

How the Mighty are Fallen

How chasing growth destroyed shareholder value in ExxonMobil

Analyst Note

October, 2020

About Carbon Tracker

The Carbon Tracker Initiative is a team of financial specialists making climate risk real in today's capital markets. Our research to date on unburnable carbon and stranded assets has started a new debate on how to align the financial system in the transition to a low carbon economy.

www.carbontracker.org | hello@carbontracker.org

About the Author

Paul Spedding – Research Adviser

Paul graduated from Oxford University with an MA in Chemistry in 1980. Later that year, he joined Dresdner Bank (then Grieveson Grant) analysing the financial performance of UK oil companies quoted on the London Stock Exchange. In 2005, he moved to HSBC, where he was Global Co-Head of Oil and Gas Research.

He was one of the first "conventional" oil analysts to publish research into the potential cost of carbon for oil companies with two reports in 2008 and 2013, both called "Oil & Carbon. He retired from HSBC in 2013, after 33 years as a financial analyst.

Readers are encouraged to reproduce material from Carbon Tracker reports for their own publications, as long as they are not being sold commercially. As copyright holder, Carbon Tracker requests due acknowledgement and a copy of the publication. For online use, we ask readers to link to the original resource on the Carbon Tracker website.

Table of Contents

1	k	Key	⁷ Findings	1	
2	E	Exe	cutive Summary	2	
3	Hero to zero – the story of Exxon's collapse				
	3.1	1	Exxon's shareholder returns have been dire over the past five years	. 3	
	3.2	2	Exxon's derating is driver of its poor shareholder returns	. 4	
	3.3	3	Exxon shareholders missed out on over US\$400bn	. 5	
4	١	Wh	y did Exxon's shareholder returns deteriorate so badly?	7	
	4.1	1	But from 2008, Exxon's returns started to fall1	0	
	4.2	2	Underlying margins under pressure1	3	
	4.3	3	Increased spend but no increase in reserves	4	
	4.4	4	and no growth in production for nearly a decade1	5	
5	١	Wh	ere did Exxon go wrong?1	7	
	5.1	1	So, what should Exxon do?1	9	

1 Key Findings

In the past year, ExconMobil has dropped out of the S&P 500 "Top ten" stocks and been removed from the Dow Jones Index. Quite embarrassing occurrences for what used to be one of the largest and most highly rated quoted oil companies in the world.

Up until 2007, Exxon had an enviable track record, delivering shareholder returns above both its peers and the wider market. But between 2007 and 2014, those returns started to deteriorate. And between 2014 and 2019, shareholders actually lost money. It even underperformed its oil major peer group suggesting an Exxon-specific rather than industry problem.

Carbon Tracker believes that a major reason behind this poor performance was that Exxon overinvested in high cost assets in order to chase growth. The consequential ballooning in its capital base and its operating costs were a major factor behind the collapse in its return on capital. Its shareholder returns followed suit.

Despite this escalation in spend, which led to its upstream (production) capital employed nearly tripling between 2007 and 2019, its proven reserves hardly changed and its production actually fell. Hardly a successful "growth" strategy, especially when accompanied by such poor shareholder returns in the past five years.

Carbon Tracker pointed out the risks to Exxon's aggressive development programme in a report in early 2014. It showed that Exxon's bet on high cost, low return assets such as heavy oil (including tar sands) and LNG (Liquified Natural Gas) had already started to depress the group's return on capital. Its portfolio of future development projects was heavily skewed to such assets.

The damage Exxon's "growth" strategy caused to investor returns is astonishing. Between 2007 and 2019, Exxon delivered shareholder returns (capital gains plus dividends) of 10% in total, less than 1% a year. In contrast, Chevron shareholders saw returns double, equivalent to an annual return of 6% a year. In aggregate, Exxon shareholders would have been better off to the tune of over US\$400 billion if they had invested in Chevron instead.

