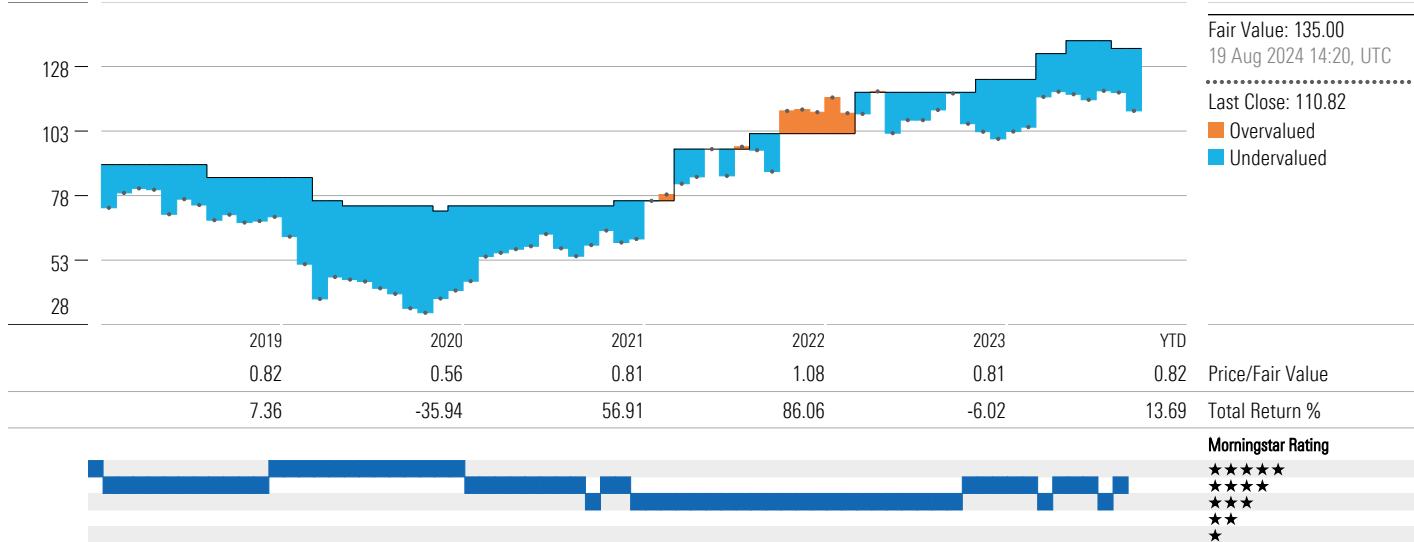


Exxon Mobil Corp **XOM** ★★★★★ 11 Sep 2024 21:22, UTC

Last Price 110.82 USD 10 Sep 2024	Fair Value Estimate 135.00 USD 19 Aug 2024 14:20, UTC	Price/FVE 0.82	Market Cap 487.47 USD Bil 11 Sep 2024	Economic Moat™ Narrow	Equity Style Box Large Value	Uncertainty High	Capital Allocation Exemplary	ESG Risk Rating Assessment¹ 7 Aug 2024 05:00, UTC
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Price vs. Fair Value



Total Return % as of 10 Sep 2024. Last Close as of 10 Sep 2024. Fair Value as of 19 Aug 2024 14:20, UTC.

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The primary analyst covering this company does not own its stock.

The ESG Risk Rating Assessment is a representation of Sustainalytics' ESG Risk Rating.

Exxon Stands Apart From Peers With Improving Portfolio and Earnings Growth

Business Strategy & Outlook Allen Good, CFA, Director, 19 Aug 2024

While many of its peers are diverting investment to renewables to achieve long-term carbon intensity reduction targets, ExxonMobil remains committed to oil and gas. It has responded to calls to bring in more outside voices to its board and announced emission reduction targets. It's also investing in low-carbon technologies, but these efforts are measured and keep oil and gas production at the core. While this strategy is unlikely to win praise from environmentally oriented investors, we think it's more likely to be more successful and probably holds less risk.

The end of oil is likely to occur, but not anytime soon. Gas is likely to have an even longer life due to the relative attractiveness of its emissions intensity and the need to supplement intermittent renewable power. These trends and growing demand for chemicals are what drive Exxon's investment strategy and will likely deliver superior returns.

To satisfy investors, Exxon capped spending with guidance of \$20 billion-\$25 billion a year for 2023-27, which should keep the dividend safe at \$40/barrel. However, earnings should still grow with plans to double earnings and cash flow from 2019 levels by 2027. Meanwhile, the dividend break-even should fall to \$30/bbl, thanks to structural cost efficiencies and high-margin new projects. This guidance excludes Pioneer Natural Resources.

