



UNWRAPPING INVESTOR RISK

In the Global Plastic Containers
and Packaging Sector

Tracker Report
March 2021

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ABOUT PLANET TRACKER

Planet Tracker is a non-profit financial think tank aligning capital markets with planetary limits. It was created to investigate the risk of market failure related to ecological limits. This investigation is primarily for the investor community where ecological limits, other than climate change, are often not aligned with investor capital. Planet Tracker generates breakthrough analytics to redefine how financial and environmental data interact with the aim of changing the practices of financial decision makers to help avoid both environmental and financial failure.

PLASTICS TRACKER

The goal of Plastics Tracker is to stem the flow of environmentally damaging plastics and related products that are creating global waste and health issues. By taking a financial lens and using financial analytics to transparently map capital flows and influences in the mid-stream of the supply chain from resins production through to product use, Plastics Tracker seeks to stop unsustainable practices while encouraging investment in sustainable solutions.

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...a coherent **PLAN**

to transition to

more **SUSTAINABLE**

processes and products



KEY TAKEAWAYS

- Hiding in plain sight between petrochemical companies and consumers (e.g. fast moving consumer goods companies) are the plastic containers and packaging companies, also called “converters” or “plastics producers”.
- Planet Tracker has identified a Universe of 83 publicly traded global companiesⁱ in the Plastic Containers and Packaging (PC&P) sector, which individually have an annual plastic revenue which exceeds USD 100 million and 10% of each company’s total revenue, according to Bloomberg. These 83 companies have a combined market capitalisation of USD 126 billion and account for 93% of the sector’s revenue. In this report we refer to these companies as **‘The Planet Tracker Universe’**.
- 20 companies dominate the PC&P sector globally, accounting for 64% of its USD 53.8 billion revenue, although few have names known to the general public.
- The companies in the PC&P sector are facing a possible pincer movement as policymakers and consumers are mobilising to push the industry into taking responsibility for the single-use plastics they produce and sell. In turn, this raises the threat that PC&P investments could become stranded.
- Companies in the Planet Tracker Universe need a coherent plan to transition to more sustainable processes and products:
 - 53 companies in our Planet Tracker Universe report no policies on key sustainable packaging-related topics and few reflect the rising risk of legislation in their company filings.
 - The top twenty institutional investors in the Planet Tracker Universe have unrealised gains¹ of USD 7.7 billion in 447 investments, led by Vanguard with USD 1.9 billion. Total unrealised gains in the Universe are USD 24 billion held in 8,665 investments surveyed by Planet Tracker.
 - Less than one-tenth of 1% of the 4,175 institutional investors, with investments in the Universe surveyed, are members of investor initiatives supporting sustainable plastics initiatives.
 - 70 investors control 60% of public plastics production in the Universe: almost none have pollution policies.
 - As of 4 January 2021, companies in the Planet Tracker Universe had issued no green bonds, no sustainability bonds and no sustainability-linked loans.
 - Alarmingly, none of the top 20 individual private equity or foundation investors who each have only one investment in the Planet Tracker Universe for a total of 20 investments valued at USD 10.98 billion, or 12.5% of the 8,655 investments assessed, are participating in, or members of, investor initiatives supporting sustainable plastics initiatives.
- 70% of the Universe’s corporate bonds and loans are rolling over by 2025, creating an opportunity for some of these PC&P companies to convince investors they should be worthy of issuing green fixed income instruments.
- Conversely, the largest fixed income investors in this industry, led by BlackRock, J.P. Morgan, Prudential and Robeco, have a clear opportunity to set the investor agenda for these publicly traded companies with regards to how the Universe will coalesce around a vision to support a transition to sustainable practices and a circular economy.

¹ An unrealised gain is a potential profit that exists on paper, resulting from an investment. It is an increase in the value of an asset that has yet to be sold for cash, such as a stock position that has increased in value but still remains open. A gain becomes realized once the position is sold for a profit.



EXECUTIVE SUMMARY

The identity of the Plastic Containers & Packaging (PC&P) companies is often unknown outside the plastics industry, major fast moving consumer goods (FMCG) companies and financial markets, despite the visibility of the products they produce, ranging from plastic bottles to food containers. Instead, the focus remains on the raw material suppliers, the major chemical and oil companies and the bottle and container users, such as the branded consumer companies. It raises the interesting issue of whether the brand name on the container (e.g., Coca-Cola) carries the risk, rather than the plastic bottle manufacturer.

Planet Tracker has identified 83 publicly traded global companies in the PC&P sector which individually have an annual revenue in excess of USD 100 million and derive at least 10% of their revenue from this sector. In this report we refer to these companies as **'The Planet Tracker Universe'**.

The companies in the Planet Tracker Universe have an estimated USD 54 billion in annual revenue (89% of the whole sector's revenue) and USD 126 billion market capitalisation (34% of the whole sector's market capitalisation).

However, this disguises the dominance of the 20 largest players in the PC&P sector. This grouping accounts for 62% of the sector's revenue and has a combined market capitalisation of USD 82 billion.

With the growing risks this sector faces, we encourage investors and financiers to be aware of this concentration risk.



Within the Planet Tracker Universe of companies:

- The top 70 equity investors have a total investment of USD 50.44 billion and control 60% of public PC&P production: almost none have pollution policies.
- Of those 70 investors, we calculate that the top 50 institutional equity investors in the Universe have investments totalling USD 39.46 billion, equal to 45% overall of the investments tracked.
- A further 20 individual, private equity or foundation investors who each have only one investment in the sector represent a total investment of USD 10.98 billion.
- In addition, the top 50 fixed income managers have a further USD 3.55 billion of exposure.
- Many of these investors have substantial unrealised gains from their equity investments. The top twenty institutional equity investors in the Universe have unrealised gains² of USD 7.7 billion in 447 investments, led by Vanguard with USD 1.9 billion.

While these potential investment gains will provide comfort for the financial institutions, the issue is whether they are temporary. From an investor's point of view, to ensure returns, they need the PC&P companies to be fully aware of the looming impacts from growing pressure to reduce plastics pollution and to be taking mitigating actions to address these risks.

The most publicly recognised environmental issue associated with plastics is packaging waste. Plastic packaging accounts for 36% of all plastic producedⁱⁱ which, in turn, accounts for nearly half of all plastic waste.ⁱⁱⁱ Compounding this problem is that much of this is for single-use purposes which, depending on the product, can endure indefinitely in the environment when discarded. This has captured the attention of consumers, policymakers and increasingly investor alliances.

Consumers are recognising the environmental impacts of plastic waste and are beginning to advocate for regulation as well as to engage with FMCG companies directly, placing negative pressure on the respective brands. PC&P companies may become the next focus of consumer campaigns and plastics-conscious consumers.

² An unrealised gain is a potential profit that exists on paper, resulting from an investment. It is an increase in the value of an asset that has yet to be sold for cash, such as a stock position that has increased in value but still remains open. A gain becomes realized once the position is sold for a profit.



Many government policymakers are aware of the growing plastic pollution problem. Many politicians, sensitive to growing consumer pressure, enjoy showing green credentials and discarded plastic may prove a revenue generator through taxes and penalties. As COVID-19 sovereign debts rise, this becomes ever more enticing. Although a number of the largest petrochemical companies are state-owned, this is not the case for companies further down the plastics value chain.

It would be hard for the PC&P and FMCG (fast moving consumer goods) companies to feign ignorance about the mounting problem of plastic pollution, as many of these companies have joined alliances which broadly recognise the fact that this issue urgently needs addressing.

With policymakers recognising the growing plastic problem and consumers becoming more activist towards the producers and politicians, the plastic containers and packaging companies will inevitably become a focus. Governments may impose waste controls on these companies or demand a rapid transition to new products, which raises the possibility of stranded assets as companies are unable to re-tool their production facilities fast enough, resulting in investment impairments, write-downs and write-offs, something presently being played out in the oil and gas sector.

The PC&P sector is at an inflection point. The industry is at risk as its existing technologies are directly associated with environmental harm while newer technologies, which could support an evolution in sustainable plastics and lead the PC&P sector into a circular economy, are not yet being invested in at scale.

This scenario should be sending a clear warning signal to Investors about the rising probability of stranded assets. If the PC&P companies fail to find a technological solution to the environmental harm stemming directly from their products, will policymakers force their hand? Meanwhile, investors should demand management teams formulate transition plans in order to protect their unrealised PC&P investments before the financial markets commence a devaluation of these companies.



We recommend that stakeholders take the following actions:

All investors should immediately request public disclosure of environmental risks and policies from all 83 publicly traded companies we have identified in the PC&P sector as the **Planet Tracker Universe** in order to safeguard their unrealised investment gains. In turn, this should allow investors to assess the likelihood of incurring stranded assets and asset write downs.

- ▶ Equity investors, invested in companies in the Planet Tracker Universe, need to implement time-bound policies and recommendations whose results will be reported to their institutions' Governance Boards in a timely and consistent manner. These should support the rapid expansion of site-specific recycling infrastructure while insisting upon the rapid standardisation of design of the polymers so that it is easier to recycle and reuse these polymers effectively in a closed loop manner.
- ▶ Fixed income investors need to work directly with companies in the Planet Tracker Universe to ensure they factor into pricing short-mid- and long-term legislative risks that may impact debt covenants. The maturity of such instruments, or new issues, presents an ideal time for such active involvement.

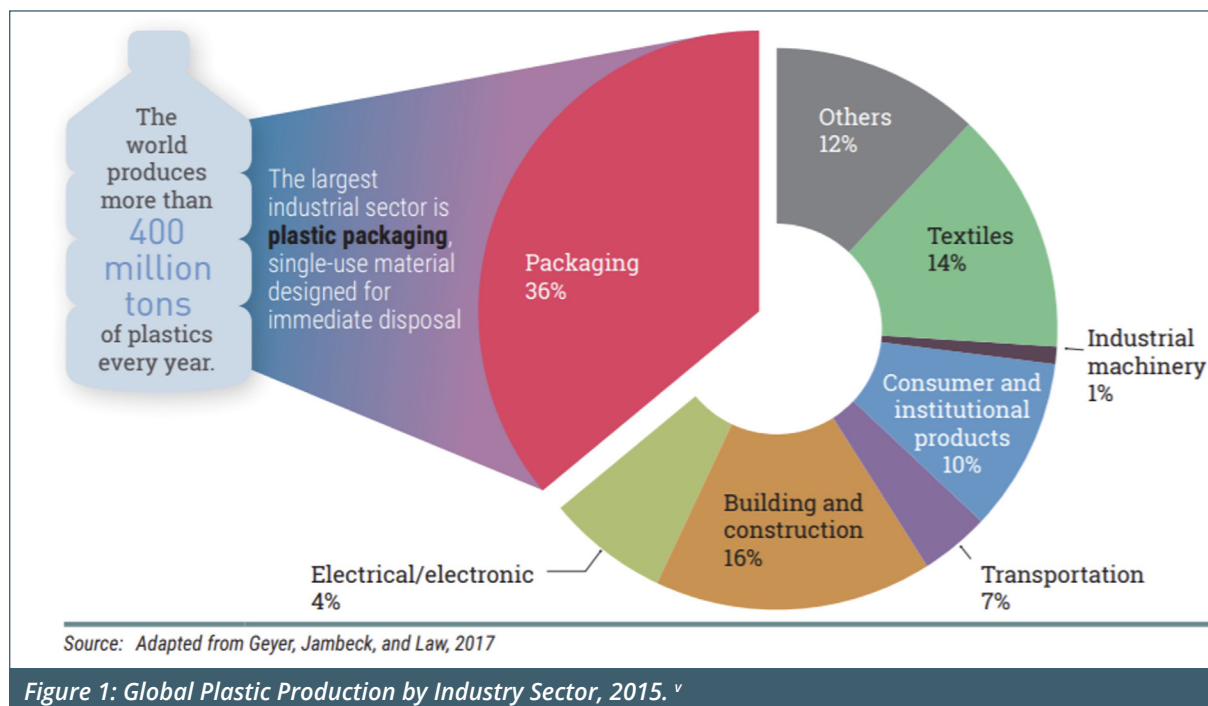
Companies in the Planet Tracker Universe need to recognise the impending risks in their filings and describe their transition strategy towards a circular economy. They can perform this individually or in the larger alliances to which they are signatories. Companies should:

- ▶ Implement a global business strategy by 2025 that migrates their business platforms in a time-bound manner towards sustainable practices and a circular economy model to mitigate the financial risks described in this report.^{iv} These companies must focus their energies on designing for reusability and they must actively join global alliances to support a transition towards a plastics-waste free economy.
- ▶ Disclose their environmental risks in their regulatory filings and their environmental policies. All companies must issue corporate responsibility reports annually to improve their disclosure.

Policymakers and regulators need to work directly with investors and companies throughout the supply chain to simplify product design, reduce the complexity of packaging and harmonise packaging formats, grow the adoption of recyclable feedstocks, increase recyclable infrastructure and improve consumer outreach, so that plastics pollution can be rapidly mitigated and addressed.

PLASTIC CONTAINERS & PACKAGING COMPANIES: IN THE LAND OF GIANTS

Sandwiched between the petrochemical companies, which provide the raw materials, and the fast-moving consumer goods (FMCG) companies, which sell the short shelf-life goods, is the Plastic Containers and Packaging (PC&P) sector - see Figure 1.



Despite the PC&P sector manufacturing thousands of plastic products which are consumed and discarded each day, the sector has a low profile, with few of these companies recognisable to the general public. However, this is not true of the raw material suppliers, which include large chemical conglomerates (e.g., BASF, Dow) and major oil companies (e.g., ExxonMobil, PetroChina); nor of the FMCG companies, which include many companies with recognisable brand names (e.g., Proctor & Gamble, Unilever, Nestlé and Coca-Cola).

The PC&P companies are business-to-business (B2B) enterprises which are dependent on both the raw materials they receive to make the products that their customers require and their customer's product and design specifications. It is difficult for them to go it alone and develop new packaging products without the required sign-off from their FMCG clients.

There are a few examples of the packaging companies working together with their customers such as Amcor's and Nestlé's joint development of the world's first recyclable retort³ pouch for pet food.^{vi} Berry Global has also announced a working arrangement with the AZEK Company to allow the use of sustainable building materials from recycled plastic.^{vii} However there are not many.

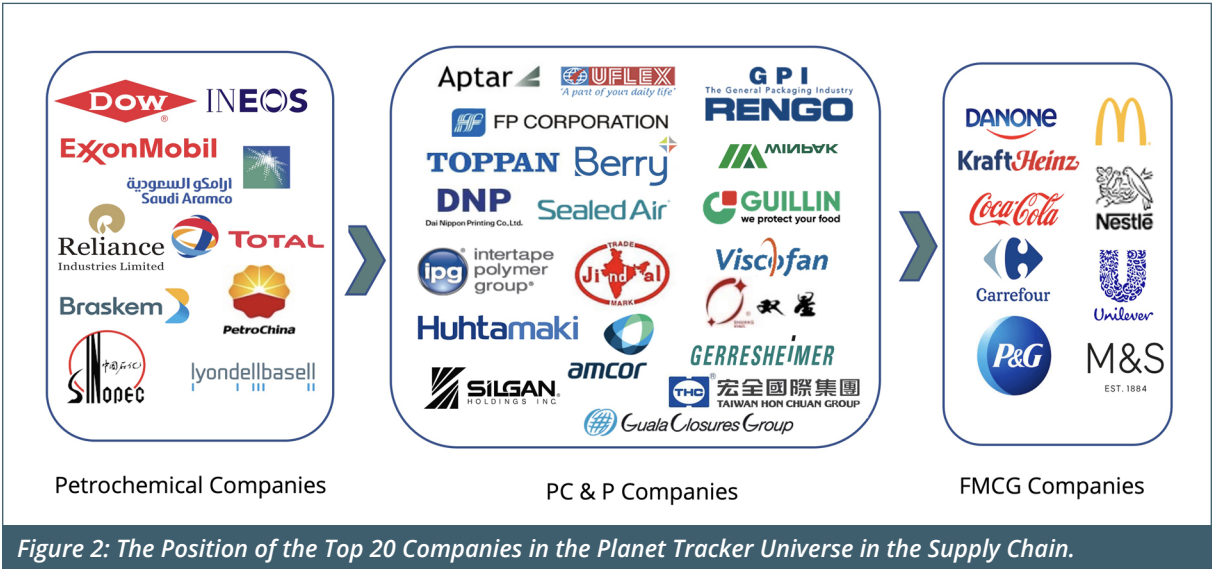
We caution against the idea that the PC&P companies will be able to remain hidden for much longer. As we discuss in this paper, the risk profile of this sector is rising and coping with an inevitable transition in their business model will be paramount for investors and financiers, despite the promising sales growth to date.

³ A **retort pouch** or **retortable pouch** is a type of food **packaging** made from a laminate of flexible plastic and metal foils. It allows the sterile **packaging** of a wide variety of food and drink handled by aseptic processing and is used as an alternative to traditional industrial canning methods.

Furthermore, these plastic packaging companies will have to entice their raw material suppliers and their FMCG customers to join a sustainable transition strategy, otherwise they will either be unable to manufacture sustainable containers for lack of raw materials, or unable to find a market for them, as FMCG companies turn to alternative packaging options.

We define the **Planet Tracker Universe** as the 83 publicly listed global companies in this plastics packaging sector, which meet the twin requirements of an annual revenue of over USD 100 million and more than 10% of revenue derived from the PC&P sector - **see Appendix A**.

However, the Planet Tracker Universe has a significant distribution tail. Of the 83 assessed companies, the top 20 alone account for more than 62% of the PC&P sector’s revenue and 65% of its market capitalisation, with a combined plastics’ revenue of USD 38 billion - see Figure 2 and Table 3.



While the companies in the Planet Tracker Universe are effective in converting resins into the thousands of plastic products we use every day, without a clear transition plan the top 50 equity (**Appendix B**) and top 50 fixed income investors (**Appendix C**) in the space - who are invested in over 50% of the sector’s value - face concentration risk if the companies they own do not actively transition to sustainable production and a circular economy model for plastic products.

Plastic is an important ingredient in our global economy and, as a material, has a number of attractions. These are neatly summed up by the Minderoo Foundation in ‘Clearing a Path Through the Waste’:^{viii}

“Versatile, strong, light and cheap - the functional benefits of plastic are not in dispute - however, the same attributes that led to plastics’ exponential rise - being durable and disposable - have turned out to be a curse.”



The attraction of these products has created unintended consequences. Affordability has made their use widespread, but their unconstrained disposal is problematic, especially since inadequate disposal ensures they remain in the environment for longer than necessary. Many plastics have long lifespans - in a recent peer reviewed scientific article, which assessed a variety of publications, estimates ranged from 1 year to greater than 10,000 years (Figure 3 and Table 1).

