Blue Finance Series - a Finance Blueprint for the Future of our Oceans

Blue Finance - equity investment leaders

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With thanks to Venetia Bell for her helpful contributions.
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Blue Finance series

In GIB Asset Management's Blue Finance series, we discuss the threats facing our oceans, the current status of Blue Finance, and how investors, are able to direct future capital towards ocean-related investment objectives.

In our first paper, we covered the oceans as a resource and the challenges of Blue Finance.

In the second, we discussed how traditional financing structures can be directed towards blue-aligned outcomes.

In this third paper of the series, we discuss the opportunity for equity investors to allocate capital towards companies investing in technologies that address some of the issues faced by our oceans. Aligned with SDG 14, we explore a number of companies that are devoting resources and capital to finding solutions to the issues of ocean plastics and to finding sustainable aquaculture feed solutions. For investors these companies present outstanding opportunities to, not only insulate portfolios from environment related risks but also to achieve solid investment returns. As many of these names are directing resources towards sustainable solutions, it is in keeping that many of them are well managed and have the potential to provide ESG aware investors with exposure to a rapidly expanding sector.

Equally as we look to invest and partner with companies that look to the future, those companies that continue to invest in materials and practices that negatively impact the oceans and our environment, will find themselves increasingly subjected to difficult shareholder meetings, or they will be starved of capital. As investors it is our responsibility to analyse who the potential winners and losers will be from a blue aligned future. It is those companies that are on the right side of this spectrum that have the greatest potential for investors.

The blue equity opportunity for fundamental investors

Companies leading the way in providing blue aligned solutions

We are at a turning point for ocean-aware investing in equity markets. Over the past decade, awareness has moved from the preserve of Non-Governmental Organisations (NGOs) such as the Ellen MacArthur Foundation and Parley for the Oceans into public company boardrooms and mainstream investment teams, not least due to the engagement of NGOs in the public, corporate and investment debate.

In more recent years, we have seen a dramatic rise in company discussion, initiatives and commitments in this area. Within the investment research community, we have seen a parallel increase in the attention paid to these issues as investment banks direct their teams to assess the impact companies are having on our oceans and the impact that might have on their future cash flows. In many cases, it is smaller firms that are devoting their intellectual resources and nimble edge to discovering new technologies and solutions. For investors, these are exciting, long-term opportunities particularly as these companies develop and expand their market share.
A number of investment managers are in the early stages of launching ocean-based or SDG 14 aligned strategies, offering clients the chance to invest their capital in companies that are working to improve the health of our oceans. Across less specialised funds, investors are analysing the negative impacts that products on the one hand, and company operations on the other, are having on our oceans and assessing whether adjustments need to be made to the financial assumptions for these businesses over the long term as the world stops buying these products and/or works to penalise polluting operations.

**Ocean Plastics - the need for sustainable solutions**

**The companies innovating in search of solutions**

As we highlighted in the first paper of this series, ocean plastics are a serious problem for a number of reasons, including: marine life ingestion, future drinking water contaminations and the besmirching of coastal tourist destinations. The International Union for the Conservation of Nature (IUCN) estimates that 8 million tons of plastic end up in our oceans every year and that plastics make up 80% of all ocean debris\(^1\). It is well-known problem that an unacceptably high level of single use plastic are consigned to landfill rather than reused or recycled. It is estimated that 6.3bn tons of plastic waste has been produced over time, and that only 9% of this has been recycled\(^2\). This means that billions of tons of plastic waste is either in landfill or in the open environment where it has a good chance of ending up in our oceans. As an illustration of the significance of plastic pollution, the lead indicator for SDG Target 14.1 is the density of floating plastic\(^3\).

The circular economy through reuse and recycling of materials is often seen as a potential solution in reducing our use of virgin plastic. Implementation of this thinking is leading to countries and companies looking for solutions that encourage reuse and recycling of single use plastics. Norway has one of the highest global recycling rates with a 97% plastic bottle recovery rate\(^4\). Part of the reason for this success rate is the widespread use of reverse vending machines where consumers are able to return bottle in exchange for their bottle deposit.

**Exhibit 1 - Regions/Countries PET Bottle Recycling Rates**

*Annually, 65% is recycled at registered facilities, 15% from the informal sector
Source UNEP Basel Baseline report on plastic waste, 2020
Norwegian company, Tomra is the world leading supplier of reverse vending machines and has attracted a great deal of attention as the issue of circularity has risen on the agenda of investors. The company is, at heart, a precision sorting machine manufacturer, but their reverse vending machines have attracted notable attention.

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Recycling of plastic is a vital part of the solution in reducing new plastic production, but another solution is potentially through the use of bioplastics that use biological, rather than fossil fuel based, raw material for their production. A long-time producer of lactic acid, a natural preservative, Corbion have turned their innovation, and a sizeable amount of capital, to turning that lactic acid into a plastic polymer. Through a joint venture, they have rapidly scaled up a Polylactic acid or PLA production plant and have been able to commercialise Bioplastics. It is important to highlight that neither option open to investors is perfect. The continued use of single use plastic in the hope that it will all be recycled ignores the significant amount of leakage in the chain – a meaningful proportion of which ends up in our oceans. Similarly bioplastics are not perfect, they may not, for example, degrade in the oceans as it is a cold, saline, light free environment.

