recycling is as old as economic activity itself, done historically more out of necessity and thrift than environmental considerations. But its need has never been more urgent. The linear “take-make-waste” production and consumption has become the prevailing global standard, thanks to post-war prosperity and advances in manufacturing productivity and engineered materials, contributing to an ever growing mass of waste and its associated social and environmental costs. The idea of a circular economy is to change this dynamic, by “closing the loop” on production and consumption. More broadly, as resource scarcity becomes more pressing, recycling becomes an ecological necessity.

Global domestic material consumption per capita has increased more than 30% since 1990 (*Display 1*). The world generates about 2 billion tons of waste per year and only 15-20% of that waste is recycled. Advanced economies disproportionately consume more goods and produce more waste. These countries make up 16% of the global population but generate 34% of the world’s waste.¹ While waste production has been plateauing in developed economies, the attention is now on emerging markets, where growing populations and rising incomes are contributing to greater waste as they adopt consumer culture practices, often with very poor sanitation and

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¹ World Economic Forum – “Reducing waste is critical for building a circular economy” – February 2023.



waste systems to manage it effectively. An estimated 93% of the waste in emerging countries is mismanaged, as compared to 2% in advanced economies.² We believe waste will remain a growing issue as long as economies remain attached to the current linear “take-make-waste” economic model, which relies on corporations collecting finite resources, producing goods used once and then discarded forever.

To be sure, progress has been made for some materials, particularly where economic incentives exist. For example, about 85% of steel and 75% of aluminum are recycled globally.³ Further, recycled copper satisfies two-fifths of global demand for the metal.⁴ As for packaging, that depends on material and location. In developed economies two-thirds of paper

and over one-third of glass comes from recovered materials. While this data is encouraging, more is needed to change the overall trajectory. The goal of adopting circular practices is to change this dynamic and shift to a mindset of “reduce, reuse and recycle” more comprehensively. This can be done by changing economic incentives, through both pricing models and policy shifts, adopting new technology and business models, and changing consumer preferences.

As active investors, we find that smart management teams incorporate circular practices to lower operating costs, improve production resiliency, reduce environmental risks and anticipate evolving consumer preferences and potential regulatory changes. We believe the following are the

drivers that will increase adoption of a circular economy:

ECONOMIC EFFICIENCY—Given growing scarcity and costs of critical resources like water, companies are increasingly recognizing the advantages of recovering and reusing materials during the manufacturing and production processes.

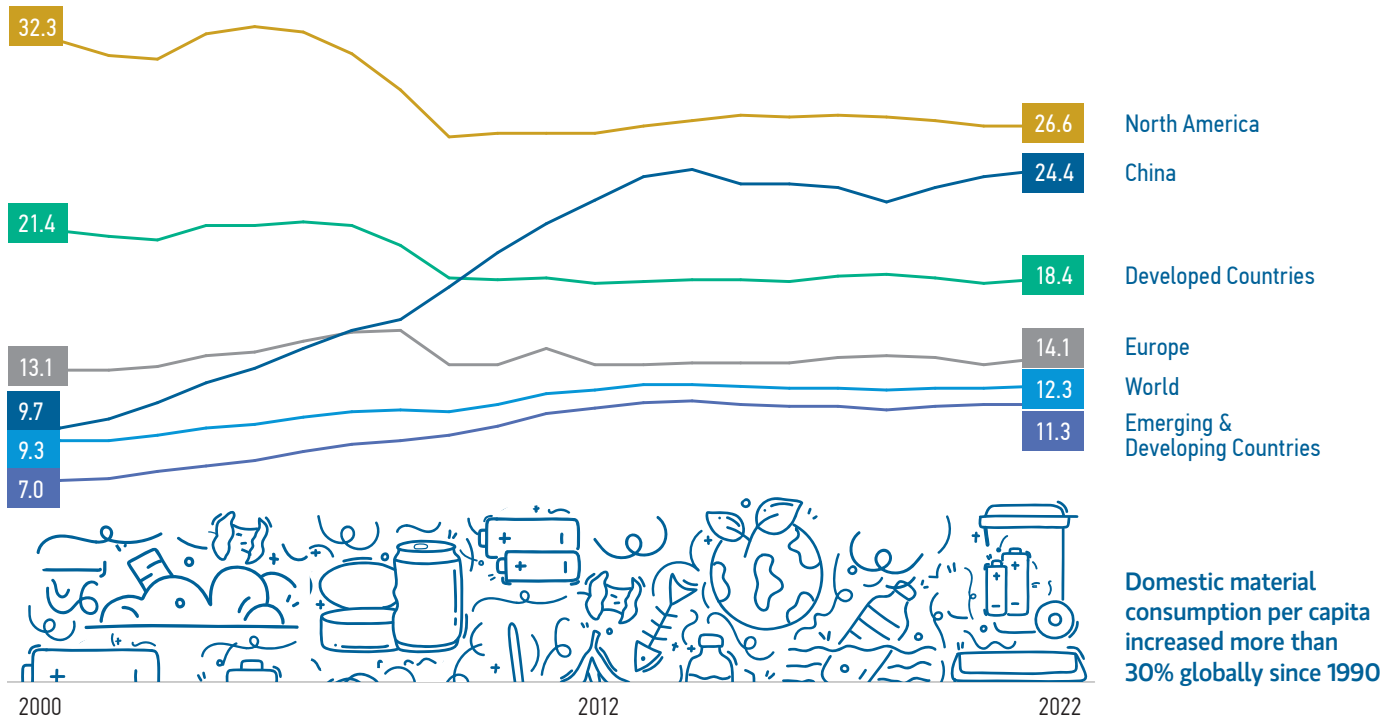
For example, one of our portfolio companies, a Taiwanese semiconductor manufacturer, requires as much as 10 million gallons of water a day, enough to satisfy the consumption needs of 300,000 households, to clean silicon wafers during production.