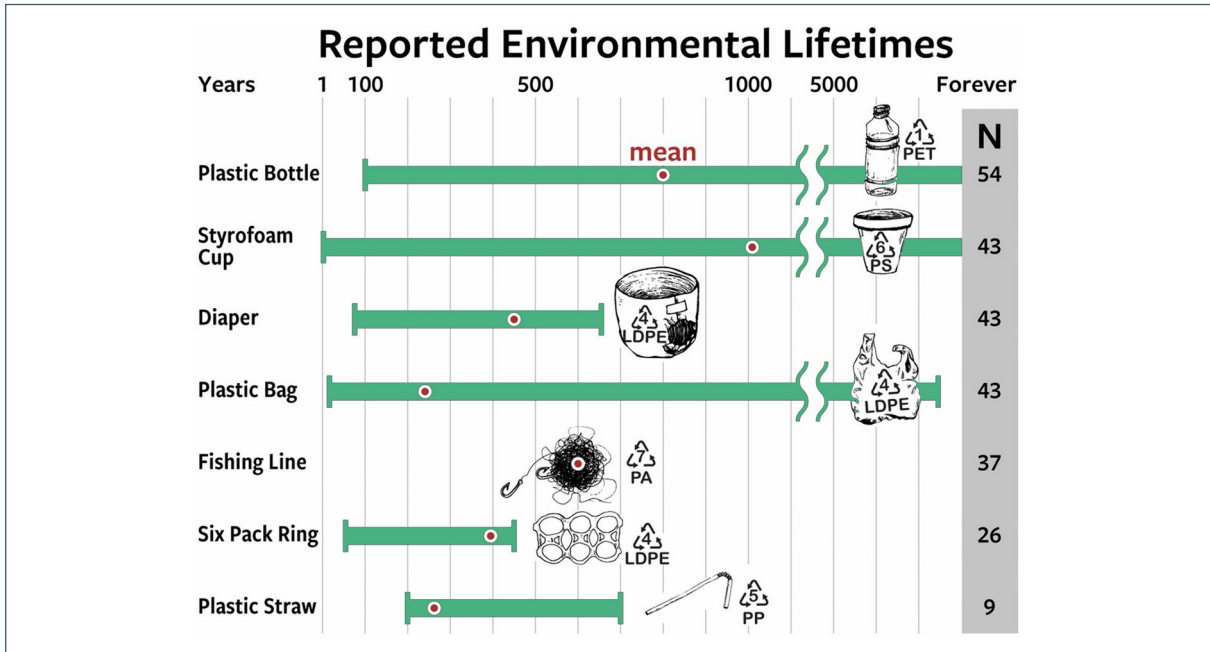


Figure 3: Review of 57 information graphics and documents from 2008 to 2019 that report environmental lifetimes of common plastic consumer goods.^{ix}

The bars represent the range of estimates, the red circles represent the mean of estimates and the number of estimates for each plastic good (N) is provided on the right (N = 255 in total). The recycling number corresponds to the base polymer of each good. PET = polyethylene terephthalate, PS = polystyrene, LDPE = low-density polyethylene, PA = polyamide, and PP = polypropylene. Individual lifetime estimates and additional details are available. (Image credit: Natalie Reiner/Woods Hole Oceanographic Institution).

Table 1: Estimates of Sample Plastics' Lifespans.^x

Use	Plastic Type	Recycle Code	Range	No. of Estimates	Mean
Plastic Bottle	Polyethylene terephthalate	#1	100 to 10,000	54	800
Diaper	Low-density polyethylene	#4	75 to 800	43	450
Styrofoam Cup	Polystyrene	#6	1 to 10,000	43	1,000
Fishing Line	Polyamide	#7	600*	37	600*
Plastic Bag	Low-density polyethylene	#4	20 to 10,000	42	250
Six Pack Ring	Low-density polyethylene	#4	50 to 450	27	400
Plastic Straw	Polypropylene	#5	100 to 700	9	275

*All 37 assessments stated that fishing line lasts 600 years.

For a schematic of plastics production, their applications and their recycling codes - see **Appendix D**.



The PC&P sector faces a number of significant direct and indirect environmental risks which may impact its core business strategies:

- For every tonne of plastic produced, 4.4 tonnes of carbon dioxide are emitted, which does not include the full life-cycle assessment of plastics' impacts.^{xi}
- 40% of plastic ends up in the environment.
- 11 million tonnes flow into the ocean annually,^{xii} of which 80% is from flexible and multilayer plastic, the subject of this report.
- Currently, plastic waste in the ocean is estimated at 150 million metric tonnes ^{xiii} and this is forecast to double by 2040.^{xiv}
- Under business as usual, the plastics industry would account for 19% of the remaining global carbon budget to remain under 1.5 °C by 2040.^{xv}
- Over 170 chemicals used in fracking (which contributes to some production plastic feedstocks) have known human health impacts.^{xvi}

This report provides an insight into whether such environment-related concerns are accurately valued in equity and debt pricing for the shareholders and capital providers of the 83 publicly traded PC&P companies^{xvii} we have identified as the Planet Tracker Universe in the PC&P sector.



DEFINING THE PLASTIC CONTAINERS & PACKAGING SECTOR

The Global Industry Classification Standard (GICS),^{xviii} developed by S&P Global and MSCI, provides a structure in which all listed companies can be framed for investment purposes and is one of the primary classification system used within the finance world. However, despite plastic's ubiquity, it does not have a defined sector, industry group or industry. It is dispersed among sub-industries. For example, plastic production can be included under integrated oil & gas or commodity chemicals (but as a speciality chemical) or diversified chemicals. In the packaging sector, plastic is hidden in metal & glass containers.

Planet Tracker has therefore used an alternative classification system - Bloomberg Industry Classification System (BICS) - to calculate the overall plastic exposure for publicly-traded converters and manufacturers across the global economy. We estimate that the plastic sector totals USD 213 billion in industry revenue across 10 sub-industries and 672 publicly-traded companies - see Table 2.

Table 2: Plastic Sectors Across the Economy.^{xix}

Plastic Sectors Total Market Capitalisation* (USD billions)	Industry Revenue** (USD billions)	Listed Companies Used to Calculate Industry Revenue**	Mean
Plastic Products	152	50	208
Plastic Materials and Forms Wholesalers	79	49	58
Plastic Building Materials	82	24	114
Plastic Containers and Packaging sector which contains the Plastic Bag and Pouch, Plastic Bottle, Plastic Packaging Film & Sheet, and Protective Packaging Materials sub-sectors	369	61	230
Plastic and Rubber Machinery	15	7	37
Engineering Plastics	165	23	22
Polystyrene Foam Insulation	1	1	3
Total	864	213	672

* Sum of currency adjusted market capitalisation for all members regardless of whether the company's primary industry is in one of the ten plastics sub-industries or not.

** Sum of annual BICS⁴ level assigned net revenue at primary industry level. BICS is the Bloomberg Industry Classification Standard (BICS). It is an industry classification system developed and maintained by Bloomberg that classifies securities based on business, economic function, and other characteristics.

Note that not every company at the industry level is assigned to a sub-industry as this depends on the real economy impacts of each company. Thus, sums may not add up. Also, industry specific revenue is calculated by Bloomberg's proprietary methodology.

⁴ BICS is the Bloomberg Industry Classification Standard (BICS). It is an industry classification system developed and maintained by Bloomberg that classifies securities based on business, economic function, and other characteristics.





IDENTIFYING THE COMPANIES

The 83 publicly traded companies in the PC&P sector we have identified as the Planet Tracker Universe have an estimated USD 54 billion in annual revenue (89% of the whole sector's revenue) and USD 126 billion market capitalisation (34% of the whole Universe's market capitalisation) and a combined estimated total of 471,000 employees - see Appendix A.

There is a noticeable concentration within this subset, as the top 20 companies in the Universe by share of revenue, while only having 22% of the sector's market capitalisation, are responsible for 62% of the PCP sector's total revenue - see Table 3.

Table 3: Plastic Containers and Packaging Publicly Traded Companies' Annual PC&P Industry-Specific Revenue.^{xx}

Use	Total Market Capitalisation** (USD billions)	Percent Market Capitalisation	Industry Revenue*** (USD billions)	Percent Industry Revenue
Plastic Containers and Packaging Sector*	369	100%	61	100%
83 Companies in the Planet Tracker Universe	126	34%	54	89%
Top 20 Companies in the Planet Tracker Universe	82	22%	38	62%

* Plastic Containers and Packaging sector which contains the Plastic Bag and Pouch, Plastic Bottle, Plastic Packaging Film & Sheet, and Protective Packaging Materials sub-sectors.

** Sum of currency adjusted market cap for all PC&P industry members. 83 companies out of 245 companies with reported market capitalisation, as of 4 January 2021.

*** Sum of annual BICS level assigned net revenue at primary PC&P industry level.

Of the top 20 in the Planet Tracker Universe, their primary listing is on 11 different stock exchanges, although three regulatory regimes dominate: EU and the USA (five companies each), Japan (four companies), followed by India and Canada (two companies each) and China and Taiwan (one company each) - see Appendix A.

The PC&P sector overall is further broken down into the following sub-industries: Plastic Bag and Pouch, Plastic Bottle, Plastic Packaging Film & Sheet and Protective Packaging Materials.



A SECTOR FACING VARIABLE FORTUNES

To provide an indication of the investment performance of the 83 companies in the Planet Tracker Universe, Planet Tracker created a market capitalisation weighted portfolio priced in USD, benchmarked against the MSCI ACWI (All Countries World Index).

While the MSCI ACWI Index is not an exact geographical match for these companies as it does not include Vietnam, it nonetheless provides a suitable benchmark for the Planet Tracker Universe's performance on a global basis, from 2015 to 2020 - see Figure 4.

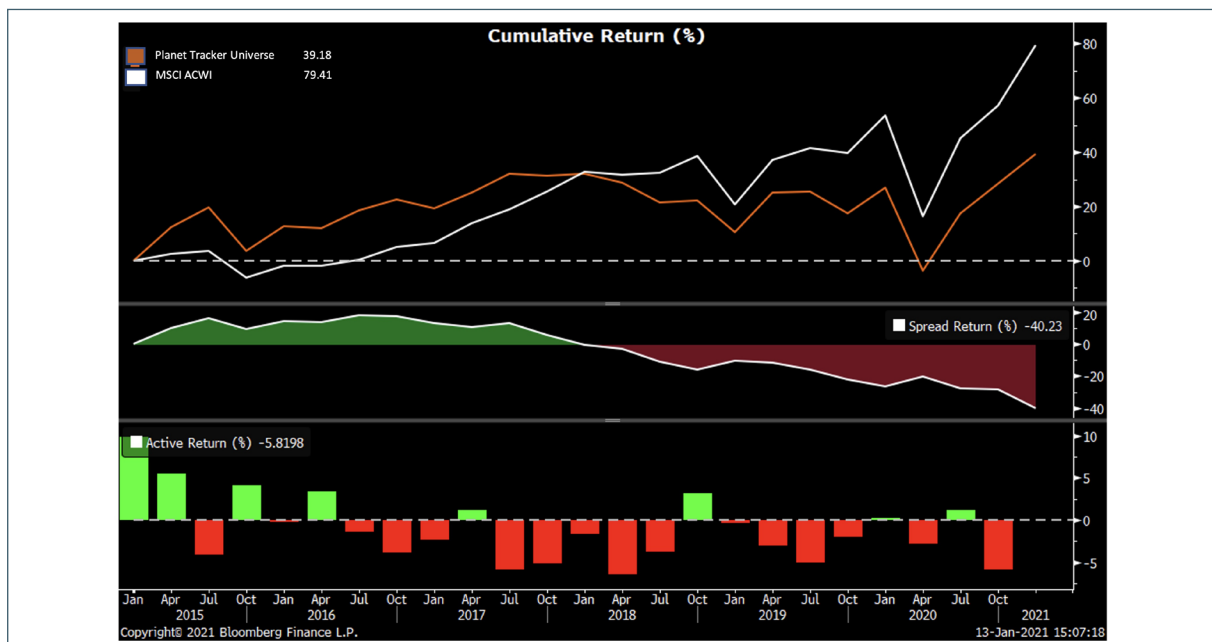


Figure 4: Planet Tracker Universe Performance vs. MSCI ACWI Index, 1 January 2015 to 1 January 2021.⁵

We recognise that our equity portfolio back test of the Planet Tracker Universe is indicative only, as its performance could be attributed to other factors such as sector, country, size or growth, for example.

Over the past 24 quarters, our Planet Tracker Universe portfolio has significantly underperformed the MSCI ACWI Index – see Table 5.

Table 5: Investment Performance Statistics for the Planet Tracker Universe portfolio 1 January 2015 to 1 January 2021. N=24. Quarterly. USD adjusted. Market capitalisation weighted.

Return Statistics		Risk Statistics		Risk/Return Statistics	
Total Return (%)	39.18	Standard Deviation	11.27	Sharpe Ratio	0.36
Mean Return (%)	6.61	Semi variance	10.61	Jensen Alpha	-1.19
Mean Active Return (%)	-4.40	Tracking Error (%)	8.62	Information Ratio	-0.41
Minimum Return (%)	-7.96	Skewness	-1.23	Beta	0.70
Maximum Return (%)	4.23			Correlation	0.80

⁵ The MSCI ACWI Index is designed to represent performance of the full opportunity set of large- and mid-cap stocks across 23 developed and 27 emerging markets. As of November 2020, it covers more than 3,000 constituents across 11 sectors and approximately 85% of the free float-adjusted market capitalisation in each market. The index is built using MSCI's Global Investable Market Index (GIMI) methodology, which is designed to take into account variations reflecting conditions across regions, market cap sizes, sectors, style segments and combinations.



The Planet Tracker Universe portfolio outperformed the MSCI ACWI Index in only seven quarters between 2015 and 2020 with significant underperformance beginning before the COVID-19 outbreak. The cumulative return of the MSCI ACWI Index was 79.41% while the return for the Planet Tracker Universe over the same period was 39.18%, an underperformance of 40.23%.

The Planet Tracker Universe portfolio starts with 74 companies in Q1 2015 and adds the following:

- Q1 2016: Suzhou Hycan Holdings
- Q2 2016: TPBI
- Q3 2017: Xiamen Yanjan New Material
- Q1 2018: Samyang Packaging Corp., Guala Closures and Panca Budi Idaman
- Q2 2019: Shanghai Yongguan Adhesive Products Corp.
- Q3 2019: Amcor
- Q4 2020: An Phat Holdings

The Planet Tracker Universe portfolio's mean active return, which is the average quarterly return relative to the benchmark, demonstrates significant underperformance against the MSCI ACWI Index. While the Planet Tracker Universe began outperforming the MSCI ACWI Index in 2015, since Q4 2017 - well before COVID-19 - the Universe significantly underperformed the MSCI ACWI Index. This underperformance is confirmed with a low Sharpe ratio and a poor information ratio, which measures the excess return of this portfolio less the MSCI ACWI Index divided by the tracking error - see Table 6.

	% Average Weight	Total Return %*	Contribution to Return %
PC&P Index	100.00%	40.17%	40.17%
Materials sector	73.28%	45.67%	33.31%
Industrials sector	13.45%	20.23%	3.06%
Health Care sector	7.74%	13.59%	0.89%
Consumer Staples sector	5.28%	64.68%	2.77%
Consumer Discretionary sector	0.25%	26.89%	0.14%

** Different day count calculation means slightly different % than Table 5.*



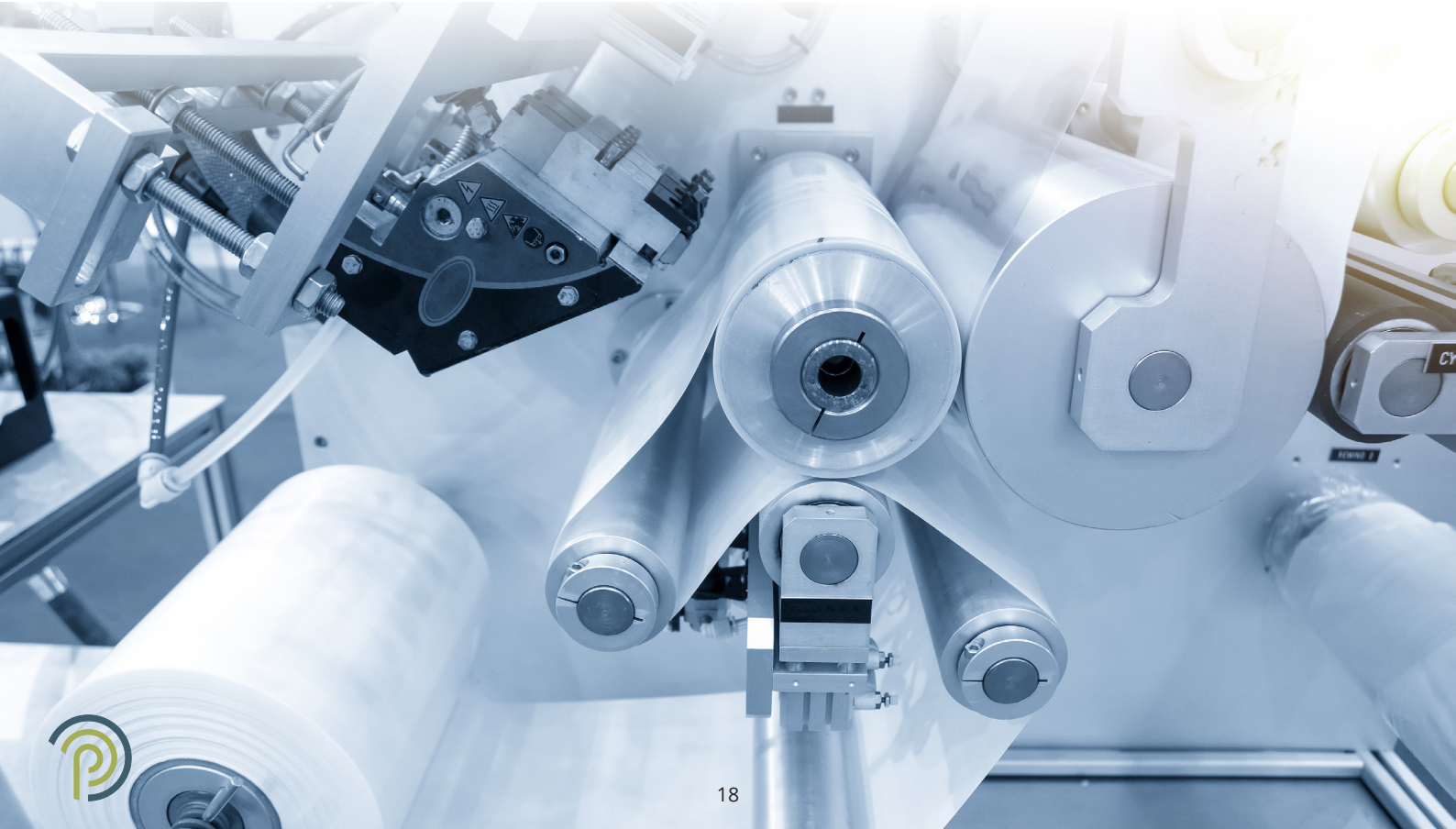
It is noteworthy that the top ten companies positively contributing to the Planet Tracker Universe portfolio total return have all made public sustainability commitments - see Table 7.