Carbon Tracker believes Excon should exercise stricter capital discipline and abandon its growth strategy. It should be focusing on high return, low cost developments in order to boost its return on capital. Chasing growth for growth's sake has proved to be a flawed strategy that has damaged shareholder returns and – ironically – failed to produce growth in reserves or production.

2 Executive Summary

In September 2014, Carbon Tracker published a report on ExxonMobil. It highlighted that Exxon's long-term outperformance of the market and its peers appeared to be coming to an end. The cause of this was Exxon's overinvesting in capital intensive, high cost, high carbon projects, especially oil sands. It concluded that Exxon's returns were likely to deteriorate further unless it changed its strategy.

Exxon didn't change its strategy and someone who invested in ExxonMobil at the time of the report would have been better off putting their cash under the mattress instead. Between 2014 and the end of 2019, Exxon's return to shareholders was negative 10%. Some would like to blame the oil price but as Exxon's peers managed to deliver returns of around 30%, the underperformance seems to be Exxon-specific.

We believe that a key reason behind this subsequent poor performance was the continuing deterioration in Exxon's return-on-capital-employed, a measure of the underlying performance of its assets. Shareholder returns go hand-in-hand with return on capital: Exxon's had been falling since the late 2000s.

Exxon's attempt to deliver production growth meant it was investing in evermore costly projects. In 2016, around a quarter of Exxon's reserves were comprised of high cost, low return assets such as Liquefied Natural Gas (LNG) and heavy oil/oil sands. But these types of assets made up 70% of its future potential projects. Clearly the company's cost base was only going one way – up.

Between 2005 and 2019, Exxon's unit development costs and operating costs more than doubled. With little change in oil prices, profits collapsed whilst the group's balance sheet value of its assets soared. Return on capital had already collapsed from around 30% in 2005 to 16% in 2014. By the end of 2019, it had fallen further to around 6%. Tellingly, Exxon's returns fell faster than Chevron's – a near 10% advantage in 2005 disappeared altogether by 2019.

To avoid its derating, Exxon should have exercised greater capital discipline, investing only in low cost projects. It certainly should have avoided investing in oil sands. But it seems as if its desire to deliver growth was a far stronger driver. What is ironic is that Exxon did not even deliver its promised growth. Reserves in 2019 are little different to those in 2005 and if we strip out the US\$40bn XTO acquisition, production is actually lower. So, investor returns were trashed in the pursuit of an undeliverable objective.

3 Hero to zero - the story of Exxon's collapse

Investors in Exxon saw total returns from their investment fall by nearly 10% from the end of 2014 till end 2019. Its peers saw gains of around 30% and the wider market rose by over 70%. In the past year or so, it has dropped out of the S&P 500 "Top ten" stocks and been removed from the Dow Jones Index. Quite embarrassing occurrences for what used to be the largest quoted company in the world.

Something was wrong with Exxon's strategy. And the oil price can't be to blame, otherwise its peers would have suffered similarly. So, much of the poor performance seems Exxon specific.

Exxon has often argued that it needed to invest to meet rising demand for oil and gas. But many of the projects Exxon invested in over the past decade were high cost and capital intensive. Even in a high oil price environment, that was a recipe for a deterioration in its return. Adding weak oil and gas prices into the equation post 2014 only exacerbated the drop in returns. Companies can only deliver high investor returns if their assets deliver high returns on capital. Exxon's didn't, so its investors suffered.

Its "invest for growth" strategy clearly did not work for shareholders. It would have been better for investors, in our view, if it had focussed on keeping costs low. The final blow for investors was that its growth strategy not only failed financially, it also failed to deliver any growth – either in reserves or production.

As we move towards an energy transition, it might be worth Exxon looking at a change in strategy. Back in 2014, Carbon Tracker highlighted the risks inherent in Exxon's then strategy. It concluded that "Looking at Exxon's resource estimates, the proportion of such high capital, lower return projects is likely to continue to rise potentially pressuring group returns – unless management changes course."

