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## ESG INSIGHTS

# THERE'S NO CLEAR SOLUTION TO THE PROBLEM OF PLASTICS

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### Summary

The debate around plastic packaging has intensified significantly over the last two years, which has come as a surprise to some given the market was expecting the plastic packaging sector to benefit from higher growth and lower capital intensity relative to the traditional packaging formats—glass, metal, and paper. But as sustainability concerns have increased, the long held thesis on plastic packaging investment is being questioned.

### Questioning the role of plastic packaging

Plastic packaging is a unique material that provides many benefits; namely, it is strong, lightweight, and is cheap to produce, store and transport. It plays a vital role in food quality and safety, and significantly reduces food waste. From an environmental standpoint, its carbon footprint is relatively low compared to more traditional packaging formats. This makes it a highly versatile and valuable material from both an environmental and economic perspective.

- Compared to paper bags, plastic grocery bags require 40% less energy to produce and generate 80% less solid waste.
- Traditional packaging formats could increase the mass of packaging by a factor of 3.6x and greenhouse gases by 2.6x.
- To have a lower carbon footprint than a plastic bag, paper bags need to be used 3x, thicker low-density polyethylene (LDPE) bags 4x, non-woven polypropylene (PP) bags 11x, and cotton bags 131x.
- 1 – 2% of the food produced in the developed world is spoiled, compared to 30 – 50% in less-developed countries.

### Willful waste makes woeful want

While the evidence for 'why plastic packaging?' may be strong, there is another side to the coin: waste. Plastic packaging companies could be considered "glorified manufacturers of rubbish". Unfortunately, too much plastic packaging ends up in landfill or oceans; incineration is a less-than-perfect solution, and recycling alternatives are generally not economic.

- Of all the plastic produced since the 1950s—when global plastic production took off—55% remains in the environment (i.e. landfills and oceans)<sup>1</sup>
- Of all the plastic waste ever produced (again since the 1950s), 80% is in the environment, 12% was incinerated, and 9% was recycled.<sup>2</sup>
- An estimated 150m tonnes of plastic waste are in our oceans and this is estimated to increase by around 8mtpa. Just 10 rivers (largely in Asia) account for a significant proportion.<sup>3</sup>

<sup>1</sup> Source: Our World in Data

<sup>2</sup> Source: Our World in Data

<sup>3</sup> Source: Nature Communications, *River plastic emissions to the world's oceans*.

## Local challenge, global problem

Until recently, many countries exported their sorted waste to China for recycling or landfill (if poor quality). But in mid-2017, China announced it would stop the import of 24 kinds of solid waste from foreign countries, including plastic. The introduction of China's National Sword policy, as it was known, has, arguably, shifted the spotlight on plastic packaging. As a consequence, plastic waste has been left stranded in the originating country and is generally being sent to landfill or, increasingly, incinerated. While some has been exported to other destinations throughout Asia, increasingly these countries are also limiting plastic waste imports.

Despite all this, industry experts see the demand for plastic continuing to grow. Between 2000 and today, the annual global plastic resin production has increased from around 200mt to around 400mt. Interestingly, in the next decade this is expected to increase close to 700mt. Ultimately, this will be driven by ever increasing demand from developing countries. For example, in China the per capita consumption of plastics is around 50% of that in the developed world, while in India and Africa it sits at around 10%. If we assume similar levels of recycling or incineration, then the world will add another ~3bn tonnes of plastic waste to the environment over the next decade. That's a staggering 65% increase on the waste generated over the last 70 years!

## There's no easy solution

So what can be done about this? At the risk of simplifying this highly complex issue, there are several options. These include bans and higher taxes, increasing physical recycling, increasing chemical recycling, and/or ultimately shifting to alternative packaging sources. We suspect, like most things in life, there is no easy fix.