Table 7: Top Ten Companies Contributing to Planet Tracker Universe Portfolio Total Return 2015 - 2020.^{xxii}

Company	Average Weight	Contribution to Total Return	Corporate Responsibility Report (2020)	GRI Report (2020)	New Plastic Economy Signatory	Sustainable Plastics Policy	Biodiversity Policy
AptarGroup	5.78%	5.95%	Y	Y	Y	Y	Y
CCL Industries	6.89%	5.87%			Y	Y	
Berry Global	5.80%	3.96%	Y	Y	Y	Y	
Huhtamaki	4.17%	3.81%	Y	Y		Y	Y
Sonoco Products	5.21%	3.66%	Y			Y	
FP Corp.	2.39%	2.99%	Y				
Gerresheimer	2.47%	2.23%				Y	
Amcor	3.77%	1.80%	Y	Y	Y	Y	Y
Sealed Air	7.94%	1.80%	Y				
Silgan Holdings	3.31%	1.74%			Y		
Total	47.73%	33.81%	7	4	5	7	3

These ten companies contributed 84.17%^{xxiii} of the Planet Tracker Universe’s active return to the 40.17% total return between 2015 and 2020. In addition, the majority of these ten companies have issued corporate responsibility reports in 2020.

On the other hand, only 30 companies out of the 83 companies in the Planet Tracker Universe report any environmental policies tracked, according to Bloomberg - see Table 15.



INVESTORS HAVE THE POWER TO SET A NEW AGENDA, BUT FEW DO

The largest investors in the sector are investment advisors, which are companies that make investment recommendations, engage in security analysis for a fee and have discretionary authority over their clients' assets. They are required to uphold a fiduciary responsibility.

Planet Tracker surveyed 8,665 investment positions for 4,175 different investors in the 83 companies in the Planet Tracker Universe. In aggregate, institutional equity investors have USD 24.17 billion in unrealised gains in the companies assessed.

Of these, the top 20 institutional investors have USD 7.70 billion in unrealised gains⁶ from investments in the Planet Tracker Universe. Their investments represent 31.9% of all unrealised gains in the Planet Tracker Universe - [see Appendix E](#).

These investments are at risk of becoming stranded if the investors do not persuade the companies in the Planet Tracker Universe to transition to more sustainable practices.

[Appendix B](#) shows the top 50 equity investors after assessing 8,655 equity investments in the 83 listed companies in the Planet Tracker Universe, valued in total at more than USD 87.6 billion. It demonstrates that the top 50 institutional investors, sovereign wealth funds and insurance companies own 45% of shares in the companies in the Planet Tracker Universe.

Not one of these 50 institutional investors is a member of an investor coalition to work on plastics including As You Sow's Plastic Solutions Investor Alliance or is a signatory to the New Plastics Economy Global Commitment and only five of these 50 institutions are members of the PRI Plastics Working Group.

[Appendix F](#) shows the top 20 private equity, foundation and individual investors who each have a single investment in the Planet Tracker Universe. These 20 investors have 20 investments that in total equal USD 10.98 billion, or 12.5% of the 8,655 investments assessed in the Planet Tracker Universe.

Not one of these 20 investors is a member of As You Sow's Plastic Solutions Investor Alliance, a signatory to the New Plastics Economy Global Commitment, or a member of the PRI Plastics Working Group, as of 30 September 2020.

The Norges Bank publication '[Ocean Sustainability Expectations Towards Companies](#)' is a positive example of an investment manager's policy guidance including risk assessment of plastics pollution in the ocean – it provides a useful template for companies in the Planet Tracker Universe to replicate for their own operations.

⁶ An unrealised gain is a potential profit that exists on paper, resulting from an investment. It is an increase in the value of an asset that has yet to be sold for cash, such as a stock position that has increased in value but still remains open. A gain becomes realized once the position is sold for a profit.

In 2018, Norges Bank published its Ocean Sustainability Expectations Towards Companies policy guidance for companies in which it invests, which includes USD 1.073 billion it has invested in 34 companies in which it has equity ownership positions in the Planet Tracker Universe. The investor stated that ocean degradation can reduce revenue while increasing legal, regulatory, financial and physical risks from over-exploited resources.

Norges Bank states that it wants the boards of companies in which it invests to:

- Understand the broader environmental and social consequences of business operations;
- Integrate material ocean-related risks and opportunities into corporate strategy, risk management and reporting;
- Define responsibilities within the organisation that are effectively guided, monitored, and reviewed by company management.

Norges Bank set out specific requirements for companies potentially impacted by ocean degradation including plastic pollution and stated that any PC&P companies it invests in must:

Integrate ocean sustainability into strategy:

“Companies engaged in the plastics value chain should have a strategy addressing a transition towards a circular economy (p. 5)”.

Integrate material ocean-related risks into risk management:

“Companies involved in agriculture, mining, waste management and other activities that can result in land-based marine pollution, and related supply chains, should work towards preventing or significantly reducing such pollution (p. 5)”.

Disclose material priorities and report associated metrics and targets:

“Companies should disclose outcomes of their activities, products and services that may affect the oceans. For example, food and beverage companies could seek to disclose the end-of-life solutions for their plastic packaging (p. 6)”.

Planet Tracker was able to identify the ownership of USD 8.9 billion – or 31.2% – of the USD 28.6 billion in fixed income securities – both corporate bonds and loans – issued by the companies in the Planet Tracker Universe. In many jurisdictions, regulators do not require ownership of fixed income securities to be reported.

Planet Tracker assessed 22.8% of all outstanding fixed income securities for a total of USD 5.62 billion out of USD 24.68 billion, or 43 out of 152 fixed income securities.

Ownership of the 152 fixed income securities is split between 87 corporate bonds and 65 corporate loans, issued either directly by the 83 companies in the Planet Tracker Universe tracked or by their subsidiaries - [see Appendix G](#) for a list of corporate bonds and loans assessed.

The largest fixed income investors in this industry have significant positions. Led by BlackRock, J.P. Morgan, Prudential and Robeco, these investors have a clear opportunity to set the investor agenda for these publicly-traded companies with regards to how the sector will coalesce around a vision to support a transition to a circular economy – [see Appendix E](#).



The league table ranking for banks credited with involvement in fixed income issuance in the Planet Tracker Universe, from 1 January 2015 to 31 December 2020, lists the top 20 investment banks with a cumulative 81.8% of total volume and 68.3% share of revenue from issuing fixed income to companies in the Planet Tracker Universe - see Table 8.

Table 8: Planet Tracker Universe League Table 2015 to 2020.^{xxiv}

	Manager/Bookrunner	Volume (USD millions)	Overall %	Cumulative Volume % Total	Revenue (USD millions)	Revenue Share %	Cumulative Revenue % Total
1	Bank of America Securities	5,854	16.9%	16.9%	18.11	11.9%	11.9%
2	BMO Capital Markets	2,689	7.8%	24.6%	8.23	5.4%	17.3%
3	Scotiabank	2,651	7.7%	32.3%	6.67	4.4%	21.6%
4	Wells Fargo & Co.	2,184	6.3%	38.6%	6.84	4.5%	26.1%
5	HSBC	2,111	6.1%	44.7%	4.11	2.7%	28.8%
6	J.P. Morgan	1,803	5.2%	49.9%	7.45	4.9%	33.7%
7	Goldman Sachs	1,757	5.1%	55.0%	6.93	4.5%	38.3%
8	Mizuho Financial	1,685	4.9%	59.8%	7.46	4.9%	43.1%
9	UniCredit	876	2.5%	62.3%	7.02	4.6%	47.8%
10	Rabobank	813	2.3%	64.7%	1.44	0.9%	48.7%
11	Sumitomo Mitsui Financial	804	2.3%	67.0%	3.25	2.1%	50.8%
12	Commerzbank	720	2.1%	69.1%	1.67	1.1%	51.9%
13	Citi	643	1.9%	70.9%	0.93	0.6%	52.5%
14	Nomura	620	1.8%	72.7%	2.65	1.7%	54.3%
15	Credit Suisse	542	1.6%	74.3%	7.89	5.2%	59.4%
16	Barclays	467	1.4%	75.6%	4.80	3.2%	62.6%
17	Morgan Stanley	459	1.3%	77.0%	3.11	2.0%	64.6%
18	US Bancorp	438	1.3%	78.2%	0.72	0.5%	65.1%
19	Credit Agricole CIB	431	1.2%	79.5%	2.19	1.4%	66.5%
20	Nedbank	404	1.2%	80.6%	1.63	1.1%	67.6%
20	Standard Bank of South Africa	404	1.2%	81.8%	1.09	0.7%	68.3%
		28,354		81.8%	104.19		68.3%

As of 4 January 2021, companies in the Planet Tracker Universe had issued:

- **No green bonds**
- **No sustainability bonds**
- **No sustainability-linked loans.**

69.9% of the USD 24.68 billion in bonds and loans will mature in the next five years - 2021 to 2025 - see Table 9. Given that none of the bonds (or loans) in the Planet Tracker Universe, as of 4 January 2021, are green bonds, sustainability bonds or sustainability-linked loans, there is an immediate opportunity as these roll over for the bankers to plan to issue green or sustainability linked bonds or loans to fund the transition of the Planet Tracker Universe towards a sustainable future.



Table 9: Planet Tracker Universe Fixed Income Maturity by Security Category 2021 to 2040 (USD billions).^{xxv}

	Total	Senior Unsecured	Company Guaranteed	Bank Guaranteed	Unsecured	Secured	Senior Secured	Bonds	No Data
2021	1,231	394	40	-	85	13	-	-	699
2022	4,284	118	425	1	4	-	-	-	3,735
2023	5,160	856	875	1	3	-	-	9	3,417
2024	3,710	371	465	-	-	52	524	-	2,298
2025	2,855	1,213	400	13	28	-	-	-	1,200
2026	1,431	442	895	-	-	80	14	-	-
2027	496	62	425	10	-	-	-	-	-
2028	1,509	1,271	238	-	-	-	-	-	-
2029	780	775	-	5	-	-	-	-	-
2030	1,396	1,396	-	-	-	-	-	-	-
2031	177	147	-	-	-	-	-	-	30
2033	450	-	450	-	-	-	-	-	-
2036	147	147	-	-	-	-	-	-	-
2040	894	894	-	-	-	-	-	-	-
Total	24,667	8,086	4,229	30	120	145	538	9	11,509

In aggregate, across both equity and fixed income investments, the top four investors in the Planet Tracker Universe are estimated to be Vanguard Group, BlackRock, State Street and the Government Pension Investment Fund of Japan - see Table 10.

Table 10: Top Four Equity and Fixed Income Investors in the Planet Tracker Universe.^{xxvi}

Investor	Investment USD (millions)	% Equity Investment in Sector	Fixed Income Investment	% Fixed Income Investment in Sector	Total Aggregate Investment
Vanguard	4,991	5.7%	118	2.1%	5,109
BlackRock	4,493	5.1%	420	7.5%	4,913
State Street	2,227	2.5%	30	0.5%	2,257
Government Pension Investment Fund of Japan	1,551	1.8%	45	0.8%	1,596
Total	13,262		613		13,875

THE COMPANIES' PERCEPTION OF THEIR RISK

Planet Tracker surveyed over 7,800 regulatory filings made between 1 January 2015 and 1 January 2021 by companies in the Planet Tracker Universe. The aim was to determine the main environmental and natural capital constraints they believe they are facing and about which they are obliged to inform investors in filings.

We searched for important key words or phrases such as 'waste' or 'recycling' or 'extended producer responsibility'. Filings included the following report categories, when available in English (or translated by Bloomberg from Japanese, French, German, Spanish, Portuguese, Italian, Traditional Chinese, Korean, Simplified Chinese and Russian): annual reports, corporate responsibility reports, quarterly reports, corporate governance reports, formal company presentations, annual consolidated financial statements, annual audited financial statements, 8-K, 10-Q, DEF 14A, ESG releases, S-4/A and others.

The analysis shows that few if any companies in the sector are identifying such terms as key natural capital risks in their regulatory filings. This exposes these companies to considerable legal risks as they have a duty to inform existing and potential investors of the risks of investing in their company - see Table 11.

Table 11: Planet Tracker Universe: Survey of 7,800 Regulatory Filings by the Planet Tracker Universe for Natural Capital Key Words, 1 January 2015 to 1 January 2021.^{xxvii}

Mentioned in Regulatory Filings	Total Mentions 2015 to 2020	Companies	% of Companies
Climate Change	231	31	36%
Circular Economy	104	28	34%
Global Warming	84	24	29%
Waste Reduction	79	21	25%
Biodiversity	69	16	19%
Species	37	15	18%
Oceans	20	12	15%
Seas	15	7	8%
Extended Producer Responsibility	13	5	6%
Planetary Impact	7	2	2%

Keyword search via Bloomberg's automation tools screening of documents where possible in English, Japanese, French, German, Spanish, Portuguese, Italian, Traditional Chinese, Korean, Simplified Chinese and Russian.

Furthermore, only 21 out of 83 companies in the Planet Tracker Universe – 25% of all companies analysed – issued a corporate responsibility report in 2020. Of the 21 companies' corporate responsibility reports, ten were in English, eight were in Japanese, three were in Chinese and three were also translated from Japanese into English - see Table 12.



Table 12: Planet Tracker Universe' Companies with Corporate Responsibility Reports in 2020.^{xxviii}

Companies		
Achilles	FP Corp.	Rengo
Amtor	Guala Closures	Sealed Air
AptarGroup	Hokkan Holdings	Sonoco Products
Berry Global	Huhtamaki	Taiwan Hon Chuan Enterprise
Carlit Holdings	Intertape Polymer Group	Ton Yi Industrial Corp.**
Chuo Kagaku	Ishizuka Glass	Winpak
Dai Nippon Printing	Nampak*	Yonyu Plastics

* Cites in its report the Global Reporting Initiative (GRI) standards.

** In accordance with GRI, not verified or submitted to GRI. Orange: GRI report verified and submitted to GRI.

Using GRI, a commonly accepted global ESG tool allowing companies to report on their sustainability impacts in a consistent and credible way as an example, only 6% of all companies in the Planet Tracker Universe report via GRI according to Bloomberg data - see Table 13. Lack of adequate reporting limits the ability of the companies in the Planet Tracker Universe to communicate to investors the environmental risks associated with plastics production.

Table 13: Total Corporate Responsibility Reports, GRI, and New Plastics Economy Global Commitments, for the companies in the PC&P Universe 2020.^{xxix}

Sustainability Reports	Companies in the Planet Tracker Universe	% Yes	% No
Published Corporate Responsibility Report in 2020	21	25%	75%
Cites GRI in latest reports	7	8%	92%
GRI reported verified and submitted	5	6%	94%
New Plastics Economy Global Commitment	5	6%	94%

In other words, 94% of companies in the Planet Tracker Universe do not file GRI reports that would enable comparable ESG analytics across the sector.

On closer inspection, it is clear that most companies in the PC&P Universe lack rudimentary policies to address key risks they face – see Table 14.

Table 14: Companies in the Planet Tracker Universe Environmental Policies Overall Assessment, 2020.^{xxx}

Sustainability Reports	Companies in the Planet Tracker Universe Disclosure	% Yes	% No
Waste Reduction Policy	29	35%	65%
Energy Efficiency Policy	27	33%	67%
Water Policy	22	27%	73%
Climate Change Policy	20	24%	76%
Total GHG CO2 Emissions Intensity per Sales	19	23%	77%
Sustainable Packaging	15	18%	82%
Biodiversity Policy	8	10%	90%

⁷ The GRI Standards are a global ESG tool allowing companies to report on their sustainability impacts in a consistent and credible way. This enhances global comparability and enables organisations to be transparent and accountable.



Only Amcor, AptarGroup, Huhtamaki and Rengo in the PC&P Universe report on all seven criteria - see Table 15.

<i>Table 15: Planet Tracker Universe Environmental Policies, Individual Company Rank by Companies that Did Report, 2020.^{xxxi}</i>								
	Waste Reduction Policy	Energy Efficiency Policy	Water Policy	Climate Change Policy	Total GHG CO2 Emissions Intensity per Sales	Sustainable Packaging	Biodiversity Policy	# Criteria Reporting
Huhtamaki	Y	Y	Y	Y	Y	Y	Y	7
Amcor	Y	Y	Y	Y	Y	Y	Y	7
Rengo	Y	Y	Y	Y	Y	Y	Y	7
AptarGroup	Y	Y	Y	Y	Y	Y	Y	7
Chuo Kagaku	Y	Y	Y	Y	Y	Y		6
Sonoco Products	Y	Y	Y	Y	Y	Y		6
Ton Yi Industrial Corp.	Y	Y	Y	Y	Y	Y		6
Achilles Corp.	Y	Y	Y	Y	Y		Y	6
Dai Nippon Printing	Y	Y	Y	Y	Y		Y	6
Nampak	Y	Y	Y	Y	Y	Y		6
Gerresheimer	Y	Y	Y	Y	Y	Y		6
Ishizuka Glass	Y	Y		Y	Y	Y	Y	6
Intertape Polymer Group	Y	Y	Y		Y	Y		5
Viscofan	Y	Y	Y	Y	Y			5
Hokkan Holdings	Y	Y	Y	Y	Y			5
Berry Global Group	Y	Y	Y		Y	Y		5
CCL Industries	Y	Y	Y	Y		Y		5
Yonyu Plastics	Y	Y	Y	Y	Y			5
China BlueChemical	Y	Y	Y		Y			4
FP Corp.	Y	Y	Y	Y				4
Taiwan Hon Chuan Enterprise	Y	Y	Y	Y				4
Winpak	Y	Y		Y		Y		4
Kalbe Farma	Y	Y	Y				Y	4
Carlit Holdings	Y	Y			Y			3
Time Technoplast	Y	Y	Y					3
Fujimori Kogyo	Y	Y		Y				3
Taisei Lamick	Y					Y		2
Jindal Poly Films		Y						1
MYS Group	Y							1
Total	29	27	22	20	19	15	8	140
% Reporting	35%	33%	27%	24%	23%	18%	10%	24%



Remarkably, according to Bloomberg, 53 companies in the Planet Tracker Universe are not disclosing if they have **any policies** regarding waste reduction, energy efficiency, water, climate change, GhG or CO² emissions, sustainable packaging or biodiversity.

The policy categories are listed below.

Waste Reduction Policy: Indicates whether the company has implemented any initiatives to reduce the waste generated during the course of its operations.

Energy Efficiency Policy: Indicates whether the company has implemented any initiatives to make its use of energy more efficient.

Water Policy: Indicates whether the organisation has undertaken any initiatives to reduce the quantity of water used or to improve the efficiency of its processes, and whether the company is considering the potential water stress to its areas of operation.

Climate Change Policy: Indicates whether the company has outlined its intention to help reduce global emissions of GhGs through its ongoing operations and/or the use of its products and services.