As we move into the low carbon energy transition, it is likely that demand for fossil fuels will decline making an "invest for growth" strategy very risky. Falling demand for any commodity tends to put pressure on prices and returns. Only low-cost companies are likely to survive such a scenario in our view. We wonder whether Exxon's management will learn from the past fifteen years and focus on costs rather than growth. If it had adopted such a strategy in the past, it might well have resulted in less financial pain for its shareholders.

3.1 Exxon's shareholder returns have been dire over the past five years

In an oil industry where the investment time frame is measured in decades, Exxon's fall from grace has been astonishingly quick, a mere five years. But as we will show, the seeds for Exxon's fall were sown over ten years ago. Its return to shareholders since the mid-noughties has been almost zero.

How is shareholder return measured? The return to shareholders is combination of capital growth and the payment of dividends. So, a company which yields 5% and whose shares rise in price by 10% will deliver a shareholder return of 15% in a single period. Dividends are assumed to be reinvested.

In the ten years up till 2010, Exxon's shareholders saw returns nearly double those of the wider market. It is hardly surprising, therefore, that Exxon was a core holding of many private shareholders and pension funds. It was then the largest company in the US stock-market.

Then things began to change. In eight of the ten years up till the end of 2019, Exxon's shareholder returns were below those of the market. Even worse, in five of those years, Exxon's returns were below that of its peer group. (Exxon defines its peer group as Chevron, Total, BP and Royal Dutch Shell.)

This chart shows the return investors would have received from US\$100 invested at the end of 2014. It is taken from ExxonMobil's 2019 Financial Statements and Supplemental Information and shows quite clearly what a bad investment Exxon had become. Investors in Exxon actually lost money between 2014 and 2019. And Exxon's underperformance relative to its peers and the wider market actually accelerated since 2016.

FIGURE 1 - EXXONMOBIL 5-YEAR CUMULATIVE TOTAL RETURNS



Source: ExxonMobil Financial Statements and Supplemental Information for 2019

A Covid aside: It is worth mentioning that all of the performance and valuation comments in this report relate to a period up till the end of 2019 and so do not include the 2020 collapse in the sector caused by the Covid-induced fall in oil prices. We have done this because we are analysing annual performance and valuation data: the 2020 annual data is not available, obviously. We would point out though that Exxon's market value has fallen by over US\$100bn since the end of 2019.

3.2 Exxon's derating is driver of its poor shareholder returns

Looking at valuations, it is clear that Exxon has been de-rated relative to other oil companies. So, the poor share price performance goes beyond the oil price. Exxon's own strategy may well be a material contributor. One useful valuation measure that shows this derating quite clearly is price to book.

What is price to book? A company's book value is the balance sheet valuation of its asset base. So, an oil field that cost US\$100m to develop would have a balance sheet value of US\$100m at the start of its life. A company's price to book is the ratio of the market value of its equity compared to this balance sheet valuation. If investors believe that the US\$100m investment can generate US\$300m in value, they might be willing to pay a price to book ratio of up to three The following chart shows the price to book ratios for Exxon and Chevron from end 2007 till end 2019.



FIGURE 2 – EXXONMOBIL'S DERATING (PRICE TO BOOK)

Source: MacroTrends

At the start of the period, Exxon's price-to-book ratio was nearly double that of Chevron's, showing investors believed it could deliver twice the value from its investments. By the end of 2019, Exxon's premium had disappeared. Exxon was no longer regarded as anything more than an ordinary supermajor. Some investors might say that Exxon's poor performance is down to the oil price not Exxon's strategy.

But by comparing Exxon to Chevron, we largely neutralise oil industry specific factors such as the oil price and currency. After all, as Chevron and Exxon are similar companies, changes in such external factors will likely have similar effects on each of them. Therefore, Exxon's derating is largely Exxon specific.