Although operationally complex, the company has reached a wastewater recycling rate of 87% and uses every drop of water

DISPLAY 1

Global Material Consumption Continues to Grow

Domestic Material Consumption per Capita by Region – 2000-2022 (tons per capita)



Source: Euromonitor. April 2023.

² World Bank – “What a Waste 2.0” 2018.

⁴ Copper Alliance – “Copper Recycling” – February 2022.

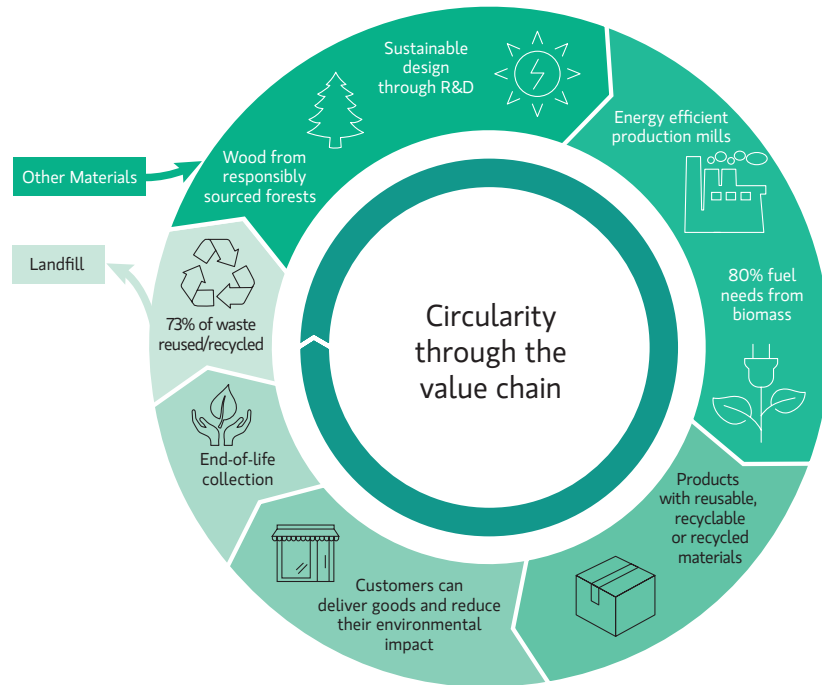
³ Congressional Research Service – “U.S. Aluminum Manufacturing: Industry Trends and Sustainability” – October 2022.

3.5 times before discharging. The company has cut its water costs by 40% and lowered operational disruptions brought on by water shortages.⁵ The company’s sustainable water management has also been important in securing new fab locations globally.

RISK MANAGEMENT—We believe that quality management teams can employ circular economy approaches to manage business risks, especially contingent environmental risks and social concerns. A circular economy encourages the adoption of not only sustainable production methods but also a better understanding of the product lifecycle, including externalities produced by a business. We see continued challenges in obtaining environmental permits globally, while— at the same time— policymakers move toward introducing new tariffs and regulations, such as taxes on carbon and plastic and regulatory bans on single-use packaging and adoption of extended producer responsibility (EPR).⁶ We believe adopting circular practices is part of an effective risk management.

For example, one of our portfolio companies, a Chilean copper miner, has managed its water risk proactively through circular practices. Although water was once abundantly available, a prolonged drought has increased the risk of lasting impacts to production and rising tension with local communities who share these fresh water resources. Faced with these growing challenges, the company adopted a comprehensive plan for improving its water footprint, including greater efficiency, higher recirculation and using renewable energy to pump and desalinate seawater. The company set a target to meet 90% of its water needs by reused or desalinated water. This way, more water is freed up for local farmers and communities in times of shortages. We believe this commitment to more sustainable mining improved trust with local communities and provided

DISPLAY 2
Circularity Through the Value Chain



Source: MSIM. For illustrative purpose only.

tangible benefits that may have also helped the company retain its mining rights, particularly when existing water rights and mining royalties were at risk during the 2022 Chilean vote to change its constitution.

SHIFTING CONSUMER PREFERENCES—Although consumers have not always voted with their wallets, they are becoming more discerning about their own consumption habits. Gen Z have shown a growing preference for goods that are sustainably made over brand names.⁷ Forward-looking companies are utilizing more sustainable packaging and material. For instance, another of our portfolio companies, a Polish clothing retailer, is eliminating plastic in all of its e-commerce packaging and has launched a line of sustainable clothing made

with recycled or sustainably sourced fiber to meet consumer preferences. In addition, the company is offering collection points for used clothing in its stores to make it easier for clothing to be recycled or reused. Companies taking action to address their environmental footprints are more likely to be rewarded by customers and investors alike, while those that are unable to transition to a circular economy are at risk of falling behind and losing market share.