Total GhG or CO² Emissions Intensity per Sales: Total greenhouse gas (GhG) if available. Otherwise total carbon dioxide (CO²) intensity calculated as metric tonnes of greenhouse gases, if available, or CO² emitted per million of sales revenue in the company's reporting currency. Source is company filings.

Sustainable Packaging Commitment: Indicates whether the company has taken any steps to make its packaging more environmentally friendly. This might include efforts to improve the recyclability of packaging, to use less environmentally damaging materials in packaging etc.

Biodiversity Policy: Indicates whether the company has implemented any initiatives to ensure the protection of biodiversity. This might include trees and vegetation as well as wildlife and endangered species.

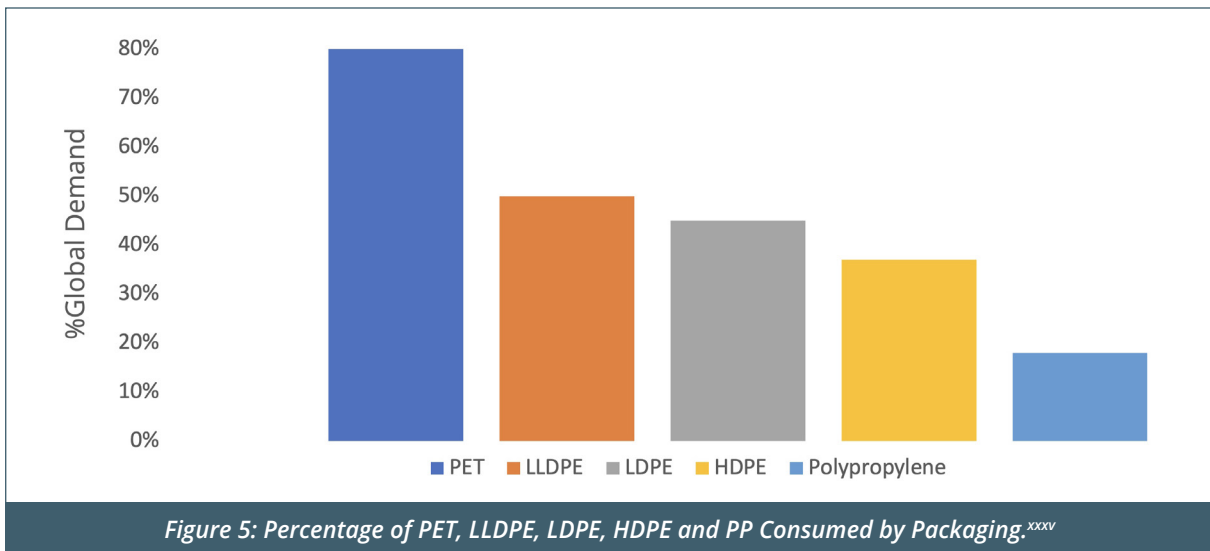
We anticipate a marked increase in such risk identification in future filings as global legislative initiatives, investor requests and a corporate push towards a new plastic waste paradigm makes this all but inevitable.



BALANCING DEMAND WITH SUSTAINABILITY

We recognise that plastic is a key component of the global economy. While not always a requirement, plastic can, for example be useful in decreasing food waste.^{xxxii} As a lightweight material, thermoset plastics reduce the overall weight of vehicles, trucks and planes with, according to the U.S. Department of Energy, a 10% reduction in vehicle weight which increases fuel economy by 5% to 7%.^{xxxiii} In the healthcare industry, plastics is an ingredient used in PPE protection, sterilisation and effective medical delivery, however the medical industry is beginning to assess its waste problems.^{xxxiv} This has become particularly evident in the COVID-19 pandemic.

The success of plastic is being borne out both in demand data and the willingness of petrochemical companies to invest in new facilities. The PC&P industry plays a major part in this. The proportion of various resins - PET, LLDPE, LDPE, HDPE and PP - consumed by the packaging industry is shown in Figure 5.



In 2015, plastic packaging was responsible for 36% of all plastic used,^{xxxvi} equal to 141 million metric tonnes of plastic waste.^{xxxvii,xxxviii} 95% of plastic packaging has a single-use cycle.^{xxxix,xl}

Global utilisation rates have been increasing, too. Rates for PET, LLDPE, LDPE, HDPE and PP production, the plastic resins feedstocks used by the PC&P sector to produce the thousands of plastic goods we use each day, has grown in aggregate from 84% to 88% from 2015 to 2019 – see Table 16.

	2019	2018	2017	2016	2015
HDPE	97%	97%	93%	91%	89%
LDPE	84%	83%	85%	87%	85%
LLDPE	79%	78%	81%	83%	83%
PET Bottle Grade	N/A	79%	80%	78%	74%
Polypropylene	88%	88%	88%	87%	85%
Aggregate Total	88%	86%	86%	86%	84%



However, it is the very success of plastic that has become its burden, giving rise to an increasingly negative environmental footprint. This is particularly true for single-use plastic. In turn, investors' risk exposure is increasing for the same reasons that we listed earlier for the companies in the Planet Tracker Universe.

Environmental risks that investors need to consider include:

- ▶ Plastic has a clear upstream fossil fuel footprint. Petrochemicals, from which plastic is derived, are now the fastest-growing percentage of a barrel of oil. The OECD and OPEC forecast 3.2 million barrels of oil per day growth for plastic feedstocks by 2030.^{xiii}
- ▶ For every plastic tonne produced, 4.4 tonnes of carbon dioxide are emitted, which does not include the full life-cycle assessment of plastics' impacts.
- ▶ 40% of plastics end up in the environment with 11 million tonnes flowing into the oceans annually – similar to dumping a garbage truck of plastics into the oceans every minute, every hour, every day, throughout the year.^{xiv}
- ▶ Of the 11 million tonnes that ended up in the oceans in 2016, 80% share of leakage was from flexible and multilayer plastics, the subject of this report.
- ▶ Currently, plastics waste in the ocean is estimated at 150 million metric tonnes,^{xv} and this is forecast to double by 2040.^{xvi}
- ▶ Under business as usual, the plastic industry would account for 19% of the remaining global carbon budget to remain under 1.5 °C temperature rise by 2040.
- ▶ Over 170 chemicals used in fracking (to produce plastic feedstocks) have known human health impacts.

THE INVESTORS' RESPONSE

It is clear that the companies themselves, and their legal advisors, are failing to recognise the growing risks described above. Investors therefore need to execute their fiduciary duty on behalf of their beneficiaries and request that these corporations improve their disclosures. Both investors and companies can join the emerging co-ordinating groups.

The PRI Plastic Investor Working Group, which represents USD 5.9 trillion in assets under management (AUM),^{xlvii} recognises that, *'With increasing production and use, and poor end-of-life management, there are many environmental and economic risks associated with plastic. There are also legal requirements companies must increasingly respond to'*.

This Working Group includes mainstream investors including Schroders, Federated Hermes, Rockefeller Asset Management, Robeco, Invesco and others - see Table 17.

Table 17: PRI Plastic Investor Working Group Institutional Investor Members.

Institutional Investors		
Aberdeen Standard Investments	California Public Employees' Retirement System CalPERS	Neuberger Berman Group
Achmea Investment Management	CCLA	PAI Partners
ACTIAM	Colonial First State Global Asset Management	Robeco
Æquo Shareholder Engagement Services	Colonial First State	Rockefeller Asset Management
Alberta Investment Management Corporation	Federated Hermes	Sancroft International
Albizia Capital	Fidelity International	Schroders
BMO Global Asset Management	Humanis	Stewart Investors
BNP Paribas Asset Management	Invesco Ltd	UniSuper Management
Boston Common Asset Management	Janus Henderson Investors	Western Asset Management
Brunel Pension Partnership	Mercy Investment Services	

On the PC&P sector only, it states, *'The containers and packaging sector, as well as related sectors such as food and beverage and consumer goods, faces reputational and regulatory pressures to use alternative materials and recycled content at scale'*.

Other investor groups have been developed. Corporate watchdog As You Sow, a non-profit shareholder advocacy organisation, launched the Plastic Solutions Investor Alliance alongside nearly 50 other global institutional investors and civil society organisations with more than USD 2 trillion in AUM - see Table 18.^{xlviii}



Table 18: Plastic Solutions Investor Alliance Members (30/09/2020).

Institutional Investors and Civil Society Organisations		
Actiam	Dignity Health	Nia Impact Capital
Adrian Dominican Sisters	Domini Impact Investments	P1 Investment Management
Aegon Asset Management	EdenTree Investment Management	Pax World Funds
ASN Bank	Epic Capital Wealth Management	Robeco
As You Sow	Ethical Partners Funds Management	Sisters of St Francis of Philadelphia
Ausbil Investment Management	Federated Hermes	Terra Alpha Investments
Aviva Investors	First Affirmative Financial Network	The Barrow Cadbury Trust
AXA Group	Green Century Capital Management	The Ecumenical Council for Corporate Responsibility
Bailard Inc.	Hull Family Foundation	The Joseph Rowntree Charitable Trust
Boston Common Asset Management	Impax Asset Management	The Sustainability Group of Loring, Wolcott & Coolidge
Boston Trust Walden	Interfaith Center on Corporate Responsibility	Trillium Asset Management
Candriam Investors Group	JLens Investor Network	Triodos Investment Management
Central Finance Board of the Methodist Church/Epworth Investment Management	Local Authority Pension Fund Forum	Unigestion
Congregation of St. Joseph	Melior Investment Management	Vancity Investment Management
Dana Investment Advisors	Mercy Investment Services	Veris Wealth Partners
Daughters of Charity, Province of St. Louise	NEI Investments	Vert Asset Management

The Alliance describes the pressure facing FMCG companies, which PC&P companies need to understand, as these are the pressures the clients of these PC&P companies are facing, when it states that:

“Companies that place plastic packaging on the market need to demonstrate awareness of these challenges and prioritize actions to resolve them”.

“Companies using plastic packaging should:

- *Transition plastic packaging to be recyclable, reusable, or compostable to the fullest extent possible.*
- *Disclose annual plastic packaging use.*
- *Set plastics use reduction goals.*
- *Develop alternatives to plastics for packaging purposes, especially for single use packaging.*
- *Acknowledge responsibility and play a significant role in funding and facilitating collection and recycling or composting of packaging in markets where they operate (i.e. producer responsibility).*
- *Support public policy measures on reducing plastic waste and broadening producer responsibility.*
- *Accelerate research on the potential for technology and innovation to provide solutions”.*

A further indication of the willingness of major financial institutions to recognise the need for a transition towards a circular economy (in plastics and other sectors) is the support of over 30 CEOs and senior executives from leading asset managers and banks - Goldman Sachs, HSBC, LGIM, ING, Intesa Sanpaolo, J.P. Morgan Chase, Morgan Stanley among others - representing over USD 18 trillion of assets, for The Ellen MacArthur Foundation’s research, *‘Financing the Circular Economy’*,^{xlix} which calls on the financial sector to *‘seize the full potential by scaling the circular economy in collaboration with governments and corporates’*.

MOST COMPANIES HAVE BARELY MOVED ON SUSTAINABLE INITIATIVES

Only five companies in the Planet Tracker Universe have joined sustainable plastics initiatives (Table 18), such as the New Plastics Economy Global Commitment.⁸ Some of the most important companies in the Planet Tracker Universe, such as Amcor, AptarGroup, Berry Global, CCL Industries and Silgan Holdings, have added their commitments to Fast Moving Consumer Goods companies such as Danone, DS Smith, Mars, Nestlé, PepsiCo and The Coca-Cola Company. The presence of not only packaging companies, but also the brands using their products, would imply that there is at least a recognition that something needs to be addressed with regard to the PC&P sector.

On the other hand, not one of the top 50 equity institutional investors in the Planet Tracker Universe is a member of As You Sow's Plastic Solutions Investor Alliance or a signatory to the New Plastics Economy Global Commitment. Only five of these 50 institutions are members of the PRI Plastics Working Group.

These investors and the companies in the Planet Tracker Universe are lagging behind.

The New Plastics Economy Global Commitment's 450+ signatories, co-led by civil society, governments, NGOs and companies in the PC&P sector, investment and fast moving consumer goods sectors, are coalescing around a similar 2025 vision of producing no unnecessary plastic, migrating towards recyclable and compostable plastic, growing demand for recycled plastic resins towards 100% replacement of virgin plastic, removing chemical additives from plastic to support recycling, while decreasing environmental and human harm and other mutually agreed visions.¹

The Break Free From Plastic movement⁹ is supported by more than 1,000 global organisations pushing for reductions in single-use plastics with companies and regional governments alike adopting zero-waste programmes. The United Nations adopted a resolution to eliminate plastic waste from the world's oceans.

⁸ The New Plastics Economy, led by the Ellen MacArthur Foundation in collaboration with the UN Environment Programme, is an initiative to build momentum towards a plastics system that works. Applying the principles of the circular economy, it brings together key stakeholders to rethink and redesign the future of plastics, starting with packaging. <https://www.newplasticseconomy.org/about/the-initiative>

⁹ The #breakfreefromplastic Movement is a global movement envisioning a future free from plastic pollution. Since its launch in 2016, more than 11,000 organisations and individual supporters from across the world have joined the movement to demand massive reductions in single-use plastics and to push for lasting solutions to the plastic pollution crisis. <https://www.breakfreefromplastic.org/about/#>



Some of the many recent downstream initiatives include:

- Multinational consumer goods company Unilever committing to decrease its virgin plastic footprint by 50% by 2025.
- Nestlé announcing it will spend up to CHF 1.5 billion (USD 1.7 billion) by 2025 to purchase more than two million metric tonnes of food-grade recycled plastic. Building on its 2018 commitment to make 100% of its packaging recyclable or reusable by 2025, Nestlé will reduce its use of virgin plastics by one third by 2025.
- Indorama Ventures, headquartered in Thailand, but with almost 30% of its revenue from the EU in 2019, has committed USD 1.5 billion over the next five years to develop 'bottle-to-bottle' recycling to assist customers such as Coca-Cola, PepsiCo and Nestlé in achieving a higher % of recycled PET plastics to comply with new regulations such as the European Commission's Single-use Plastics Directive.
- Danone has committed that by 2025 all packaging will be reusable, recyclable or compostable and it aims to initiate / support initiatives to enhance collection and recycling in all top 20 markets (90% sales) by 2025.
- Mondelez has committed to making all packaging recyclable by 2025 and providing clear information on recycling guidelines to customers.
- PepsiCo stating its goal is to reduce virgin plastic content by 35% across its beverage portfolio by 2025 (2.5 million tonnes of cumulative virgin plastics displaced). It expects to eliminate 67 billion plastic bottles by 2025 and is building on the goal to make 100% of packaging recyclable, compostable or biodegradable and increase recycled content to 25%.

The German machinery and engineering trade group VDMA, which represents 3,300 companies,^{li} is pushing for policymakers to increase the prices of virgin plastic feedstocks and increase quotas for recycled plastic within products predominately in the PC&P sector. VDMA is asking that policymakers support responsible plastic production, use and waste management,^{liii} given that the PC&P sector lacks a transparent vision of how some plastic is necessary, while other plastic causes harm.

In the face of these initiatives, demand for plastic is beginning to decouple from GDP, as plastic growth to GDP elasticity adjusts to the new regulatory, investor and consumer pressures, bounded by upstream feedstock growth and downstream policy constraints.

J.P. Morgan is now forecasting that plastics' demand elasticity - currently at 1.5x GDP - will decrease to 0.5x GDP by 2050, as the market migrates from virgin resins to recycled resins.^{liiii}

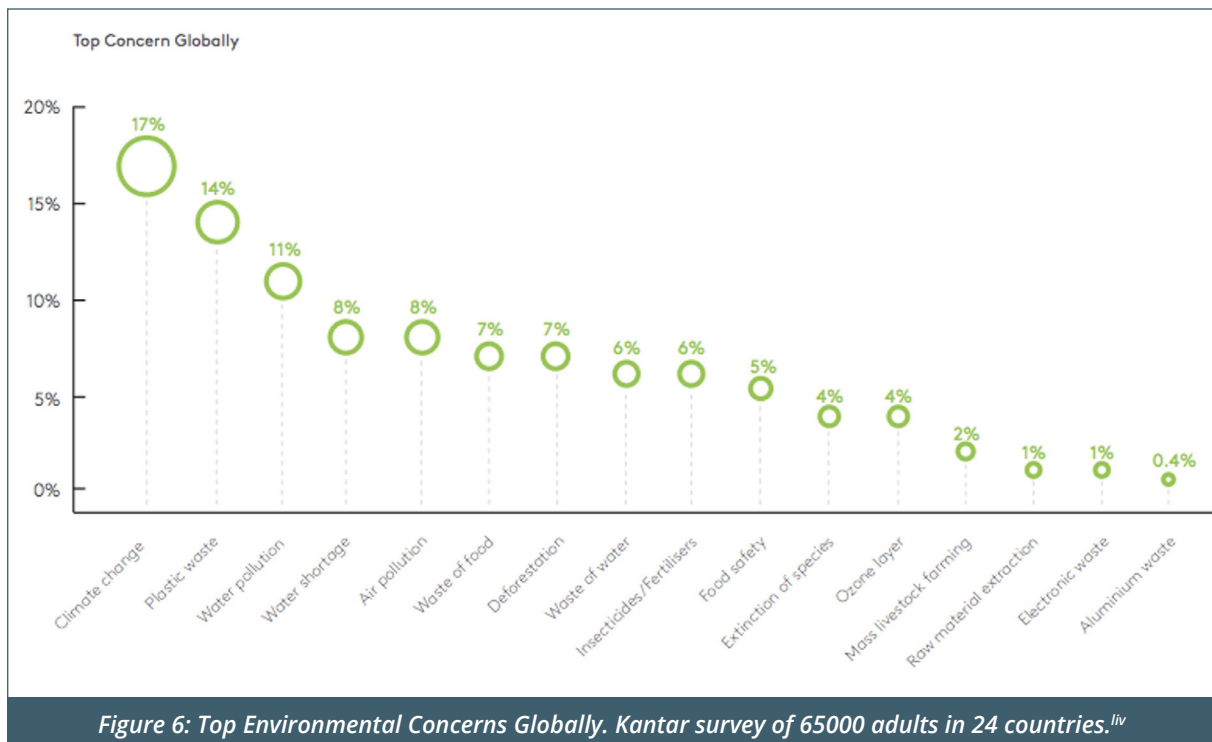


THE CONSUMER'S VIEW

Situated at the end of the plastics supply chain, consumers are able to apply considerable pressure on both brands and governments to force change. The growing public outcry against single use plastic bags, amplified by celebrity environmentalists such as Sir David Attenborough, has driven a response from FMCG companies on packaging and led to supermarket chains reducing their use of single-use plastic bags, although regulatory measures, such as a small charge on each bag, have reinforced that trend.

Perhaps more interesting is who is held responsible for ensuring consumer products are environmentally and socially responsible, with minimal impacts to communities. In this, consumers appear conflicted.

On the one hand, a survey by Kantar, in collaboration with Europanel and GfK, of more than 65,000 people in 24 countries in 2019, exploring how they feel about the use of plastics by FMCG companies, found that plastic waste was second only to climate change among consumer concerns - see Figure 6.