3.3 Exxon shareholders missed out on over US\$400bn

If we compare Exxon's shareholder returns to those of Chevron, we can see how much the former's shareholders lost out on. This chart shows the returns an investor would see if they had invested US\$100 in both companies at the end of 2007. This includes capital gains as well as dividends, which are assumed to be reinvested. An investment in Chevron would have doubled: an investment in Exxon has hardly changed. So, Exxon investors would have been worse off in real terms.



FIGURE 3 – EXXONMOBIL TOTAL SHAREHOLDER RETURN (2007=100)

Source: Company annual filings

When Exxon's derating began at the end of 2007, its market capitalisation (market value) was around US\$490 billion – near its all-time high market capitalisation. By end 2019, the capital gain on the shares plus dividends (reinvested) had risen to nearly US\$540bn. If invested in Chevron shares instead, shareholder total returns would have risen to US\$980bn. By investing in ExxonMobil rather than Chevron, investors lost out to the equivalent of US\$440bn.

4 Why did Exxon's shareholder returns deteriorate so badly?

Before answering that question, it is worth looking at how Exxon managed to deliver past investor returns that were materially higher than both the market and its industry peers. This is a total return chart taken from Exxon's 2010 Financial Statements and Supplemental Information.





Source: ExxonMobil Financial Statements and Supplemental Information for 2010

It shows that between 2000 and 2010, Exxon more than doubled investors' money, nearly twice the return on the wider market and 15% higher than its peer group. The period of best performance was from 2003 till 2007, where the improvement in Exxon's relative shareholder returns appear to be accelerating.

Exxon's "Financial & Operating Review" for 2007 proudly displays a chart showing its "record earnings" and its superior returns.



FIGURE 5 – EXXONMOBIL EARNINGS, TOTAL SHAREHOLDER RETURNS

Source: ExxonMobil Financial & Operating Review 2007

The bar chart on the far right shows a twenty-year record of shareholder returns that beats both the market and its industry peer group, quite impressive. The returns over five and ten years are also superior.

In order to deliver above-average investor returns, a company needs to deliver high return on its investments.

There are many ways of measuring returns from a business but one of the commonest is "return on capital". This is a ratio of earnings to the balance sheet value of a company's assets. There is not an automatic link between a high return on capital and shareholder returns. By that we mean that a 20% return on capital doesn't automatically generate a 20% shareholder return. But companies with high return on capital tend to deliver high shareholder returns, especially in capital intensive businesses like the oil industry.

What is return on capital? For the oil industry, it is common to use Net Operating Profit After Tax (NOPAT) divided by Capital Employed (Total Assets less Current Liabilities). Some market analysts use slightly different formulae and make other adjustments. But as we are looking at trends here, it doesn't matter as long as we use the same approach for all companies. We believe that thinking of ROCE as the amount of earnings generated from the asset base is the most useful concept.

In 2007, when Exxon's shareholders had seen a period of strong shareholder returns, Exxon's assets had been delivering impressive returns for several years, nearly 60% above its peers, as this chart from its Financial and Operating Review for that year shows. (In this chart, Exxon defines its peers as BP, Chevron and Total)

FIGURE 6 - EXXONMOBIL RETURN ON AVERAGE CAPITAL EMPLOYED



(1) Royal Dutch Shell, BP, and Chevron values are estimated on a consistent bas with ExxonMobil, based on public information.

Source: ExxonMobil Financial & Operating Review 2007

This is the sort of performance that likely contributed to Exxon's premium rating in the past. Simply put, Exxon was able to generate far more profit for each dollar invested than any of its peers. The comment on the chart above about "**ROCE Leadership**" demonstrated the importance management placed on the metric.

4.1 But from 2008, Exxon's returns started to fall





Source: ExxonMobil Financial Statements

Its production business, a key driver of its earnings, saw its returns start to slide from 2008 onwards, dropping below 10% in 2015, hitting zero in the following year. Of course, apologists for Exxon will claim that it was all the oil price's fault. And indeed, some of the poor performance can be attributed to the oil price.