A combination of all of the above is likely to be required especially given each solution in its own right is not perfect. Bans and taxes potentially can result in less than favourable outcomes; physical recycling infrastructure is insufficient and, arguably, uneconomic; chemical recycling is unproven at scale, and shifts to alternatives may result in increased carbon emissions. While the solution may not be simple, what is clear is that understanding the trade-off between plastics and alternatives (including bans) is becoming paramount.

Globally, many companies have made commitments on this issue. Locally the major packaging companies (Amcor, Orora and Pact Group) have made the following commitments:

- **Amcor** pledged to develop all its packaging to be recyclable or reusable by 2025.
- **Orora's** recycling rates in its key products are already high and it remains focused on a circular economy, where its products are used, recycled, and remanufactured. Its challenge will be to do this using natural resources as efficiently as possible.
- **Pact's** "End of Waste" strategy focuses on eliminating all non-recyclable packaging; have solutions to reduce, reuse and recycle all single use secondary packaging, and offer 30% recycled content across the packaging portfolio by 2025.

While the motivation to achieve change is admirable in the mind of the consumer, it may be a case of too little too late. The social backlash against plastic packaging and its contribution to landfill and ocean waste is strong, especially among younger generations. This will be very hard to reverse. It reminds us of similar social backlash against genetically modified seed and crop in the early 2000s—from which the large multi-national seed companies never seem to have recovered. But it's not just the social backlash which sees the cards stacked against the plastic packaging companies. The economics around plastics recycling don't appear to work at this point to support investment in sufficient appropriate infrastructure. Unless governments are willing to take dramatic steps and support recycling, it's hard to believe that consumer won't be biased towards packaging alternatives where recycling is perceived to be higher. That's not to say we believe this will decimate the plastic packaging industry, but it most likely will modestly reduce expected growth rates in an industry that is already relatively low growth—the impacts of which could be significant.

Recently there has been plenty of action on this issue:

- **Pact Group** announced it will invest \$500m in facilities, research and technology
- **McDonald's** will phase out plastic cutlery by the end of 2020
- **Nestlé** will partner with a waste management company in a trial that will see soft plastics collected and recycled
- **Mitsubishi Chemical Corporation** will acquire two Swiss engineering plastics recyclers as a part of the company's efforts to promote the circular economy.
- **Coca-Cola Co** said it will not abandon single-use plastic bottles because people still want to drink from them because they are resealable and lightweight.
- **Mondelez** is trialing a recycled paper wrapper for its Cadbury Energy Bar in NZ.

## Weighing up the numbers

So where does this all leave us? The controversy around plastic packaging is complicated. Looking at the facts today would suggest the wants/needs/desires of the consumer are going to drive future outcomes. As it currently stands, we would not be surprised to see the plastic packaging industry growth rates come in lower than expected levels. The flipside is that traditional packaging companies may benefit. While we acknowledge traditional packaging has a greater carbon footprint, its recyclability is what sets it apart from plastics. While this may, in part, be built on a misconception that the majority of traditional packaging is recycled, the reality is that more traditional packaging is recycled than plastic packaging today.

How do we factor this into our investment process? As fundamental investors focused on valuing companies based on their sustainable earnings, we need to take account of all threats and opportunities, including ESG factors. Threats to the usage of plastics, driven by regulation or changing consumer preferences, is clearly such an issue. In regard to valuations, this can be handled either through our earnings forecasts or by reducing the valuation multiple, i.e. capitalisation rate. It is interesting to note over the last few years, the international equity markets have generally reduced the valuation multiples to plastic packaging companies and increased the multiples ascribed to traditional packaging companies to the point where both groups are trading at similar levels. The speed of this change is interesting and could continue. In this context, we are comfortable applying valuation discount penalties to Amcor and Pact Group.

The bottom line: When considering the pros and cons of plastic packaging not all is as it seems. Ultimately, we believe the consumer will dictate the outcome and investment markets will follow. By considering these issues now, our goal is to remain ahead of the pack.

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