On the other hand, research in 2019 by Bioplastics News found that *“nearly half (48%) of all consumers worldwide expect manufacturers to take the lead, saying they have the most responsibility to act on these issues. And making changes to account for this is clearly a matter of ‘when’, rather than ‘if’, for all businesses”*.^{lv}

This view is strongly supported by a limited survey of consumers in three countries, USA, France & U.K., in which they put the onus firmly on companies, placing them above governments and themselves - see Figure 7.



Q: Who, if anyone, do you think is responsible for ensuring consumer products are environmentally and socially responsible?

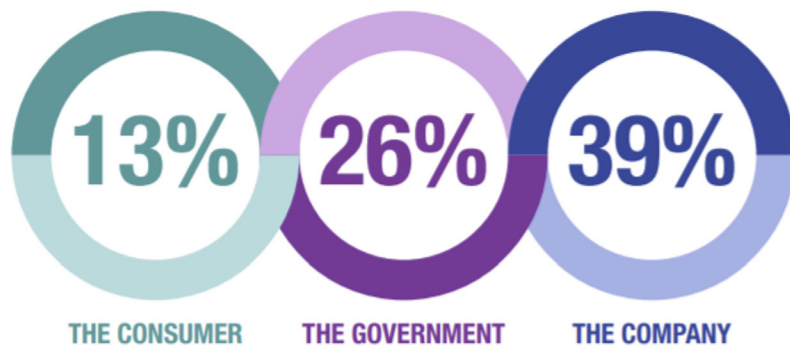


Figure 7: Where does Responsibility Lie?
Ipsos Research among c. 1000 adults in each market: US, UK and France, Q2 2019.

In November 2020, a report by global market research and public opinion specialist IPSOS, 'The Sustainable Imperative,'^{1vi} noted: 'Consumer expectations and demands for more sustainable practices are higher than they have ever been, and they have withstood the pressures of the pandemic.'

'It is no longer a question of when companies should pursue a sustainability agenda, but how they should go about it.'



REGULATORY PRESSURE IS BUILDING

Governments are increasingly enacting legislation and policies that directly impact the PC&P sector with, as of September 2020, more than 180 policies to date in 75 nations globally.^{lvii}

In the European Strategy for Plastics in a Circular Economy, the European Commission has asserted that *'by 2030, all plastic packaging placed on the EU market is either reusable or can be recycled in a cost-effective manner'*.^{lviii}

In February 2020, legislative pressure was identified as the top risk to the plastic industry by J.P. Morgan Cazenove, in *'Petrochemicals – Peak Plastic: Potential impacts of a shift towards a circular economy on plastic and feedstock demand'*.^{lix}

Planet Tracker believes that governments are incentivised to tackle this problem for three main reasons, in addition to the environmental benefits that would follow.

- 1** Governments at both a national and municipal/regional level are incurring costs from having to clear up the plastic waste. In 2019, Deloitte placed a price on plastic pollution.^{lx} The report – 'The Price Tag of Plastic Pollution' - estimates that marine plastic pollution could have resulted in an economic loss of USD 6 to 19 billion for 87 coastal countries in 2018. It further states, 'Our conclusion is that beyond obvious ecological arguments, there is a strong economic and financial reason to address the marine plastic pollution challenge'.
- 2** Government debt levels have risen during the COVID-19 pandemic, finance ministries will be looking for revenue opportunities. Taxes on plastic containers may prove tempting as would levies against the revenues of the plastic producers, PC&P and FMCG companies.
- 3** Consumers could well think more positively of administrations that show their green credentials and avoid passing the consequences of such a strategy on to the consumers.

If legislation proves an attractive route, the options fall into three main categories:

- 1** Production and sale
- 2** Consumption and use
- 3** Waste management, circular economy and promoting recycled resins over virgin resins.

Across the three main markets in terms of production - China, the EU and the US – while differences exist, the broad momentum is the same - see Figure 8.

These three regions give examples of the policy risks globally. California's one cent "sin-tax" on single-use plastic is forecast to become law in 2023^{lxi} and the EU's upcoming €800 per tonne plastic waste levy which came into force on 1 January 2021, will push the plastic industry to innovate, invest and restructure.^{lxii}





Figure 8: Three Largest Plastics Producers (European Chemical Industry Council 2020) with Growing Legislation.

China we view as the most straightforward at present, with bans which commenced this year. In the EU there has been a top-down approach with policy set at EU level but with national implementation necessary by each member state. The US is the most diverse, with policies remaining very fragmented depending on the state or city. The election of President-elect Biden may alter this picture as 2021 progresses.

STAKEHOLDER CONSENSUS?

Having examined the views of different stakeholders a confused picture emerges.

The companies in the Planet Tracker Universe are not revealing risks to investors in their filings about issues such as waste, pollution, recycling or extended user responsibilities.

The institutional investors which are the major shareholding group in these companies in the Planet Tracker Universe, however, do perceive some dangers, as alliances have been formed to highlight the needs for a circular economy or end of life management solutions. However, to date little is heard from them about the possibility of stranded assets, which is the likely outcome if companies fail to transition to a more sustainable output.

And yet, some companies from the broader PC&P and FMCG sectors are signatories to declarations promoting a new plastic economy. It appears inevitable that this mismatch will be corrected or declarations of intention to change be exposed as potentially misleading.

Consumers perceive the onus is on corporate players to tackle the environmental issues, although if an issue captures the public's attention, such as marine litter, then companies who produce single-use plastics will come under increasing pressure to change.

For the financial markets, the important issue is that the risk exposure of companies in the Planet Tracker Universe is likely to change from the status quo. If there is a broad consensus that the unintended consequences of plastic products need to be addressed and if companies in the PC&P sector do not react quickly enough, then governments may need to fill the void. In turn, this raises important questions for investors about the rising probability of stranded assets.

RECOMMENDATIONS

Companies in the Planet Tracker Universe are at an inflection point. The industry is at risk of adhering to the present technologies which drive environmental harm, pushing the sector towards obsolescence while newer technologies, which could support an evolution in sustainable plastics and lead the Planet Tracker Universe into a circular economy, are not yet being invested in at scale.

We recommend that stakeholders take the following actions:

▶ All investors should:

- Immediately request public disclosure of environmental risks and policies from all the 83 companies in the Planet Tracker Universe in order to safeguard their unrealised investment gains. In turn, this should allow investors to assess the likelihood of incurring stranded assets and asset write downs. These 83 companies need to recognise the impending risks in their filings and describe their transition strategy towards a circular economy. They can perform this individually or in the larger alliances to which they are signatories. For example:
- Develop time-bound engagement plans aligned with laws, regulations and initiatives: These investors must commit to publish time-bound engagement plans by 2025 for all companies in the Planet Tracker Universe in which they invest, aligned with global plastic waste initiatives and regulatory policies. These should require changes to production lines to reduce, in absolute terms, the pollution, measured in tonnes, associated with the products they produce.
- Demand that the companies in which they invest make clear, public commitments, by employing Norges Bank's 'Ocean Sustainability Expectations Towards Companies' policy guidance or similar documents, to address the pollution from plastic products.
- Lead by example by joining and directly engaging in global alliances to work collaboratively across industry to decrease their environmental impacts in a time-bound, auditable manner and encourage companies in the Planet Tracker Universe to do the same.

▶ **Equity investors**, invested in the plastics supply chain, need to implement time-bound policies and recommendations whose results will be reported to their institutions' Governance Boards in a timely and consistent manner. These should support the rapid expansion of site-specific recycling infrastructure while insisting upon the rapid standardisation of design of the polymers so that it easier to recycle and reuse these polymers effectively in a closed loop manner.

▶ **Fixed income investors** need to work directly with companies in the Planet Tracker Universe to ensure they factor into pricing short- mid- and long-term legislative risks that may impact debt covenants. The maturity of such instruments (e.g., bonds, loans), or new issues, presents an ideal time for such active involvement.

- Review debt covenants: Fixed income investors must review the debt covenants of companies in the Planet Tracker Universe which they manage to ensure compliance with both financing requirements and environmental laws, as well as regulations and policies that govern each company they finance. This is aimed at minimising fiduciary risk to the investors and their beneficiaries while enabling the companies in which they invest to immediately develop and implement strategies to pivot their production lines to minimize pollution.
- Commit to renewing all debt by 2025 as green and sustainable: Investment bankers and the companies they represent must commit to renewing as green and sustainable the 70% of debt that is maturing in the Planet Tracker Universe by 2025 to finance industry retooling towards a circular economy based on the sustainable plastics products of tomorrow, not the dirty plastics products of yesterday.

▶ **Companies in the PC&P Universe should:**

- implement a global business strategy by 2025 that migrates their business platforms in a time-bound manner towards a circular economy so as to mitigate the financial risks described in this report.^{lxiii} These companies must focus their energies on designing for reusability and they must actively join global alliances to support a transition towards a plastics-waste free economy.
- must disclose their environmental risks in their regulatory filings and their environmental policies. All companies must issue corporate responsibility reports annually to improve their disclosure.

▶ **Policymakers and regulators** need to work directly with investors and companies throughout the supply chain to simplify product design, reduce the complexity of packaging and harmonise packaging formats, grow the adoption of recyclable feedstocks, increase recyclable infrastructure and improve consumer outreach, so that plastics pollution can be rapidly mitigated and addressed.

APPENDIX A COMPANIES IN THE PLANET TRACKER UNIVERSE RANKED BY PLASTIC CONTAINERS AND PACKAGING SECTOR-SPECIFIC REVENUE

Table 19: Companies in the Planet Tracker Universe Ranked by Plastic Containers and Packaging Sector-Specific Revenue.^{lxiv}

Companies	Market Cap (USD millions)**	Industry Specific Revenue (USD millions)	% Revenue from Industry	Sum	Market Cap Size	Major Index	ISIN	Current Employees
Berry Global Group*	\$7,218	\$5,180	44%	8.9%	Mid-cap	Russell 1000	US08579W1036	47,000
Sealed Air Corp.	\$7,046	\$4,791	100%	17.2%	Mid-cap	S&P 500	US81211K1007	16,500
Toppan Printing	\$4,945	\$3,787	28%	23.7%	Mid-cap	Nikkei 225	JP3629000005	52,599
Dai Nippon Printing	\$6,003	\$3,589	28%	29.9%	Mid-cap	Nikkei 225	JP3493800001	38,181
AptarGroup*	\$8,679	\$2,860	100%	34.8%	Mid-cap	Russell 1000	US0383361039	14,000
Huhtamaki	\$5,528	\$2,738	72%	39.5%	Mid-cap	STXE 600	FI0009000459	18,554
Amcor*	\$18,289	\$2,716	22%	44.2%	Large-cap	S&P 500	JE00BJ1F3079	50,000
FP Corp.	\$3,471	\$1,714	100%	47.2%	Mid-cap	Topix	JP3167000003	4,484
Intertape Polymer Group	\$1,195	\$1,159	100%	49.2%	Small-cap	S&P/TSX Composite	CA4609191032	1,800
Rengo	\$2,228	\$1,091	17%	51.0%	Mid-cap	Topix	JP3981400009	18,902
Jindal Poly Films	\$273	\$1,049	96%	52.8%	Micro-cap	S&P BSE SmallCap	INE197D01010	1,751
Uflex	\$378	\$1,013	100%	54.6%	Small-cap	S&P BSE 500	INE516A01017	6,360
Viscofan	\$3,425	\$901	95%	56.1%	Mid-cap	STXE 600	ES0184262212	4,904
Wipak	\$2,248	\$874	100%	57.6%	Mid-cap	S&P/TSX Composite	CA97535P1045	2,400
Gerresheimer	\$3,485	\$846	54%	59.1%	Mid-cap	STXE 600	DE000A0LD6E6	9,890
Taiwan Hon Chuan Enterprise	\$597	\$697	100%	60.3%	Small-cap	Taiwan TAIEX	TW0009939009	4,642
Groupe Guillin	\$569	\$685	93%	61.5%	Small-cap	Euronext Growth All Share	FR0012819381	2,619
Guala Closures	\$677	\$679	100%	62.7%	Small-cap	STXE TM	IT0005311821	4,849
Jiangsu Shuangxing Color Plastic New Materials	\$1,716	\$633	98%	63.7%	Small-cap	Shenzhen SE Composite	CNE1000013N6	1,433
Silgan Holdings*	\$4,043	\$611	14%	64.8%	Mid-cap	Russell 1000	US8270481091	13,100
Sekisui Kasei	\$245	\$534	43%	65.7%	Micro-cap	Topix	JP3419800002	3,855
Shanghai Zijiang Enterprise Group	\$1,007	\$526	39%	66.6%	Small-cap	Shanghai SE Composite	CNE000001055	7,026
Kalbe Farma	\$5,080	\$521	33%	67.5%	Mid-cap	Jakarta Composite	ID1000125107	12,161
Fujimori Kogyo	\$872	\$520	49%	68.4%	Small-cap	Topix	JP3821000001	2,522
Sonoco Products	\$6,013	\$512	10%	69.3%	Mid-cap	Russell 1000	US8354951027	23,000
Time Technoplast	\$146	\$505	100%	70.2%	Micro-cap	S&P BSE 500	INE508G01029	2,561
Hokkan Holdings	\$191	\$465	40%	71.0%	Micro-cap	Topix	JP3846600009	2,424
Resilux	\$356	\$463	100%	71.8%	Small-cap	S&P Europe SmallCap	BE0003707214	907
Polyplex Thailand	\$682	\$454	100%	72.6%	Small-cap	Stock Exchange of Thailand Index	TH0815010002	520
Chuo Kagaku	\$117	\$442	100%	73.3%	Micro-cap	JASDAQ Stock	JP3514000003	1,702
Ton Yi Industrial Corp.	\$631	\$422	40%	74.0%	Small-cap	Taiwan TAIEX	TW0009907006	1,192



Companies	Market Cap (USD millions)**	Industry Specific Revenue (USD millions)	% Revenue from Industry	Sum	Market Cap Size	Major Index	ISIN	Current Employees
CCL Industries*	\$8,372	\$420	10%	74.8%	Mid-cap	S&P/TSX Composite	CA1249003098	21,400
An Phat Holdings	\$483	\$406	99%	75.5%	Small-cap	Ho Chi Minh Stock Index	VN000000APH7	98
EPL	\$1,111	\$384	100%	76.1%	Small-cap	S&P BSE 500	INE255A01020	1,168
An Phat Bioplastics	\$128	\$364	90%	76.8%	Micro-cap	Ho Chi Minh Stock Index	VN000000AAA4	1,715
Myers Industries	\$700	\$356	69%	77.4%	Small-cap	Russell 2000	US6284641098	1,640
Achilles Corp.	\$223	\$348	47%	78.0%	Micro-cap	Topix	JP3108000005	1,675
MYS Group	\$991	\$346	71%	78.6%	Small-cap	Shenzhen SE Composite	CNE100000H85	4,900
NPC	\$111	\$334	86%	79.1%	Micro-cap	KOSPI	KR7004250007	219
Samyang Packaging Corp.	\$285	\$322	100%	79.7%	Micro-cap	KOSPI	KR7272550005	470
Takween Advanced Industries	\$356	\$317	100%	80.2%	Small-cap	Tadawul All Share	SA130G50IOH8	
Cosmo Films	\$121	\$310	100%	80.8%	Micro-cap	S&P BSE SmallCap	INE757A01017	911
Shanghai Yongguan Adhesive Products Corp.	\$492	\$285	100%	81.3%	Small-cap	Shanghai SE Composite	CNE100003LN9	1,497
Ishizuka Glass	\$82	\$285	42%	81.8%	Micro-cap	Topix	JP3136000001	2,153
Bilcare	\$14	\$257	100%	82.2%	Nano-cap	No major index	INE986A01012	
Shenzhen Beauty Star	\$2,011	\$232	81%	82.6%	Mid-cap	Shenzhen SE Composite	CNE100000BR7	4,550
AJ Plast	\$257	\$221	100%	83.0%	Micro-cap	Stock Exchange of Thailand Index	TH0214010Z07	507
Taisei Lamick	\$211	\$221	90%	83.4%	Micro-cap	Topix	JP3444900009	846
China BlueChemical	\$743	\$217	14%	83.7%	Small-cap	BBG HKSE All	CNE1000002D0	4,834
Thong Guan Industries	\$248	\$211	93%	84.1%	Micro-cap	FTSE ASEAN All-Share	MYL703400001	865
Plasto Cargal Group	\$38	\$208	100%	84.5%	Nano-cap	TA-All Share	IL0007270163	358
Grupa Kety	\$1,210	\$205	22%	84.8%	Small-cap	WSE WIG	PLKETY000011	5,188
PSB Industries	\$77	\$205	68%	85.2%	Micro-cap	CAC All Tradeable	FR0000060329	1,890
Indopoly Swakarsa Industry	\$42	\$203	100%	85.5%	Nano-cap	Jakarta Composite	ID1000115900	1,208
Zhuhai Zhongfu Enterprise	\$512	\$197	87%	85.9%	Small-cap	Shenzhen SE Composite	CNE0000000C8	1,976
Panca Budi Idaman	\$176	\$183	56%	86.2%	Micro-cap	Jakarta Composite	ID1000141401	3,593
Trias Sentosa	\$79	\$181	100%	86.5%	Micro-cap	Jakarta Composite	ID1000059009	1,159
Pack Corp.	\$543	\$180	21%	86.8%	Small-cap	Topix	JP3345900009	1,252
CPMC Holdings	\$508	\$170	16%	87.1%	Small-cap	BBG HKSE All	HK0000057171	6,039
Tredegear Corp.	\$685	\$169	17%	87.4%	Small-cap	Russell 2000	US8946501009	3,000
Zhejiang Great Southeast	\$749	\$166	71%	87.7%	Small-cap	Shenzhen SE Composite	CNE100000CH6	652



Companies	Market Cap (USD millions)**	Industry Specific Revenue (USD millions)	% Revenue from Industry	Sum	Market Cap Size	Major Index	ISIN	Current Employees
Carlit Holdings	\$156	\$162	37%	87.9%	Micro-cap	Topix	JP3205320009	1,091
Argha Karya Prima Industry	\$24	\$159	100%	88.2%	Nano-cap	Jakarta Composite	ID1000084205	1,034
CPH Chemie & Papier Holding	\$485	\$154	29%	88.5%	Small-cap	SPI Swiss Performance	CH0001624714	1,095
Nampak	\$116	\$153	22%	88.7%	Micro-cap	STOXX Emerging Markets	ZAE000071676	5,061
Ginegar Plastic Products	\$75	\$151	100%	89.0%	Micro-cap	TA-All Share	IL0010958929	308
Xiamen Yanjan New Material	\$565	\$150	100%	89.3%	Small-cap	Shenzhen SE Composite	CNE100002NV0	1,099
Daibochi	\$217	\$147	100%	89.5%	Micro-cap	FTSE ASEAN All-Share	MYL812500006	1,157
Ming Lam Holdings	\$19	\$144	100%	89.8%	Nano-cap	BBG HKSE All	KYG6181M1024	805
Suzhou Hycan Holdings	\$315	\$139	58%	90.0%	Small-cap	Shenzhen SE Composite	CNE100002452	1,913
Garware Polyester	\$113	\$130	100%	90.2%	Micro-cap	No major index	INE291A01017	8
Pro-Pac Packaging	\$128	\$129	100%	90.4%	Micro-cap	BBG Australia All	AU000000PPG6	59
Maruto Sangyo	\$32	\$127	83%	90.7%	Nano-cap	No major index	JP3876500004	364
Dongsuh	\$2,929	\$124	29%	90.9%	Mid-cap	KOSPI	KR7026960005	
Zhejiang Zhongcheng Packing Material	\$922	\$121	100%	91.1%	Small-cap	Shenzhen SE Composite	CNE100000XL4	930
TPBI	\$73	\$121	71%	91.3%	Micro-cap	Stock Exchange of Thailand Index	TH7114010005	
Thai Plaspac	\$131	\$121	100%	91.5%	Micro-cap	Thai Stock Exchange MAI	TH0877010007	752
Yonyu Plastics	\$106	\$118	100%	91.7%	Micro-cap	Taiwan TAIEX	TW0001323004	1,464
Miko	\$149	\$114	46%	91.9%	Micro-cap	Belgian Stock Market Price	BE0003731453	1,184
Superbag	\$19	\$113	39%	92.1%	Nano-cap	TSE2 TOPIX	JP3395400009	718
Southern Packaging Group	\$23	\$103	100%	92.3%	Nano-cap	No major index	SG1CG0000009	1,215
Panjawattana Plastic	\$28	\$102	100%	92.5%	Nano-cap	Thai Stock Exchange MAI	TH1083010005	
KAP	\$130	\$100	24%	92.6%	Micro-cap	DAX CDAX Index	DE0006208408	2,711
Total	\$126	\$53,762		93%				470,569

* Companies are New Plastics Economy Global Commitment signatories, as of 4 January 2021.