FIGURE 8 - EXXONMOBIL PRODUCTION ROCE AND THE OIL PRICE

Source: ExxonMobil Financial Statements

But the price Exxon received for its oil production was the same in 2019 as it was in 2005 and yet Exxon's returns from its production business fell from around 45% to 8%. Its returns have been single digit since 2015 – and almost certainly will be again in 2020.



FIGURE 9 – EXXONMOBIL AND CHEVRON GROUP ROCE

In 2005, Exxon had a near 10% advantage over Chevron. That gap narrowed subsequently and disappeared in 2019. As they are similar companies, they are similarly affected by external factors such as the oil price. That suggests that the erosion of Exxon's premium is largely due to Exxon specific factors.

So why did Exxon's business returns deteriorate? In simple terms, it has to be either falling profits or a growing balance sheet – or both. One possible reason is higher costs. This was true of both capital costs (depreciation and exploration) and operating costs. Between 2005 and 2019, Exxon's unit costs of production more than doubled whereas its realisations (the price it gets for its production) were largely flat (but volatile).

Source: ExxonMobil, Chevron Financial Statements





A rise in combined costs from around US\$10 per barrel to US\$24 without any rise in oil prices is a recipe for compressed cashflow and profit margins and hence depressed returns. The other side of the return equation is the balance sheet. If a company invests heavily, its balance sheet begins to balloon which will also drag down returns.

As we will see, Exxon did invest aggressively – and its returns likely deteriorated as a consequence. To be fair, other companies did the same but the key issue here is that Exxon's returns moved from being top-tier to being run-of-the-mill. And its shareholders suffered accordingly: they paid a premium for what they thought was a superior company that turned out to be average.

One way of seeing how aggressive Exxon's capital investment programme became is to compare development costs to depreciation charges. Depreciation is a measure of past developments costs whereas development costs are the driver of future depreciation costs. We will compare per barrel costs of depreciation and development. Some might argue that this is not a fair comparison as a growing company's development costs will always be higher than the depreciation costs. Whilst this is true, in Exxon's case it is irrelevant. Why? As we will see later, Exxon hasn't been growing so the issue doesn't arise.



FIGURE 11 – EXXONMOBIL DEPRECIATION AND DEVELOPMENT COSTS (US\$/B)

There is a clear divergence between depreciation and development costs between 2005 and 2014. Development costs rose from around US\$7/barrel to nearly US\$20/barrel. Its development costs only came back under control in 2016 and that was more to do with the collapse in the oil price than a change in management strategy. The more than doubling in development costs in 2019 supports this view.

As mentioned earlier, the oil price in 2005 was similar to that in 2019 and yet Exxon's development spend per barrel nearly doubled between 2005 and 2019. At its peak in 2014, its unit capital spend was nearly triple that of 2005. Admittedly, other companies' costs rose as well, but they did not see the same derating and collapse in return on capital that Exxon did.

4.2 Underlying margins under pressure

As a result of this accelerating spend, Exxon's profitability from its production assets deteriorated. A high development spend will result in a higher depreciation charge once a project starts production. Between 2005 and 2019, the profit margin for Exxon's production business halved from US\$15/barrel to US\$7.6. The percentage margin fell from 33% in 2005 to 18% in 2019.



FIGURE 12 - EXXONMOBIL PRODUCTION PROFIT (US\$/B) AND MARGIN (%)

But this is just the profit side of the equation. When looking at returns, the size of the asset base is also important. We have already shown how Exxon's capital spend ballooned but so did its balance sheet. The most common measure of a company's operational asset base is capital employed.

4.3 Increased spend but no increase in reserves...

Exxon's increase in capital spend led to a boost in the balance sheet value of its assets. The capital employed associated with its production business more than tripled between 2005 and 2019. A near halving of profit combined with a more-than-tripling of the asset base can only lead to deteriorating returns.