Portfolio Company Case Study: Repackaging the Plastic Problem

Another of our portfolio companies, a South African paper and packaging company, employs circular practices throughout its value chain (*Display 2*). The company’s competitive advantage is based on its low

⁵ Published Company Data as of 2019.

⁶ Extended Producer Responsibility (EPR) is an environmental policy approach in which a producer’s responsibility for a product is extended to the post-consumer stage of a product’s lifecycle. The EU has been a leader in EPR schemes with over 30 active programs.

⁷ World Economic Forum – “Gen Z cares about sustainability more than anyone else – and is starting to make others feel the same” – May 2022.

cost of production, which is partially due to its ability to generate roughly 80% of its power internally from biomass waste produced during the manufacturing process. This internal use of waste has also insulated the company from energy price volatility, such as the recent natural gas and electricity cost spikes which hit the European economies after Russia’s invasion of Ukraine. Separately, the company sells some of its waste product to manufacture cement and bricks to generate incremental revenue even as it moves toward the goal of achieving zero waste to landfill.

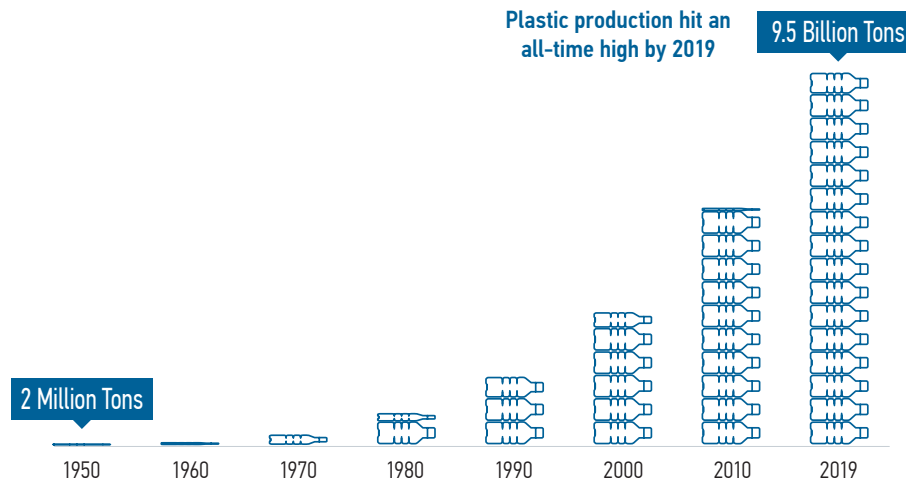
Given that they are in the paper business, the company understands its reliance on healthy forests for production. It conducts frequent supply chain risk assessments and monitors biodiversity performance, while engaging with suppliers to ensure strong partnerships and reliability. Its efforts in sustainable forestry help them stand out as a responsible manager of forest assets, and that is further supported by its commitment to zero deforestation and 100% certified traceable timber. The company has been successfully managing its supply chain risks which in turn reduces the risks of disruption of operations.

On the revenue side, the company is taking advantage of the larger move to more circular packaging globally and is specifically focused on innovating paper packaging to take share from plastic. More than 80% of the company’s revenue is from products made from renewable materials which are recycled and recyclable. By 2025, the company aims to reach 100%. We believe this substitution opportunity

DISPLAY 3

The Planet Is Inundated with Plastic

Cumulative global plastics production in tons (millions)



Source: Our World in Data based on Geyer et al. (2017) and the OECD Global Plastics Outlook.

can add +1% to its trend volume growth of 2-3%.

Replacing plastic packaging will be a lucrative opportunity. Global plastic production has grown exponentially over the past 70 years. Despite the rhetoric around plastic recycling, we are currently at all-time highs of plastic production with just two million tons per year in 1950 reaching 9.5 billion tons in 2019 (Display 3). Today, approximately 36% of plastic produced is used in single-use packaging and 85% of that plastic ends up in landfills or, in most cases for emerging markets, the waterways.⁸

Plastic packaging is on the way out. Countries such as Canada, Chile, France

and South Africa have introduced bans on single-use plastics, taxes on virgin plastic and EPR schemes to address the global plastic waste. Some states in the U.S. have also banned single-use plastic bags in retail stores. The EU recently proposed new rules on packaging that call for all plastic packaging to be reusable or recyclable by 2030. Last year, the UK introduced a “virgin plastic tax” on any packaging with less than 30% recycled plastic.

Forward thinking companies are using circular practices to lower costs, increase revenue and manage operational and regulatory risks. A circular economy is good for the environment and the bottom line.

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⁸ Environment Programme – “Our planet is choking on plastic” - 2018.

DEFINITIONS: Gen Z: Members of the global population cohort born between 1997-2012 are often labeled as 'Generation Z' by researchers and the popular media.

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