** Market capitalisation does not equal total equity ownership tracked as shares outstanding is often less than total shares issued given companies often retain a percentage ownership of their shares outstanding.

Companies highlighted in orange issued a corporate responsibility report between 1 January 2020 to 1 January 2021.

Note: International Securities Identification Number (ISIN) are numbers that uniquely identify a security.



APPENDIX B TOP 50 EQUITY INSTITUTIONAL INVESTORS INVESTED IN COMPANIES THE PLANET TRACKER UNIVERSE

Table 20-: Top 50 Equity Institutional Investors Invested in Companies the Planet Tracker Universe.^{lxv}

Investor	Category	Total Equity Ownership (USD millions)	% Equity Ownership Sector	Cumulative Total	# Securities	Key Exposure
1 Vanguard	Investment Advisor	\$4,991	5.7%	5.7%	36	Ownership position in 11 companies of 3% or more
2 BlackRock	Investment Advisor	\$4,493	5.1%	10.8%	37	Ownership position in 8 companies of 3% or more
3 State Street Corp.	Investment Advisor	\$2,227	2.5%	13.4%	43	Ownership position in 5 companies of 3% or more
4 Government Pension Investment Fund of Japan	Sovereign Wealth Fund	\$1,551	1.8%	15.1%	18	Ownership position in 12 companies of 3% or more
5 Komatsu Yasuhiro Kosan	Investment Advisor	\$1,177	1.3%	16.5%	1	Owns 33.91% of FP Corp.
6 Norges Bank	Sovereign Wealth Fund	\$1,073	1.2%	17.7%	34	Owns 2.92% of Viscofan and 2.47% of Taiwan Hon Chuan Enterprise
7 Nomura Holdings	Investment Advisor	\$1,016	1.2%	18.9%	17	Owns 5.33% of Rengo, 4.78% of Sealed Air, 4.03% of Dai Nippon Printing, and 3.84% of Toppan Printing
8 Fidelity	Investment Advisor	\$939	1.1%	19.9%	32	Owns 8.76% of Pack Corp., 4.43% of Miko, 3.05% of Gerresheimer and 2.29% of Silgan Holdings
9 T. Rowe Price	Investment Advisor	\$917	1.0%	21.0%	16	Owns 10.12% of Sealed Air
10 Dimensional Fund Advisors	Investment Advisor	\$904	1.0%	22.0%	50	Owns 7.94% of Tregedar and 4.61% of Myers Industries
11 J.P. Morgan	Investment Advisor	\$863	1.0%	23.0%	19	Owns 3.44% of AptarGroup, 4.68% of Silgan Holdings, and 3.12% of Taisei Lamick
12 EdgePoint Investment	Investment Advisor	\$845	1.0%	24.0%	1	Owns 11.61% of Berry Global Group
13 State Farm Mutual	Insurance Company	\$783	0.9%	24.9%	7	Owns 8.48% of AptarGroup
14 1281228 Ontario	Investment Advisor	\$779	0.9%	25.7%	1	Owns 10.05% of CCL Industries
15 Morgan Stanley*	Investment Advisor	\$763	0.9%	26.6%	22	Owns 8.38% of AptarGroup and 3.84% of Taiwan Hon Chuan Enterprise
16 Geode Capital Management	Investment Advisor	\$745	0.8%	27.5%	12	Owns 2.07% of Myers Industries
17 Invesco	Investment Advisor	\$685	0.8%	28.2%	23	Owns 3.84% of Sonoco Products
18 Capital Group Cos.	Investment Advisor	\$600	0.7%	28.9%	4	Owns 6.32% of CCL Industries
19 APG Asset Management	Investment Advisor	\$599	0.7%	29.6%	6	Owns 10.09% of Viscofa
20 Mitsubishi UFJ Financial Group	Bank	\$597	0.7%	30.3%	24	Owns 7.53% of Pack Corp., 5.17% of Dai Nippon Printing, 5.05% of Rengo
21 Mizuho Financial Group	Bank	\$578	0.7%	31.0%	22	Owns 4.68% of Fujimori Kogyo and 4.59% of Achilles



	Investor	Category	Total Equity Ownership (USD millions)	% Equity Ownership Sector	Cumulative Total	# Securities	Key Exposure
22	Ameriprise Financial	Insurance Company	\$576	0.7%	31.6%	16	Owns 4.08% of Gerresheimer, 2.89% of Sonoco Products, and 2.25% of Huhtamaki
23	Charles Schwab	Investment Advisor	\$571	0.7%	32.3%	24	Owns 1.38% of Sonoco Products and 1.27% of Amcor
24	Janus Henderson	Investment Advisor	\$540	0.6%	32.9%	13	Owns 5.97% of Sealed Air
25	Wells Fargo & Co.	Investment Advisor	\$533	0.6%	33.5%	19	Owns 2.53% of AptarGroup, 2.55% of Silgan Holdings, and 5.73% of MYE Group
26	Sumitomo Mitsui Banking Corp.	Bank	\$524	0.6%	34.1%	17	Ownership position in 7 companies of 3% or more
27	Victory Capital Management	Investment Advisor	\$506	0.6%	34.7%	17	Owns 2.57% of AptarGroup
28	Northern Trust	Investment Advisor	\$504	0.6%	35.2%	25	Owns 3.05% of MYE Group
29	AllianceBernstein	Investment Advisor	\$497	0.6%	35.8%	19	Owns 4.90% of Gerresheimer
30	LSV Asset Management	Investment Advisor	\$491	0.6%	36.4%	7	Owns 3.84% of Silgan Holdings and 3.02% of Berry Global Group
31	Bank of New York Mellon Corp.	Investment Advisor	\$488	0.6%	36.9%	15	Owns 1.39% of AptarGroup and 1.37% of Sonoco Products
32	Eminence Capital	Hedge Fund	\$485	0.6%	37.5%	2	Owns 5.085% of Berry Global Group
33	RBC	Bank	\$484	0.6%	38.0%	17	Ownership position in 4 companies of 3% or more
34	Rivulet Capital	Hedge Fund	\$482	0.6%	38.6%	2	Owns 5.17% of Sealed Air
35	Bank of America	Bank	\$413	0.5%	39.1%	8	Owns 2.12% of Sonoco Products
36	TIAA	Investment Advisor	\$410	0.5%	39.5%	29	Owns 2.32% of Berry Global Group
37	Alba Participaciones	Investment Advisor	\$402	0.5%	40.0%	1	Owns 13.03% of Viscofan
38	Power Corp. of Canada	Holding Corp.	\$396	0.5%	40.4%	18	Owns 3.45% of CCL Industries and 3.26% of Intertape Polymers
39	Dai-ichi Life Holdings	Insurance Company	\$393	0.4%	40.9%	6	Owns 6.45% of Sekisui Kasei, 3.55% of Ishizuka Glass, and 3.43% of Dai Nippon Printing
40	Canyon Capital Advisors	Hedge Fund	\$385	0.4%	41.3%	1	Owns 5.30% of Berry Global Group
41	Sun Life Financial	Investment Advisor	\$379	0.4%	41.8%	12	Owns 3.18% of Gerresheimer and 3.12% of Taisei Lamick Co.
42	NN Group	Insurance Company	\$349	0.4%	42.1%	14	Owns 10.05% of Gerresheimer
43	Goldman Sachs Group	Investment Advisor	\$335	0.4%	42.5%	22	Owns 2.09% of Gerresheimer
44	Neuberger Berman Group	Investment Advisor	\$333	0.4%	42.9%	12	Owns 3.06% of Gerresheimer and 2.30% of AptarGroup
45	Schroders	Investment Advisor	\$331	0.4%	43.3%	17	Owns 6.21% of Fujimori Kogyo and 4.82% of Gerresheimer



Investor	Category	Total Equity Ownership (USD millions)	% Equity Ownership Sector	Cumulative Total	# Securities	Key Exposure	
46	Wellington Management Group	Investment Advisor	\$324	0.4%	43.7%	6	Owns 3.63% of Silgan Holdings and 3.22% of Viscofan
47	Nippon Life Insurance	Insurance Company	\$324	0.4%	44.0%	16	Owns 4.29% of Toppan Printing and 4.86% of Hokkan Holdings
48	Manulife	Insurance Company	\$323	0.4%	44.4%	46	Owns 1.49% of CCL Industries
49	American Century Cos.	Investment Advisor	\$286	0.3%	44.7%	32	Owns 3.72% of Sonoco Products
50	Aviva	Insurance Company	\$272	0.3%	45.0%	7	Owns 20.92% of Grupa Kety
Subtotal Top 50 Institutions			\$39,461		45.0%		865 positions
Grand Total			\$87,622		100.0%		8,655 positions

* Combination of Morgan Stanley, Eaton Vance, and Calvert Investments.

Note: Market capitalisation does not equal total equity ownership tracked as shares outstanding is often less than total shares issued given companies often retain a percentage ownership of their shares outstanding.

Orange means the company is a PRI Plastics Working Group member.



APPENDIX C TOP 50 FIXED INCOME MANAGERS INVESTED IN THE COMPANIES IN THE PLANET TRACKER UNIVERSE BY % EXPOSURE TO FIXED INCOME TRACKED, ESTIMATED. SOURCE: BLOOMBERG L.P.

Table 21: Top 50 Fixed Income Managers Invested in the Companies in the Planet Tracker Universe by % Exposure to Fixed Income Tracked, estimated. Source: Bloomberg L.P.^{lxvi}

	Managing Firm Name	Held Amount (USD millions)	% of Total	Cumulative Total %	# Securities
1	BlackRock	\$420	7.5%	7.5%	25
2	J.P. Morgan Chase	\$391	7.0%	14.4%	23
3	Prudential Financial	\$138	2.4%	26.5%	29
4	Robeco	\$123	2.2%	16.6%	11
5	Vanguard	\$118	2.1%	18.7%	11
6	Allianz	\$110	2.0%	20.7%	21
7	Capital Group Cos.	\$95	1.7%	22.4%	7
8	Franklin Resources	\$95	1.7%	24.1%	16
9	Candriam Investors	\$90	1.6%	25.7%	3
10	Guggenheim	\$82	1.5%	27.1%	10
11	Nordea Bank	\$71	1.3%	28.4%	11
12	Apollo Group Management	\$71	1.3%	29.6%	14
13	New York Life Group	\$68	1.2%	30.8%	16
14	Manulife	\$66	1.2%	32.0%	12
15	Provident Investment Management	\$64	1.1%	33.2%	4
16	Evli Bank	\$62	1.1%	34.3%	4
17	Trivent Financial	\$62	1.1%	35.4%	9
18	TCW Group	\$60	1.1%	36.4%	8
19	Lord Abbett & Co.	\$59	1.1%	37.5%	5
20	AllianceBernstein	\$58	1.0%	38.5%	16
21	Wells Fargo & Co.	\$56	1.0%	39.5%	16
22	PPM America	\$54	1.0%	40.5%	14
23	Metlife Financial Advisors	\$52	0.9%	41.4%	13
24	Madison Capital	\$51	0.9%	42.3%	15
25	Ameriprise	\$50	0.9%	43.2%	12
26	Baird Financial Group	\$49	0.9%	44.1%	9
27	Invesco	\$48	0.9%	44.9%	14
28	Wellington	\$47	0.8%	45.7%	18
29	Principal Financial Group	\$46	0.8%	46.6%	16
30	TIAA	\$45	0.8%	47.4%	8



	Managing Firm Name	Held Amount (USD millions)	% of Total	Cumulative Total %	# Securities
31	Government Pension Investment Fund of Japan	\$45	0.8%	48.2%	15
32	Goldman Sachs	\$44	0.8%	48.9%	18
33	Voya Investment Management	\$43	0.8%	49.7%	17
34	Ashmore Group	\$42	0.7%	50.4%	12
35	Goldpoint Partners	\$40	0.7%	51.1%	14
36	NYL Investors	\$40	0.7%	51.9%	14
37	UBS	\$38	0.7%	52.5%	13
38	Power Corp. of Canada	\$38	0.7%	53.2%	7
39	Auto Owners Group	\$37	0.7%	53.9%	2
40	Federated Investors	\$37	0.7%	54.5%	11
41	Western Asset Management	\$36	0.7%	55.2%	13
42	Deutsche Bank	\$36	0.6%	55.8%	18
43	Barings	\$36	0.6%	56.5%	14
44	Dai-ichi Life Holdings	\$35	0.6%	57.1%	4
45	Victory Capital Management	\$34	0.6%	57.7%	6
46	Industry Funds Management	\$34	0.6%	58.3%	9
47	Tokio Marine Holdings	\$34	0.6%	58.9%	6
48	HSBC	\$34	0.6%	59.5%	10
49	Tortoise Capital Advisors	\$33	0.6%	60.1%	12
50	HPS Investment Partners	\$32	0.6%	60.7%	13
	Total	\$3,548		60.7%	



APPENDIX D THE BASICS - FROM MONOMERS TO POLYMERS TO PLASTICS TO REUSE

While plastics can be sourced from bio-based feedstocks (vegetable oils or other sources), the industry is predominantly reliant on fossil fuel feedstocks (crude oil, natural gas liquids or coal). As shown in Figure 9, plastics are generally produced applying the following steps:

Extracting crude oil, natural gas and coal.

Refining to convert feedstocks into monomers, which are the building blocks of polymers. Refining requires heating the feedstocks in a furnace and sending the contents to a distillation unit so that lighter and heavier compounds separate, which is called fractionalisation. After distillation, either steam or catalytic cracking occurs, which breaks down hydrocarbons into alkenes, alkanes or alkynes.

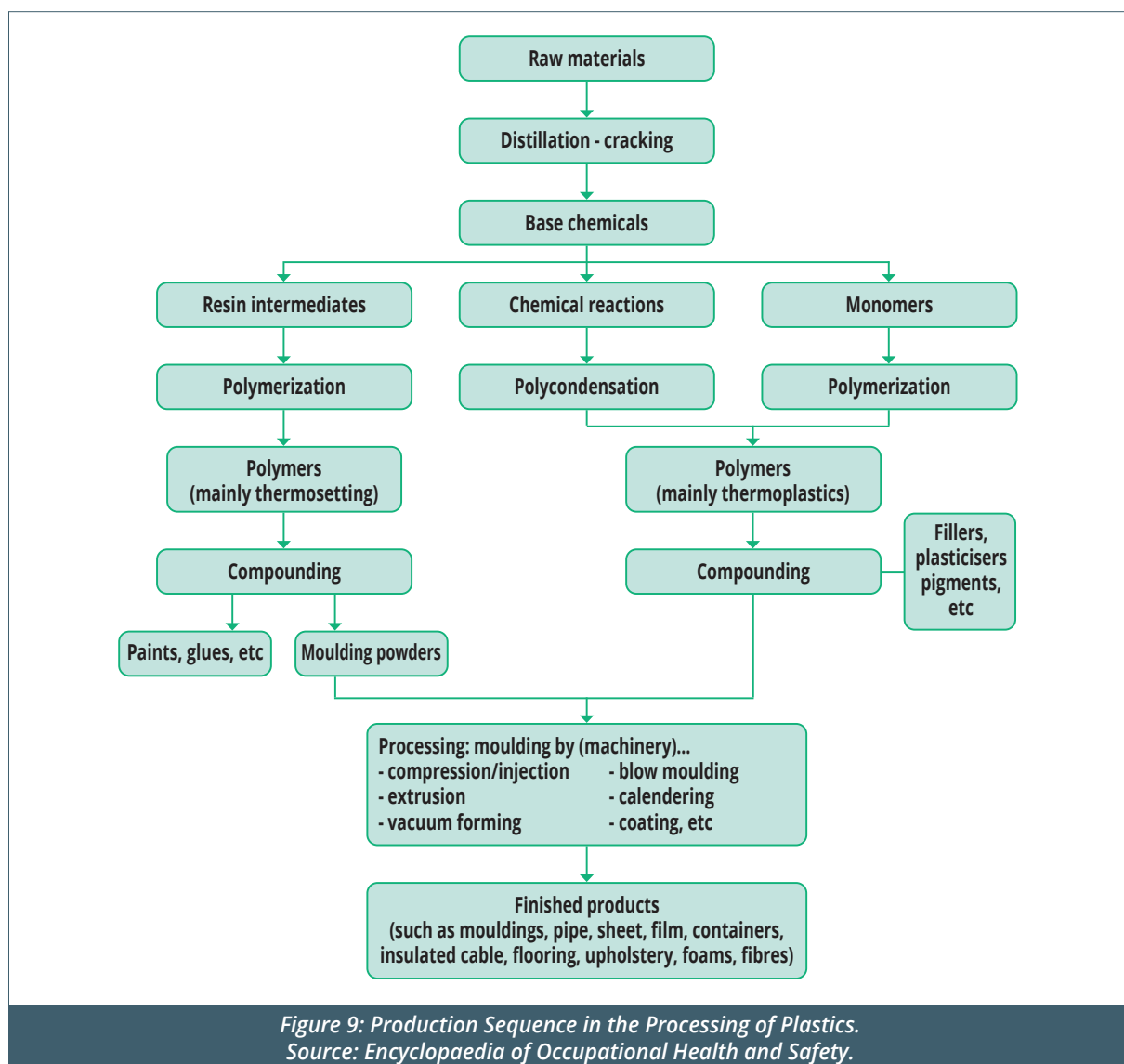


Figure 9: Production Sequence in the Processing of Plastics.
Source: Encyclopaedia of Occupational Health and Safety.