Tellingly, the increase in the value of the asset base failed to lead to any increase in reserves. So not only did Exxon's aggressive investment policy hit returns, it failed to deliver its reserve growth objective.

4.4 ... and no growth in production for nearly a decade

Exxon's annual reports often carry comments regarding future growth prospects. For example, in 2014, Exxon's guidance suggested production of oil and gas would rise from 4.0 million barrels of oil equivalent per day (boe/d) to 4.3 million b/d in 2017. It actually delivered no growth in production whatsoever. In 2006, its guidance was that production would rise from 4.2 million b/d to nearly 4.8 million boe/d in 2011. It only rose to 4.5 million boe/d and excluding the XTO acquisition, it actually fell to just over 4.0 mboe/d.



FIGURE 14 - EXXONMOBIL PRODUCTION (THOUSAND BARRELS OIL EQUIVALENT PER DAY)

This suggests that Exxon's growth ambitions were somewhat over-optimistic. It was producing around 4 million barrels of oil equivalent a day (mmboe/d) in 2005. (Oil equivalent converts gas production in the thermal equivalent amount of oil). By 2019, it was producing slightly less than that amount. And if the US\$40bn acquisition of XTO in 2010 is ignored, it was well below 4 mmboe/d. Despite a major increase in capital expenditure since 2005, Exxon's volumes have been going downhill since 2011 – and since 2006 if XTO is ignored.

So, not only did Exxon's aggressive investment programme fail to generate net reserve additions, it failed to deliver underlying growth in production over more than a decade. And the aggressive spend led to a steady derating of Exxon's shares with obvious consequences for its shareholders. Exxon might have served its investors better if it had pursued a more conservative strategy, focussing on value rather than volume.

5 Where did Exxon go wrong?

Exxon breaks out its production earnings on a regional basis and this chart shows the results for 2005 and 2019.





Source: ExxonMobil Financial Statements

Its "Other" earnings (predominantly Africa, Asia and Europe) were relatively stable with higher costs being offset by higher realisations. Earnings in the US disappeared in 2019 due to a combination of sharply higher costs and a material fall in realisations, the latter being due to the fall in US gas prices due to oversupply caused by the shale "boom", to which Exxon contributed. "Non-US Americas" (which is predominantly Canada) also saw a collapse in earnings, almost entirely due to a tripling of costs: realisations were little changed.

If Exxon's Canadian and US operations had disappeared overnight, there would have been virtually no impact on its 2019 earnings. It's a simplistic approach but if we adjust Exxon's returns by removing its US and Canadian operations, we estimate that its capital employed would fall by around US\$90bn and earnings by US1bn. Its return on capital would have been near 10% rather than 6.5%. So Exxon's decision to invest in the US and Canada reduced its return on capital by around a third.

So, In Exxon's case, not investing in these high cost/low realisation assets would have been a better option for its shareholders. In our view, its US and Canadian investments have destroyed value. Since 2014, Exxon's Canadian upstream assets made a cumulative loss of around Can\$1 billion – i.e. a negative return. Its US upstream assets managed a return of around 1% over the same period – less than Exxon's cost of debt let alone its cost of equity. Neither return is sufficient to provide an acceptable return to shareholders.

But Exxon does not appear to have learned from the past. It continues to list projects that we believe will struggle to deliver an acceptable return. In the past (2016), Exxon provided a breakdown of the nature of its future potential projects, those it is considering for development, and its resource base, with discoveries it has made. (It no longer does so)





The key chart is the central one as this shows potential future developments. High cost, high carbon, low return projects such as LNG and Heavy Oil/Oil sands made up nearly 70% of potential future projects. Admittedly, since the oil price fall of 2014, some of these projects have been shelved. But if they made up only 27% of proven reserves but 70% of projects, the only way Exxon's costs were likely to go were up.