A potential, nascent solution to the issue of certain bioplastics non-degradation is the use of polyhydroxy-alkanoate (PHA). Studies have shown that biodegradability of PHA in marine environments is good and this directly addresses one of the primary drawbacks of bioplastics. While the market for PHA remains at its early stages, some estimates suggest a CAGR of 15% to 2025. Danimer Scientific have created a range of PHA-based plastics and resins that exhibit a similar degradation profile to cellulose and are fully biodegradable in a number of aerobic and anaerobic environments.

As this discussion shows we will need a range of complementary options in addressing the issue of ocean plastic. For investors, a portfolio approach to analysis will help to ensure that they are not caught on the wrong side of a rapidly changing landscape.
Michelin: What does motor racing have to do with the Oceans?

Exhibit 2 - Tyre Degradation Contribution to Total Ocean Microplastics by Region

Investors need to be aware of hidden impacts. Tyre technology is an issue that has been on sustainable investor radars for some time, as investors assess the need to make our cars safer but also more fuel efficient. These two themes put opposing stresses on tyre manufacturers as they look to make tyres thinner and lighter for efficiency while heavier and wider for safety and grip. More recently, their impact on the oceans has come to light as studies have shown that tyre microplastics are contaminating rivers and oceans. This problem is particularly acute in North America and Europe, where the combined total of tyre microplastic accounts for 20% of ocean microplastics (Exhibit 2).

Investors now have to assess the financial prospects for tyre manufacturers as they innovate to increase grip while reducing rolling resistance and reducing wear.

Michelin is an interesting company in this regard having moved from Formula 1 to the all-electric Formula E. High performance EV racing is an excellent place to innovate around grip and energy conservation, but they have cited another reason: the deterioration of tyres in the race. Formula E races run with one set of tyres per car for practice, qualifying and the race itself. As well as requiring less carbon and fewer raw materials, these tyres throw off fewer micro particles. Michelin made clear in their decision not to return to the relatively tyre hungry F1 that:

“...the deterioration of performance as a part of the show, goes against our principles of efficient resource management and respect for the technology of a sustainable tyre.”

“For investors, these companies present outstanding opportunities to, not only insulate portfolios from environment related risks but also to achieve solid investment returns.”
Aquaculture – a rapidly expanding protein source

Innovation addresses potential negative consequences

The World Economic Forum estimates that aquaculture is the fastest growing form of food production. The FAO estimate that total aquaculture production has grown from 74m tons in 2006 to 114m tons in 2018. On the face of it, aquaculture would appear to be a highly successful form of food production and potential solution in addressing the future protein needs of global populations. Aquaculture has gone some way in meeting these needs, with a major increase in production from the early nineties, particularly in East Asia and Pacific region.

Exhibit 3 - Aquaculture Production by Region since 1960

An issue with aquaculture production is the use of captured natural fish for fishmeal production. This is particularly acute when viewed against the potential inputs - some estimates indicate that aquaculture will require 87.1m tons of feed by 2025. At these levels, there is potential for a serious strain to be placed upon natural fish stocks.

Over recent years, a number of companies have arrived at solutions aimed at replacing the fatty acid content of fishmeal with a non-fish alternative. DSM produces an alternative to these fatty acids from a North Atlantic marine based algae that is farmed in extensive lakes. The end product has a favourable efficiency ratio when compared to fish-based fatty acid origination. In addition, the company produces enzymes that aid digestibility of feed products, further aiding efficiency.

In searching for alternative sources of fishmeal protein, black fly larvae have been highlighted as a potential solution for both human consumption and animal feed. The larvae are a very rich protein source - it is estimated that half a hectare of larvae can produce the same amount of protein as 1200ha of grazed cattle or 52ha of soya beans. Darling Ingredients is one of a number of companies that have invested in production facilities of the larvae as a source of aquaculture protein for a number of different fish species. In addition, for some species such as trout, the larvae closely resemble their natural food source, further enhancing their desirability as feed source. Black fly larvae have another advantage in that they can be fed on food waste or excess, pre consumer stock – further enhancing their credentials as sustainable protein source.

Source: UN Food and Agriculture Organization (FAO), OurWorldInData.org/meat-and-seafood-production-consumption/
Conclusion

Through this series of papers, we have posed the question of “who owns the oceans?”. The question is important when assessing a resource that is largely defined by common ownership. An individually-owned resource is more likely to have a value placed upon it, and a resource with a value is more likely to be protected.

For equity investors, the question of ownership is often more directly linked than for other forms of blue capital. While most investable companies do not own the ocean resource, they do have the potential to find solutions to the problem oceans face and, accordingly, equity investors are more able to “own the solution” – and reap the financial reward.

Blue investing in equities is about more than any specific NGO or corporate initiative. It is about more than the specific Ocean funds or Ocean themes within any one fund. These NGOs and funds have a vital role to play as early leaders in raising awareness and driving the change that is vital to blue sustainability.

It is for the broader investment community to integrate the issues highlighted under SDG 14 into their research and analysis on all affected companies and operations. We are beginning to understand that these issues, their impacts and the financial materiality they drive are far more widespread than previously believed. Accordingly, equity investors through fundamental research, engagement and ownership have the potential to play a direct and crucial role in financing a more sustainable blue economy.

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