Polymerising monomers, such as the olefins – ethylene, propylene or butylene – into polymers, via one of two manufacturing processes. Addition polymerisation applies a catalyst, such as peroxide, to produce polyethylene, polystyrene and polyvinyl chloride. Condensation polymerisation joins monomers by removing molecules, such as water, and adding a catalyst, to produce polyester and nylon.



Processing polymers to create plastics. This includes extruding, palletisation, adding chemicals and additives, and shaping plastic into the products sold by the PC&P sector.

This four-stage process yields polyolefins, which are a family of polyethylene and polypropylene thermoplastics. Thermoplastics are set when heated.





These are easily moulded, while offering flexibility and strength and more easily recyclable than thermoset plastics, which are cured via chemical bonding. Thermoset plastics are ideal for electronics and appliances because they can withstand heat but are not easily recyclable and cannot be reshaped or remoulded.

Plastics are categorized by the polymer, use and recyclability. These codes enable the recyclability of plastics by resin type - see Table 22. Recyclability is constrained by contamination, business and consumer behaviour, chemical additives and lack of necessary infrastructure.

Table 22: Plastics Polymers by Identification Code, Properties and Common Uses.

Polymer	Monomers	Polymers	Properties	Uses
 <p>PETE</p> <p>Polyethylene Terephthalate</p>	Ethylene glycol Dimethyl terephthalate	Polyethylene terephthalate	<ul style="list-style-type: none"> ● Good gas & moisture barrier properties. ● High heat resistance ● Clear ● Hard ● Tough Microwave transparency ● Solvent resistant 	<ul style="list-style-type: none"> ● Mineral water, fizzy drink and beer bottles ● Pre-prepared food trays and roasting bags ● Boil in the bag food pouches ● Soft drink and water bottles ● Fibre for clothing ● Carpet fibre ● Strapping ● Some shampoo and mouthwash bottles
 <p>HDPE</p> <p>High Density Polyethylene</p>	Ethylene (CH ₂ =CH ₂) (lesser branching between polymer chains)	High-density polyethylene	<ul style="list-style-type: none"> ● Excellent moisture barrier properties. ● Excellent chemical resistance ● Hard to semi-flexible and strong. ● Soft waxy surface ● Permeable to gas ● HDPE films crinkle to the touch ● Pigmented bottles stress resistant 	<ul style="list-style-type: none"> ● Detergent, bleach and fabric conditioner bottles ● Snack food boxes and cereal box liners ● Milk and non-carbonated drinks bottles ● Toys, buckets, rigid pipes, crates, plant pots ● Plastic wood, garden furniture ● Wheeled refuse bins, compost containers*



Polymer	Monomers	Polymers	Properties	Uses
 Polyvinyl Chloride	Vinyl chloride	Polyvinyl chloride	<ul style="list-style-type: none"> • Excellent transparency • Hard, rigid (flexible when plasticised) • Good chemical resistance • Long term stability • Good weathering ability • Stable electrical properties • Low gas permeability 	<ul style="list-style-type: none"> • Credit cards • Carpet backing and other floor covering • Window and door frames, guttering • Pipes and fittings, wire and cable sheathing • Synthetic leather products**
 LDPE Low Density Polyethylene	Ethylene (CH ₂ =CH ₂) (excessive branching)	Low-density polyethylene and linear low-density polyethylene	<ul style="list-style-type: none"> • Tough and flexible • Waxy surface • Soft – scratches easily • Good transparency • Low melting point • Stable electrical properties • Good moisture barrier properties 	<ul style="list-style-type: none"> • Films, fertiliser bags, refuse sacks • Packaging films, bubble wrap • Flexible bottles • Irrigation pipes • Thick shopping bags (clothes and produce) • Wire and cable applications • Some bottle tops
 PP Polypropylene	Propylene	Polypropylene	<ul style="list-style-type: none"> • Excellent chemical resistance • High melting point • Hard, but flexible • Waxy surface • Translucent • Strong 	<ul style="list-style-type: none"> • Most bottle tops • Ketchup and syrup bottles • Yoghurt and some margarine containers • Potato crisp bags, biscuit wrappers • Crates, plant pots, drinking straws • Hinged lunch boxes, refrigerated containers • Fabric and carpet fibres • Heavy duty bags and tarps
 PS Polystyrene	Styrene	Polystyrene	<ul style="list-style-type: none"> • Clear to opaque • Glassy surface • Rigid or foamed • Hard • Brittle • High clarity • Affected by fats and solvents 	<ul style="list-style-type: none"> • Yoghurt containers, egg boxes • Fast food trays • Video cases • Vending cups and disposable cutlery • Seed trays • Coat hangers • Low cost brittle toys
 OTHER		They are identified with "7 and OTHER" or a triangle with numbers from 7 to 19	<ul style="list-style-type: none"> • There are other polymers that have a wide range of uses, particularly in engineering sectors 	<ul style="list-style-type: none"> • Nylon (PA) • Acrylonitrile butadiene styrene (ABS) • Polycarbonate (PC) • Layered or multi-material mixed polymers

*It is never safe to reuse an HDPE bottle as a food or drink because of the risk of chemical leaching.

** PVC should never come into contact with food or drink as it can be harmful if digested.



APPENDIX E POTENTIAL UNREALISED RETURNS ON AN AVERAGE COST BASIS FOR INVESTMENT ADVISORS AND SOVEREIGN WEALTH FUNDS INVESTED IN THE PLANET TRACKER UNIVERSE

Table 23-: Potential Unrealised Returns on an Average Cost Basis for Investment Advisors and Sovereign Wealth Funds Invested in the Planet Tracker Universe.

Investor	Unrealised Gains (millions USD)	% of Total Tracked	Notes
1 Vanguard Group	1,913	7.9%	\$1,605 million in unrealised gains from 5 investments: AptarGroup, Sonoco Products, Sealed Air, Berry Global, and Silgan Holdings
2 BlackRock	1,642	6.8%	\$1,503 million in unrealised gains from 6 investments: AptarGroup, Sonoco Products, Sealed Air, Amcor, Berry Global, and Silgan Holdings
3 State Street Corp.	717	3.0%	\$625 million in unrealised gains from 4 investments: AptarGroup, Sonoco Products, Sealed Air, and Amcor
4 Norges Bank	329	1.3%	\$301 million in unrealised gains from 11 investments
5 State Farm	324	1.2%	\$323 million in unrealised gains from 1 investment: AptarGroup
6 Dimensional Fund Advisors	294	1.2%	\$268 million in unrealised gains from 11 investments
7 J.P. Morgan Chase	289	1.1%	\$263 million in unrealised gains from 2 investments: AptarGroup and Silgan Holdings
8 Morgan Stanley*	268	0.9%	\$223 million in unrealised gains from 1 investment: AptarGroup
9 Fidelity	210	0.8%	\$210 million in unrealised gains from 7 investments
10 Neuberger Berman	205	0.8%	\$178 million in unrealised gains from 1 investment: AptarGroup
11 Geode Capital Management	201	0.8%	\$203 million in unrealised gains and \$2 million in unrealised losses
12 T. Rowe Price	194	0.8%	\$132 million in unrealised gains from 1 investment: Sealed Air
13 Aviva	185	0.7%	\$183 million in unrealised gains from 1 investment: Grupa Kety
14 Ameriprise	168	0.6%	\$164 million in unrealised gains from 5 investments: Sonoco Products, Huhtamaki, CCL Industries, Gerresheimer and AptarGroup
15 Government Pension Investment Fund	153	0.6%	\$151 million in unrealised gains from 2 investments: FP Corp. and Rengo Co.
16 Invesco	139	0.5%	\$82 million in unrealised gains from 1 investment: Silgan Holdings
17 Wells Fargo & Co.	131	0.5%	\$107 million in unrealised gains from 4 investments: AptarGroup, Silgan Holdings, Berry Global and Myers Indust
18 Charles Schwab	121	0.5%	\$95 million in unrealised gains from 4 investments: Amcor, Sonoco Products, AptarGroup, and Sealed Air
19 APG Asset Management	118	0.4%	\$99 million in unrealised gains from 2 investments: Viscofan and Gerresheimer
20 NN Group	103	7.9%	\$102 million in unrealised gains from 2 investments: Grupa Kety and Gerresheimer
Subtotal - Top 20	7,704	31.9%	447 total investments
Grand Total	24,171	100%	8,665 total investments



Planet Tracker chose to apply the average cost basis approach to calculating unrealised gains as average cost basis is often used by investment advisors in their tax reporting to regulatory authorities.

The average cost basis considers the total cost to investors or beneficiaries. It factors in capital gains, stock splits, capital distributions, reinvested dividends and returns of capital. The average cost basis helps determine what the economic gain or loss will be to an investor or beneficiary when they liquidate their investment.



APPENDIX F LARGEST PRIVATE EQUITY, FOUNDATION AND INDIVIDUAL INVESTORS WITH A SINGLE INVESTMENT IN THE 83 COMPANIES IN THE PLANET TRACKER UNIVERSE

Table 24-: Largest Private Equity, Foundation and Individual Investors with a Single Investment in the 83 Companies in the Planet Tracker Universe.^{1xix}

	Investor	Category	Total (USD millions)	% Ownership Sector	Cumulative Total	Notes
1	Epsilon Bidco PTE (The Blackstone Group)	Private Equity	\$1,516	1.7%	1.7%	Owens 51.96% of EPL
2	Antti Aarnio-Wihuri, Chairman, Winpak	Individual	\$1,156	1.3%	3.0%	Owens 52.58% of Winpak
3	Shenzhen Qinghua University	Private Equity	\$707	0.8%	3.9%	Owens 34.43% of Shenzhen Beauty Star
4	R. Philip Silver, Co-Founder Silgan Holdings	Individual	\$612	0.7%	4.6%	Owens 15.10% of Silgan Holdings
5	Finnish Cultural Foundation	Foundation	\$566	0.6%	5.2%	Heikki Huhtamäki donated a majority shareholding in the Huhtamäki company to the Finnish Cultural Foundation in 1943. The Foundation currently has 11.15% equity ownership stake in Huhtamäki.
6	Kim Seok-Soo, former President Dongsuh Co.	Individual	\$546	0.6%	5.8%	Owens 18.98% of Dongsuh
7	Kim Sang-Heon, former Chairman Dongsuh Co.	Individual	\$500	0.6%	6.4%	Owens 17.39% of Dongsuh
8	Gira Sole Prima	Private Equity	\$498	0.6%	7.0%	Owens 10.29% of Kalbe Farma TBK
9	Greg Horrigan, Co-Founder Silgan Holdings	Individual	\$492	0.6%	7.5%	Owens 12.14% of Silgan Holdings
10	Santa Seha Sanadi	Private Equity	\$478	0.5%	8.1%	Owens 9.89% of Kalbe Farma TBK
11	Diptanala Bahana	Private Equity	\$460	0.5%	8.6%	Owens 9.50% of Kalbe Farma TBK
12	Lucasta Murni Cemerlang	Private Equity	\$458	0.5%	9.1%	Owens 9.47% of Kalbe Farma TBK
13	Wu Peifu, Chairman, Jiangsu Shuangxing Color Plastic New Materials Co.	Individual	\$455	0.5%	9.6%	Owens 26.07% of Jiangsu Shuangxing Color Plastic New Materials Co.
14	Ladang Ira Panen	Private Equity	\$452	0.5%	10.2%	Owens 9.36% of Kalbe Farma TBK
15	Bina Artha Charisma	Private Equity	\$412	0.5%	10.6%	Owens 8.52% of Kalbe Farma TBK
16	Wang Haipeng, Chairman, Chairman, MYS Group	Individual	\$401	0.5%	11.1%	Owens 41.73% of MYS Group
17	Kim Jong-Hui, Senior Managing Director, Dongsuh Co.	Individual	\$362	0.4%	11.5%	Owens 12.59% of Dongsuh
18	Shenzhen Tongchan Group (People's Republic of China)	Government	\$319	0.4%	11.9%	Owens 15.53% of Shenzhen Beauty Star
19	Chen Dakui, ex-Chairman/President, Zhejiang Zhongcheng Packing Material	Individual	\$298	0.3%	12.2%	Owens 32.95% of Zhejiang Zhongcheng Packing Material
20	Uni-President Enterprises	Corporation	\$295	0.3%	12.5%	Owens 45.55% of Ton Yi Industrial Group
Subtotal of Top 20			\$10,984		12.5%	20 positions
Grand Total			\$87,622		100.0%	8,655 positions



APPENDIX G CORPORATE BONDS AND LOANS ASSESSED ISSUED BY THE COMPANIES IN THE PLANET TRACKER UNIVERSE

Table 25: Corporate Bonds and Loans Assessed Issued by the Companies in the Planet Tracker Universe.^{10x}

Issuer Name	Asset Class	Amt Outstanding (USD)	CUSIP	Maturity (MMDDYY)	Coupon	S&P Issuer Rating
An Phat Bioplastics	Corporates	\$13,345,200	LW4070840	12/4/2021	3.7%	-
An Phat Bioplastics	Corporates	\$6,725,700	QZ4482316	9/1/2021	2.237%	-
AptarGroup	Corporates	\$50,000,000	038336D*1	9/5/2024	3.4%	-
AptarGroup	Corporates	\$125,000,000	038336E*0	12/16/2025	3.61%	-
AptarGroup	Corporates	\$125,000,000	038336E@8	2/26/2026	3.61%	-
AptarGroup	Loans	\$207,000,000	03833HAE9	7/20/2022		-
AptarGroup	Loans	\$95,000,000	03833HAF6	7/20/2022	1.338%	-
AptarGroup	Loans	\$-	03833HAG4	7/20/2022	1.1%	-
AptarGroup	Loans	\$112,000,000	03833HAH2	7/20/2022	1.466%	-
AptarGroup	Corporates	\$75,000,000	AS9750330	9/5/2022	3.25%	-
AptarGroup	Corporates	\$125,000,000	AS9750652	12/16/2023	3.49%	-
AptarGroup	Corporates	\$100,000,000	AS9750660	2/26/2024	3.49%	-
Bilcare	Corporates	\$13,992,785	AT9477718	3/5/2026	0.0%	-
CCL Industries	Loans	\$366,000,000	-	2/28/2022		BBB
CCL Industries	Loans	\$366,000,000	-	2/28/2022		BBB
CCL Industries	Loans	\$704,251,945	-	2/28/2025		BBB
CCL Industries	Loans	\$704,251,945	-	2/28/2025	1.688%	BBB
CCL Industries	Corporates	\$500,000,000	124900AB7	10/1/2026	3.25%	BBB
CCL Industries	Corporates	\$238,031,100	124900AC5	4/13/2028	3.864%	BBB
CCL Industries	Corporates	\$600,000,000	124900AD3	6/1/2030	3.05%	BBB
CPH Chemie & Papier	Corporates	\$100,919,000	AU5407682	10/12/2023	2.0%	-
Dai Nippon Printing	Corporates	\$464,119,000	AZ2966523	7/19/2029	0.28%	NR
Dai Nippon Printing	Corporates	\$293,624,100	BG2664442	3/9/2040	0.58%	NR
Dai Nippon Printing	Corporates	\$195,749,400	BG2664459	3/8/2030	0.27%	NR
EPL	Loans	\$166,300,000	-	7/16/2024		-
EPL	Loans	\$166,300,000	-	7/16/2024		-
EPL	Corporates	\$1,357,400	BN0802866	6/14/2022	6.5%	-
EPL	Corporates	\$2,714,800	BN0802908	12/14/2022	6.5%	-
EPL	Corporates	\$2,714,800	BN0802932	6/14/2023	6.5%	-
Gerresheimer	Loans		-	4/22/2021		NR
Gerresheimer	Loans		-	4/22/2021		NR
Gerresheimer	Loans	\$399,334,335	-	9/26/2024		NR
Gerresheimer	Loans	\$399,334,335	-	9/26/2024		NR
Gerresheimer	Corporates	\$-	AR6548788	9/27/2027	0.0%	NR
Gerresheimer	Corporates	\$-	ZO1196310	11/10/2025	0.0%	NR
Guala Closures	Loans	\$15,105,126	-	2/28/2024		B+
Guala Closures	Loans	\$34,074,354	-	2/28/2024	2.5%	B+



Issuer Name	Asset Class	Amt Outstanding (USD)	CUSIP	Maturity (MMDDYY)	Coupon	S&P Issuer Rating
Guala Closures	Corporates	\$523,923,400	AU6545704	4/15/2024	3.5%	B+
Hokkan Holdings	Corporates	\$46,304,000	ZP2059688	10/31/2029	0.396%	-
Huhtamaki	Loans	\$106,473,600	-	1/9/2022		-
Huhtamaki	Loans	\$106,473,600	-	1/9/2022		-
Huhtamaki	Corporates	\$125,000,000	038336E@8	2/26/2026	3.61%	-
Huhtamaki	Corporates	\$-	AS1313996	5/1/2024	0.0%	-
Huhtamaki	Corporates	\$-	AS1321122	5/1/2027	0.0%	-
Huhtamaki	Corporates	\$-	BJ6774381	7/3/2025	0.0%	-
Huhtamaki	Corporates	\$193,669,000	ZQ5981308	11/20/2026	1.125%	-
Intertape Polymer Group	Loans	\$221,300,000	-	6/14/2023		BB-
Intertape Polymer Group	Loans	\$172,500,000	-	6/14/2023	1.651%	BB-
Intertape Polymer Group	Loans	\$48,800,000	-	6/14/2023	1.644%	BB-
Intertape Polymer Group	Corporates	\$250,000,000	460919AA1	10/15/2026	7.0%	BB-
Ishizuka Glass Co.	Corporates	\$843,932	AM5469433	12/28/2023	0.34%	BBB
Ishizuka Glass Co.	Corporates	\$5,386,650	AN5061428	3/30/2027	0.45%	-
Ishizuka Glass Co.	Corporates	\$1,168,188	AO7722561	6/30/2022	0.2%	-
Ishizuka Glass Co.	Corporates	\$1,835,724	AO7722595	6/30/2022	0.32%	-
Ishizuka Glass Co.	Corporates	\$13,586,220	AZ1273178	12/30/2027	0.46%	-
Ishizuka Glass Co.	Corporates	\$4,639,165	ZO2194991	9/25/2029	0.26%	-
Ishizuka Glass Co.	Corporates	\$4,664,725	ZO2195899	6/25/2025	0.21%	-
Ishizuka Glass Co.	Corporates	\$4,308,969	ZO2196335	3/30/2027	0.042%	-
Ishizuka Glass Co.	Corporates	\$8,768,022	ZO2196475	3/31/2025	0.2%	-
Ishizuka Glass Co.	Corporates	\$3,439,762	ZO2196483	3/30/2027	0.17%	-
Ishizuka Glass Co.	Corporates	\$5,845,348	ZO2196491	3/31/2025	0.15%	-
Ishizuka Glass Co.	Corporates	\$4,638,110	ZP2059274	9/25/2029	0.14%	-
Ishizuka Glass Co.	Corporates	\$3,804,740	ZS1876151	3/24/2028	0.69%	-
Ishizuka Glass Co.	Corporates	\$5,286,438	ZS8778707	9/30/2026	0.51%	-
Jindal Poly Films	Loans	\$29,945,000	-	6/30/2031		-
Jindal Poly Films	Loans	\$29,945,000	-	6/30/2031		-
KAP	Loans	\$25,331,495	-	8/24/2022		-
KAP	Loans	\$73,342,173	-	8/24/2022		-
KAP	Loans		-	8/24/2022		-
KAP	Loans	\$47,547,600	-	8/24/2022		-
Myers Industries	Loans	\$-	62846VAE9	3/8/2022		NR
Myers Industries	Loans	\$-	62846VAF6	3/8/2022	1.788%	NR
Myers Industries	Corporates	\$40,000,000	UV5266555	1/15/2021	4.67%	NR
Myers Industries	Corporates	\$11,000,000	UV5266910	1/15/2024	5.25%	NR
Myers Industries	Corporates	\$29,000,000	UV5267124	1/15/2024	5.3%	NR
Myers Industries	Corporates	\$20,000,000	UV5267231	1/15/2026	5.45%	NR