A quick way of showing how different projects can be in terms of economics, here is a list of some of Exxon's current projects with estimated breakeven prices. The breakeven price is the oil or gas price a project needs to make a commercial return which we assume is 10% (internal rate of return).

TABLE 1 – SELECTED EXXONMOBIL PROJECTS

Project	Туре	Breakeven
Oil		
Kearl (Canada)	Oil sands	US\$50-100/barrel
Guyana (Liza, Payara, Pacora)	Deepwater	US\$40-50/barrel
Current oil price (Brent)		US\$40-50/barrel
Gas		
Rovuma (Mozambique)	LNG	US\$6.6-7.0/MMBtu
Russian Gas to Europe	Competitor for LNG	US\$3.6-4.2/MMBtu
Current European spot price		US\$1.5-2.5/MMBtu
Current US gas price		US\$1.5-2.0/MMBtu
Current Japanese LNG price		US\$3.0-4.0/MMBtu

Source: Rystad Energy, CTI analysis

Note: Breakeven prices based on 10% discount rate

Under current oil prices, even Exxon's most competitive large-scale projects in Guyana will struggle to make a commercial return unless they are on time and on budget. But some of its oil sands and LNG projects are unlikely to be commercial unless prices rise materially.

5.1 So, what should Exxon do?

As Carbon Tracker argued back in 2014, Exxon should focus on low cost assets. Its decision to apparently emphasise growth seems to have cost its shareholders dearly.

Focussing on low cost reserves might well result in Exxon's production falling but it has been doing so anyway. Its foray into higher cost projects, especially oil sands, has not worked for shareholders. Higher costs have hurt profitability and made the company's earnings more volatile. So not only has it depressed returns, it has increased the risk profile of its business.

Even before the energy transition, a growth-based strategy like Exxon's was risky. Western governments have already taken action to curb oil demand – it has been falling by around 1% annually in Europe since 2004. Action on climate change is likely to see world oil demand start to decline. Historically, falling demand has tended to put pressure on prices.

In an energy transition, a low-cost strategy with capital discipline will be more beneficial for shareholders than chasing growth. Matching its volume ambitions to a Paris-accord demand profile would be a step in the right direction. By constraining capital expenditure, the company's portfolio would automatically focus on low cost developments. If only Exxon had done so back in 2014 when Carbon Tracker pointed out the potential problems that lay ahead, its shareholders might well have fared better. In absolute terms, they would have been even better off if they had sold stock – but hindsight is 20:20.

Disclaimer

Carbon Tracker is a non-profit company set up to produce new thinking on climate risk. The organisation is funded by a range of European and American foundations. Carbon Tracker is not an investment adviser, and makes no representation regarding the advisability of investing in any particular company or investment fund or other vehicle. A decision to invest in any such investment fund or other entity should not be made in reliance on any of the statements set forth in this publication. While the organisations have obtained information believed to be reliable, they shall not be liable for any claims or losses of any nature in connection with information contained in this document, including but not limited to, lost profits or punitive or consequential damages. The information used to compile this report has been collected from a number of sources in the public domain and from Carbon Tracker licensors. Some of its content may be proprietary and belong to Carbon Tracker or its licensors. The information contained in this research report does not constitute an offer to sell securities or the solicitation of an offer to buy, or recommendation for investment in, any securities within any jurisdiction. The information is not intended as financial advice. This research report provides general information only. The information and opinions constitute a judgment as at the date indicated and are subject to change without notice. The information may therefore not be accurate or current. The information and opinions contained in this report have been compiled or arrived at from sources believed to be reliable and in good faith, but no representation or warranty, express or implied, is made by Carbon Tracker as to their accuracy, completeness or correctness and Carbon Tracker does also not warrant that the information is up-to-date.

To know more please visit: <u>www.carbontracker.org</u> @carbonbubble