Exxon Mobil Corp XOM ★★★★★

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Sector

 Energy

Industry

Oil & Gas Integrated

Business Description

ExxonMobil is an integrated oil and gas company that explores for, produces, and refines oil around the world. In 2023, it produced 2.4 million barrels of liquids and 7.7 billion cubic feet of natural gas per day. At the end of 2023, reserves were 16.9 billion barrels of oil equivalent, 66% of which were liquids. The company is one of the world's largest refiners with a total global refining capacity of 4.5 million barrels of oil per day and is one of the world's largest manufacturers of commodity and specialty chemicals.

Production will grow modestly through 2027, but portfolio profitability is set to improve due largely to high-margin Guyana volumes backfilling declines in North American dry gas production and lower-value divestments. Exxon's high-quality Permian position, further bolstered with the addition of Pioneer Natural, affords it capital flexibility and generates free cash flow; it should reach 2.0 million barrels of oil equivalent per day by 2027.

Exxon's downstream and chemical segments had suffered from decade-low industry margins, but market conditions are reverting to or surpassing midcycle levels, boosting near-term earnings. Investments are focused on producing higher-value lubricants and diesel in its downstream segment and performance products in its chemical segment, which should lift midcycle returns and earnings capacity.

Bulls Say Allen Good, CFA, Director, 19 Aug 2024

- ▶ Exxon has responded to shareholder concerns by reducing spending, appointing new board members, increasing disclosure, and announcing emission reduction targets.
- ▶ Exxon will see its portfolio mix shift to liquids pricing as gas volumes decline and new oil projects start production. Cash margins should improve as a result, thanks to Permian and Guyana volumes.
- ▶ With coordination between upstream and downstream operations, as well as integrated refining and chemical facilities, Exxon achieves a high level of integration that creates value, as opposed to simply owning the assets.

Bears Say Allen Good, CFA, Director, 19 Aug 2024

- ▶ Despite activist pressure and new board members, Exxon has not sufficiently reduced hydrocarbon investment levels and continues to develop long-life projects that hold a high risk of becoming stranded.
- ▶ Exxon lacks the level of investment in low-carbon businesses, such as renewable power, of its peers and risks not sufficiently reducing its emissions or securing its future as a going concern.
- ▶ If oil demand peaks and declines sooner than expected, ongoing investment in new projects and the acquisition of Pioneer will be stranded and value-destructive.

Economic Moat Allen Good, CFA, Director, 19 Aug 2024

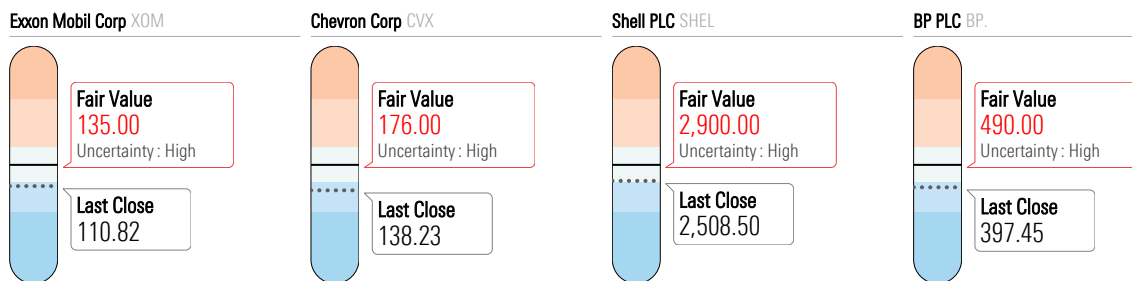
Exxon earns a narrow economic moat rating even as we forecast narrower future excess returns than achieved historically. However, we expect improvement from the weak levels of 2015-20, sufficient to maintain a narrow moat rating.

We continue to see Exxon's integrated model as a source of competitive advantage. Historically, Exxon has rated as the highest-quality integrated firm, given its ability to capture economic rents along the oil and gas value chain. While its peers operate a similar business model with the same goal, they have largely failed to replicate Exxon's success, as evidenced in their comparatively lower margins and