Issuer Name	Asset Class	Amt Outstanding (USD)	CUSIP	Maturity (MMDDYY)	Coupon	S&P Issuer Rating
Nampak	Loans	\$141,155,200	-	9/28/2022		-
Nampak	Loans	\$141,155,200	-	9/28/2023		-
Nampak	Loans	\$245,000,000	-	9/28/2022		-
Nampak	Loans		-	9/28/2023		-
Nampak	Loans		-	9/28/2023		-
Nampak	Loans	\$491,793,231	-	9/28/2023		-
Plasto Cargal Group	Corporates	\$9,011,733	LW5846610	8/1/2023	5.85%	-
Plasto Cargal Group	Corporates	\$3,400,017	QZ0813142	8/1/2021	4.75%	-
Pro-Pac Packaging	Loans	\$40,600,700	-	3/23/2023		-
Pro-Pac Packaging	Loans		-	3/23/2023		-
Pro-Pac Packaging	Loans	\$40,600,700	-	3/23/2023		-
PSB Industries	Loans		-	2/6/2024		-
PSB Industries	Loans		-	2/6/2024		-
Rengo Co.	Loans	\$48,706,100	-	3/14/2024		-
Rengo Co.	Loans	\$130,796,000	-	-		-
Rengo Co.	Loans	\$48,706,100	-	3/14/2024		-
Rengo Co.	Loans	\$130,796,000	-	-		-
Rengo Co.	Corporates	\$87,573,300	AL2948829	12/8/2026	0.39%	-
Rengo Co.	Corporates	\$87,573,300	AL2948837	12/8/2023	0.28%	-
Rengo Co.	Corporates	\$44,499,600	AQ1804345	12/13/2024	0.27%	-
Rengo Co.	Corporates	\$44,499,600	AQ1804352	12/14/2027	0.41%	-
Rengo Co.	Corporates	\$88,003,800	AV7173066	12/13/2028	0.415%	-
Rengo Co.	Corporates	\$95,368,900	EK4186392	9/3/2021	0.451%	-
Rengo Co.	Corporates	\$41,617,400	UV4266226	9/2/2022	0.498%	-
Rengo Co.	Corporates	\$91,519,400	ZQ6601988	12/11/2026	0.21%	-
Rengo Co.	Corporates	\$91,519,400	ZQ6602002	12/12/2029	0.3%	-
Samyang Packaging Corp.	Loans	\$143,088,320	-	9/7/2022		-
Samyang Packaging Corp.	Loans	\$143,088,320	-	9/7/2022		-
Samyang Packaging Corp.	Corporates	\$44,333,700	AU2896242	9/7/2021	2.825%	-
Sealed Air Corp.	Corporates	\$450,000,000	81211KAK6	7/15/2033	6.875%	BB+
Sealed Air Corp.	Corporates	\$425,000,000	81211KAU4	4/1/2023	5.25%	BB+
Sealed Air Corp.	Corporates	\$425,000,000	81211KAV2	12/1/2022	4.875%	BB+
Sealed Air Corp.	Corporates	\$425,000,000	81211KAW0	12/1/2024	5.125%	BB+
Sealed Air Corp.	Corporates	\$400,000,000	81211KAX8	9/15/2025	5.5%	BB+
Sealed Air Corp.	Corporates	\$425,000,000	81211KAY6	12/1/2027	4.0%	BB+
Sealed Air Corp.	Loans	\$691,300,000	81211LBC1	7/11/2023		BB+
Sealed Air Corp.	Loans	\$-	81211LBD9	7/11/2023	1.644%	BB+
Sealed Air Corp.	Loans	\$-	81211LBE7	7/11/2023	1.644%	BB+
Sealed Air Corp.	Loans	\$181,837,500	81211LBF4	7/11/2023	1.64%	BB+



Issuer Name	Asset Class	Amt Outstanding (USD)	CUSIP	Maturity (MMDDYY)	Coupon	S&P Issuer Rating
Sealed Air Corp.	Loans	\$474,600,000	81211LBH0	8/1/2022	1.269%	BB+
Sealed Air Corp.	Corporates	\$449,676,000	EK9644080	9/15/2023	4.5%	BB+
Sekisui Kasei Co.	Corporates	\$64,063,580	ZQ6798354	12/11/2026	0.5%	-
Shanghai Yongguan Adhesive Products	Corporates	\$79,594,320	ZO9323445	12/8/2026	0.5%	-
Shanghai Zijiang Enterprise Group	Corporates	\$28,277,800	BH2912914	3/26/2025	4.5%	-
Shanghai Zijiang Enterprise Group	Corporates	\$75,176,500	ZO9902750	4/19/2021	2.85%	-
Silgan Holdings	Corporates	\$300,000,000	827048AU3	3/15/2025	4.75%	BB+
Silgan Holdings	Corporates	\$30,000,000	827048AV1	2/1/2028	4.125%	BB+
Silgan Holdings	Corporates	\$570,000,000	827048AW9	2/1/2028	4.125%	BB+
Silgan Holdings	Loans	\$1,146,000,000	82704EBB1	5/30/2024		BB+
Silgan Holdings	Loans	\$246,000,000	82704EBE5	5/30/2023	1.237%	BB+
Silgan Holdings	Loans	\$900,000,000	82704EBG0	5/30/2024	1.894%	BB+
Silgan Holdings	Corporates	\$782,463,500	AQ4025203	3/15/2025	3.25%	BB+
Silgan Holdings	Corporates	\$108,787	BG1648552	6/1/2028	2.3%	BB+
Silgan Holdings	Corporates	\$578,749,227	BK0252787	6/1/2028	2.3%	BB+
Sonoco Products	Loans	\$100,000,000	-	3/31/2021		BBB
Sonoco Products	Loans	\$150,000,000	-	3/17/2021		BBB
Sonoco Products	Loans	\$100,000,000	-	3/31/2021	1.394%	BBB
Sonoco Products	Loans	\$150,000,000	-	3/17/2021	1.394%	BBB
Sonoco Products	Corporates	\$4,321,000	835495AA0	8/1/2021	9.2%	BBB
Sonoco Products	Corporates	\$600,000,000	835495AJ1	11/1/2040	5.75%	BBB
Sonoco Products	Corporates	\$250,000,000	835495AK8	11/1/2021	4.375%	BBB
Sonoco Products	Corporates	\$600,000,000	835495AL6	5/1/2030	3.125%	BBB
Sonoco Products	Loans	\$136,897,000	83549UAH0	7/20/2022		BBB
Sonoco Products	Loans	\$-	83549UAJ6	7/20/2022	1.338%	BBB
Sonoco Products	Loans	\$136,897,000	83549UAK3	7/20/2022	1.466%	BBB
Suzhou Hycan Holdings	Corporates	\$52,240,710	AV8517626	11/27/2024	1.0%	-
Taiwan Hon Chuan Enterprise	Corporates	\$101,505,600	AS0083657	4/27/2023	1.07%	-
Takween Advanced Industries	Loans	\$242,611,460	-	9/11/2021		-
Takween Advanced Industries	Loans	\$242,611,460	-	9/11/2021		-
Toppan Printing	Corporates	\$441,484,000	EJ5037613	1/27/2023	0.932%	NR
Toppan Printing	Corporates	\$168,904,000	EK6306055	12/12/2029	1.104%	NR
Toppan Printing	Corporates	\$146,837,100	QZ2407133	9/5/2036	0.73%	NR
Toppan Printing	Corporates	\$146,837,100	QZ3834608	9/5/2031	0.55%	NR
Tredegar Corp.	Loans	\$7,000,000	-	6/28/2024		-
Tredegar Corp.	Loans	\$7,000,000	-	6/28/2024	1.863%	-
Zhuhai Zhongfu Enterprise	Corporates	\$16,662,975	EJ0369813	3/28/2017	6.6%	-



APPENDIX H COMPANIES IN THE PLANET TRACKER UNIVERSE EQUITY PRICES WITH CURRENCY TRANSLATION USED FOR VALUATION CALCULATIONS

Table 26: Companies in the Planet Tracker Universe Equity Prices with Currency Translation Used for Valuation Calculations.^{1xxi}

Ticker	Ticker	Share (Domestic Currency)	Exchange	Currency	Exchange Rate (USD to Domestic Currency)
Pro-Pac Packaging	PPG AU Equity	0.205	ASE	AUD	0.7580000
CCL Industries	CCL/B CN Equity	59.64	Toronto	CAD	0.7788162
Intertape Polymer Group	ITP CN Equity	24.36	Toronto	CAD	0.7788162
Winpak	WPK CN Equity	43.45	Toronto	CAD	0.7788162
CPH Chemie & Papier Holding	CPHN SW Equity	72.2	SIX Swiss Ex	CHF	1.1261261
Zhuhai Zhongfu Enterprise	000659 CH Equity	2.53	Shenzhen	CNY	0.1528912
Shenzhen Beauty Star	002243 CH Equity	11.1	Shenzhen	CNY	0.1528912
Zhejiang Great Southeast	002263 CH Equity	2.69	Shenzhen	CNY	0.1528912
MYS Group	002303 CH Equity	4.1	Shenzhen	CNY	0.1528912
Zhejiang Zhongcheng Packing Material	002522 CH Equity	6.54	Shenzhen	CNY	0.1528912
Jiangsu Shuangxing Color Plastic New Materials	002585 CH Equity	9.87	Shenzhen	CNY	0.1528912
Suzhou Hycan Holdings	002787 CH Equity	6.31	Shenzhen	CNY	0.1528912
Xiamen Yanjan New Material	300658 CH Equity	28.9	Shenzhen	CNY	0.1528912
Shanghai Zijiang Enterprise Group	600210 CH Equity	4.3	Shanghai	CNY	0.1528912
Shanghai Yongguan Adhesive Products Corp.	603681 CH Equity	18.59	Shanghai	CNY	0.1528912
Groupe Guillin	ALGIL FP Equity	24.55	EN Paris	EUR	1.1219500
Guala Closures	GCL IM Equity	8.24	Brsaltaliana	EUR	1.1219500
Gerresheimer	GXI GR Equity	86.6	Xetra	EUR	1.1219500
Huhtamaki	HUH1V FH Equity	42.02	Helsinki	EUR	1.1219500
KAP	IUR GR Equity	13.6	Xetra	EUR	1.1219500
Miko	MIKO BB Equity	99	EN Brussels	EUR	1.1219500
PSB Industries	PSB FP Equity	16.85	EN Paris	EUR	1.1219500
Resilux	RES BB Equity	143	EN Brussels	EUR	1.1219500
Viscofan	VIS SM Equity	59.1	Soc.Bol SIBE	EUR	1.1219500
Ming Lam Holdings	1106 HK Equity	0.01	Hong Kong	HKD	0.1289807
China BlueChemical	3983 HK Equity	1.19	Hong Kong	HKD	0.1289807
CPMC Holdings	906 HK Equity	3.51	Hong Kong	HKD	0.1289807
Argha Karya Prima Industry	AKPI IJ Equity	490	Indonesia	IDR	0.0000704
Indopoly Swakarsa Industry	IPOL IJ Equity	138	Indonesia	IDR	0.0000704
Kalbe Farma	KLBF IJ Equity	1465	Indonesia	IDR	0.0000704
Panca Budi Idaman	PBID IJ Equity	1445	Indonesia	IDR	0.0000704
Trias Sentosa	TRST IJ Equity	384	Indonesia	IDR	0.0000704
Ginegar Plastic Products	GNGR IT Equity	1583	Tel Aviv	ILS*	0.0031096
Plasto Cargal Group	PLCR IT Equity	315	Tel Aviv	ILS*	0.0031096
Bilcare	BILC IN Equity	42.9	BSE India	INR	0.0135568



Ticker	Ticker	Share (Domestic Currency)	Exchange	Currency	Exchange Rate (USD to Domestic Currency)
Cosmo Films	CFLM IN Equity	454.35	Natl India	INR	0.0135568
EPL	EPLL IN Equity	252.4	Natl India	INR	0.0135568
Garware Polyester	GWPL IN Equity	367.75	BSE India	INR	0.0135568
Jindal Poly Films	JDPF IN Equity	466.05	Natl India	INR	0.0135568
Time Technoplast	TIME IN Equity	47.25	Natl India	INR	0.0135568
Uflex	UFLX IN Equity	374.75	Natl India	INR	0.0135568
Rengo	3941 JP Equity	839	Tokyo	JPY	0.0096581
Superbag	3945 JP Equity	1169	Tokyo	JPY	0.0096581
Pack Corp./The	3950 JP Equity	2715	Tokyo	JPY	0.0096581
Sekisui Kasei	4228 JP Equity	528	Tokyo	JPY	0.0096581
Carlit Holdings	4275 JP Equity	667	Tokyo	JPY	0.0096581
Taisei Lamick	4994 JP Equity	3110	Tokyo	JPY	0.0096581
Achilles Corp.	5142 JP Equity	1422	Tokyo	JPY	0.0096581
Ishizuka Glass	5204 JP Equity	1951	Tokyo	JPY	0.0096581
Hokkan Holdings	5902 JP Equity	1431	Tokyo	JPY	0.0096581
Maruto Sangyo	7894 JP Equity	2085	Fukuoka	JPY	0.0096581
Chuo Kagaku	7895 JP Equity	553	Tokyo	JPY	0.0096581
Toppan Printing	7911 JP Equity	1432	Tokyo	JPY	0.0096581
Dai Nippon Printing	7912 JP Equity	1858	Tokyo	JPY	0.0096581
Fujimori Kogyo	7917 JP Equity	4670	Tokyo	JPY	0.0096581
FP Corp.	7947 JP Equity	4250	Tokyo	JPY	0.0096581
NPC	004250 KS Equity	3205	Korea SE	KRW	0.0009026
Dongsuh Cos.	026960 KS Equity	31950	Korea SE	KRW	0.0009026
Samyang Packaging Corp.	272550 KS Equity	21650	Korea SE	KRW	0.0009026
Daibochi	DPP MK Equity	2.65	Bursa Malays	MYR	0.2460933
Thong Guan Industries	TGI MK Equity	2.62	Bursa Malays	MYR	0.2460933
Grupa Kety	KTY PW Equity	484	Warsaw	PLN	0.2705042
Takween Advanced Industries	TAKWEEN AB Equity	14.06	Saudi Arabia	SAR	0.2664890
Southern Packaging Group	SPAK SP Equity	0.475	Singapore	SGD	0.7506380
AJ Plast	AJ TB Equity	19.1	Bangkok	THB	0.0330961
Panjawattana Plastic	PJW TB Equity	1.39	Bangkok	THB	0.0330961
Polyplex Thailand	PTL TB Equity	21.9	Bangkok	THB	0.0330961
Thai Plaspac	TPAC TB Equity	11.6	Bangkok	THB	0.0330961
TPBI Public	TPBI TB Equity	4.98	Bangkok	THB	0.0330961
Yonyu Plastics	1323 TT Equity	33.15	Taiwan	TWD	0.0355202
Ton Yi Industrial Corp.	9907 TT Equity	11.55	Taiwan	TWD	0.0355202
Taiwan Hon Chuan Enterprise	9939 TT Equity	58.6	Taiwan	TWD	0.0355202



Ticker	Ticker	Share (Domestic Currency)	Exchange	Currency	Exchange Rate (USD to Domestic Currency)
Amcor	AMCR US Equity	11.63	New York	USD	1.0000000
AptarGroup	ATR US Equity	135.12	New York	USD	1.0000000
Berry Global Group	BERY US Equity	54.485	New York	USD	1.0000000
Myers Industries	MYE US Equity	19.51	New York	USD	1.0000000
Sealed Air Corp.	SEE US Equity	46.035	New York	USD	1.0000000
Silgan Holdings	SLGN US Equity	36.66	NASDAQ GS	USD	1.0000000
Sonoco Products	SON US Equity	60.17	New York	USD	1.0000000
Tredegar Corp.	TG US Equity	16.35	New York	USD	1.0000000
An Phat Bioplastics	AAA VN Equity	14100	Ho Chi Minh	VND	0.0000432
An Phat Holdings	APH VN Equity	75400	Ho Chi Minh	VND	0.0000432
Nampak	NPK SJ Equity	215	Johannesburg	ZAR*	0.0006854



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 - Search for keywords under exact match in company filing database.
 - Include subsidiaries and related companies.
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- xxviii Planet Tracker calculated. Data source Bloomberg, L.P. (2020). Accessed 5 January 2021.
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- Alkane family: Methane (CH_4), ethane ($\text{CH}_3\text{-CH}_3$ or C_2H_6), propane ($\text{CH}_3\text{-CH}_2\text{-CH}_3$), butane ($\text{CH}_3\text{-CH}_2\text{-CH}_2\text{-CH}_3$), pentane ($\text{CH}_3\text{-CH}_2\text{-CH}_2\text{-CH}_2\text{-CH}_3$), etc.
 - Alkene family: Ethylene ($\text{CH}_2=\text{CH}_2$ or C_2H_4), propylene ($\text{CH}_2=\text{CH-CH}_3$), 1-butylene ($\text{CH}_2=\text{CH-CH}_2\text{-CH}_3$), 2-butylene ($\text{CH}_3\text{-CH=CH-CH}_3$), etc.
 - Alkyne hydrocarbons: Ethyne ($\text{CH}\equiv\text{CH}$ or C_2H_2), propyne ($\text{CH}\equiv\text{C-CH}_3$), 1-butyne ($\text{CH}\equiv\text{C-CH}_2\text{-CH}_3$), 2-butyne ($\text{CH}_3\text{-CH}\equiv\text{CH-CH}_3$), etc.
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