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Competitors



	Exxon Mobil Corp XOM	Chevron Corp CVX	Shell PLC SHEL	BP PLC BP
Economic Moat	Narrow	Narrow	None	None
Currency	USD	USD	GBX	GBX
Fair Value	135.00 19 Aug 2024 14:20, UTC	176.00 18 Mar 2024 18:12, UTC	2,900.00 19 Mar 2024 13:22, UTC	490.00 19 Aug 2024 16:48, UTC
1-Star Price	81.00	272.80	4,495.00	759.50
5-Star Price	209.25	105.60	1,740.00	294.00
Assessment	Undervalued 11 Sep 2024	Undervalued 11 Sep 2024	Fairly Valued 11 Sep 2024	Undervalued 11 Sep 2024
Morningstar Rating	★★★★★ 11 Sep 2024 21:22, UTC	★★★★★ 11 Sep 2024 21:23, UTC	★★★ 11 Sep 2024 01:38, UTC	★★★★★ 11 Sep 2024 01:34, UTC
Analyst	Allen Good, Director	Allen Good, Director	Allen Good, Director	Allen Good, Director
Capital Allocation	Exemplary	Exemplary	Standard	Standard
Price/Fair Value	0.82	0.78	0.87	0.81
Price/Sales	1.33	1.30	0.69	0.43
Price/Book	1.83	1.58	1.08	1.22
Price/Earning	12.40	13.69	7.73	7.43
Dividend Yield	3.43%	4.63%	4.24%	5.83%
Market Cap	487.47 Bil	250.22 Bil	15,592.09 Bil	6,510.30 Bil
52-Week Range	95.77 — 123.75	135.37 — 171.70	2,345.00 — 2,961.00	389.77 — 562.30
Investment Style	Large Value	Large Value	Large Value	Large Value

returns. Although Exxon continues to operate a highly integrated model and has aligned its management structure to do so, its lead in return on capital employed, a key metric of performance among the group, has eroded as upstream performance has waned. However, we consider the integration of lower-cost assets, particularly in the downstream and chemical segments, as an element of its cost advantage moat source that is still intact.

Aside from the secular decline in commodity prices from earlier levels, the erosion of Exxon's returns is largely attributable to its pursuit of production volume growth during the last decade or so through acquisitions and investment in higher-cost assets like oil sands. The most notable and ill-timed acquisition was the purchase of XTO Energy, an unconventional natural gas firm, in 2009 for \$41 billion. Ultimately, Exxon wrote off the bulk of the acquisition when it impaired its North American dry gas assets in the last several years. Exxon has recorded over \$24 billion in upstream impairments since 2016

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as natural gas prices fell from the time of the deal. The impairments reflect Exxon's view that future natural gas prices will remain lower than when the deal was struck and be insufficient to earn an appropriate return on these assets.

Exxon's reserves and reserve life have also declined as lower prices (reserves are booked based at year-end based on average prices for the year) have required it to remove higher-cost reserves from its proved reserve balances. The low prices of 2020 (\$42/bbl Brent) resulted in Exxon's proved reserves falling to 15.2 billion boe from 22.4 billion boe at year-end 2019, demonstrating the marginal amount of reserves the company has acquired, discovered, and developed recently.

The decline was primarily from debooking of bitumen reserves, largely tied to the Kearl oil sands mining project, that totaled 4.6 billion barrels or nearly 20% of total reserves in 2015. However, even at higher prices, these reserves are not economical. Exxon only booked bitumen reserves of 701 million barrels in 2016 and 1.0 billion barrels in 2017, when oil prices averaged \$45/bbl and \$54/bbl, respectively. Although they were largely restored in 2018 (\$71/bbl) and 2019 (\$64/bbl), they were once again removed in 2020, falling to 81 million barrels at the end of 2020, or less than 1% of total reserves. With higher average prices in 2022, they increased to 2.4 billion barrels.

Whether or not the bitumen reserves are booked is a technical matter; they could grow or decline in any given year based on prices. The important thing is that the bulk of Exxon's bitumen resources are clearly not able to deliver excess returns below our midcycle price of \$60/bbl, indicating that a large portion of reserves over the last 10 years do not qualify as a low-cost resource.

Removal of North American dry gas reserves also contributed to the decline in total reserves. After reserves peaked at 26.3 trillion cubic feet in 2011 shortly after close of the XTO deal, they fell steadily to 19.0 Tcf in 2019 and collapsed to 13.4 Tcf at year-end 2020, reflecting the steady decline in US natural gas prices. In total, Exxon's reserves and reserve life fell to 15.2 billion boe and 10.4 years in 2020 from an average of 23.9 billion and 15.8 years, respectively, the last 10 years.

The erosion of asset competitiveness during the last decade demonstrated by the impairments and debookings helps explain the decline in upstream ROCEs from an average of 22% from 2010 to 2014 to an average of 6% from 2015 to 2019. Exxon's upstream assets were not built for the lower prices of the those years.

The impairments and reserve bookings suggest Exxon's upstream does not earn a narrow moat rating, given our midcycle price assumptions. Moat ratings, however, are forward-looking, and although reserve base quality has clearly declined in the last 10 years, it does not tell the whole story of where Exxon is going.

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Although we expect overall returns to remain low, we see relatively high incremental returns on new invested capital.

Exxon has reduced and focused its capital budget on the highest-return areas, primarily Guyana and the Permian. Exxon estimates Guyana and Permian can both deliver 10% returns at oil prices down to \$35/bbl, figures that are supported by third-party researcher Rystad. Neither of these assets is fully reflected in reserve bookings, however, in this case making reserve disclosures less useful for projecting future returns and evaluating moats than explaining the past. For perspective, Exxon has reported discoveries of 10 billion boe (5 billion net, excluding government take) in Guyana, but its total booked reserves from its Canada/other Americas segment, which excludes oil sands and includes Guyana, has total reserve bookings of about 1.1 billion boe, including only 1.2 billion of new discoveries booked in the last six years.

Reserve bookings are even less applicable for evaluating Exxon's Permian position. For unconventional acreage, reserves are only booked once wells are drilled, leaving all undrilled acreage with zero associated reserve bookings. This explains why Exxon estimates Permian net resource of 10 billion boe, 70% liquids, while total US booked reserves are only 4.1 billion boe. Exxon has booked 3.5 billion barrels of liquid reserves in the US since 2015 as it has drilled wells. The company current reserve base largely does not reflect Guyana and Permian potential to uplift returns.


Both regions are expected to be the primary driver of new volumes during the next five years while commanding nearly 40% of upstream spending the next five years by Rystad's estimates, although the Permian spending will depend on oil prices, given its flexibility. In Guyana, Exxon estimates it will have six floating production storage and offloading units producing more than 1.2 mmb/d gross in 2027 compared with 1 FPSO and 30 mmb/d net in 2020. Meanwhile, Permian production should rise to 2.0 mmb/d in 2027 compared with 550 mmb/d in 2022, largely on the addition of Pioneer's assets.

In total, we expect upstream earnings per barrel to increase to \$12/bbl at \$60/bbl, well below historical levels at higher prices, but higher than the \$10/bbl in 2018 when oil prices were \$71/bbl Brent. The implied margin expansion is in large part due to the mix shift as Exxon adds higher-margin volumes from Guyana, but also a reduction in North American nonassociated dry gas production by 50% by 2025. The large amount of domestic natural gas production from the XTO acquisition dragged on returns, contributing to US upstream ROCEs averaging less than 1% in 2015-19, including impairments. As these volumes fall and are backfilled by higher-return Permian liquids volumes, returns should improve for the US upstream segment. Assuming modest growth in capital employed and the associated earnings improvement, we estimate Exxon can improve total upstream ROCEs to nearly 9% within our forecast period, well below historical levels, but enough to earn a narrow economic moat for the segment.

Exxon's downstream and chemicals position remains strong and is set to improve as well. Recent

Exxon Mobil Corp XOM ★★★★★

11 Sep 2024 21:22, UTC

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performance has been uneven as market margins have swayed from historically poor levels to historically high levels in 2022. Ultimately, we expect margins to revert to midcycle levels during our forecast. Meanwhile, investments are going toward improving yields of higher-value products, which should lead to margin expansion and a higher midcycle earnings capacity than in the past.

The size and physical integration between Exxon's refining and chemical manufacturing is a unique asset that creates an unequaled advantage that cannot easily be duplicated by peers. Approximately 80% of its refining capacity is integrated with chemical manufacturing facilities. The integrated network delivers wider margins and returns than peers, thanks to a low-cost position derived from economies of scale and the ability to process a variety of feedstocks into the highest-value products. The combination of the two should also provide greater value as transportation fuel demand wanes and chemical demand grows during the next decade.

Exxon's combined downstream and chemical segments' returns on capital employed have historically far outpaced the group average, and while returns have been below upstream's at times, they have been much more consistent. In contrast to upstream returns which have steadily declined since 2014 when oil prices broke below \$100/bbl, downstream and chemical returns have remained volatile, but in line with historical averages. From 2010 to 2014, downstream and chemical combined returns averaged 18% compared with 17% from 2015 to 2019. We expect the combined segments' returns to steadily recover from 2020 troughs and reach 20% by the end of our forecast on the combination of improved market conditions and investments in increasing high-margin products.

Our decision to maintain Exxon's narrow moat rating in light of its relatively weak top-line ROIC stands in contrast to our decision to downgrade our moat ratings for other integrated firms with similarly weak top-line ROIC profiles. In these latter cases, uncertainty around future strategy related to the energy transition and amount of investment in oil and gas is too great to maintain a narrow moat rating. Exxon is only committing a relatively small amount of capital (\$20 billion by 2027) to low-carbon technologies and not reorienting its business model away from oil and gas production. Also, while Exxon's top-line ROICs and excess returns look similarly weak, we view its underlying reinvestments as more attractive.

This strategy to keep focus on hydrocarbons holds risk as well, but over the next decade we do not see a material decline in global oil and gas demand as likely. Given hydrocarbons require investment in existing and new field to maintain global supply, we have a greater level of confidence in what Exxon's returns will be a decade from now as opposed to firms that are investing in lower-return, highly competitive areas such as renewable power generation.

Exxon is exposed to several environmental, social, and governance-related risks, but these do not imperil its moat rating, in our view, as most fall outside the 10-year narrow moat window or are not probable or material enough risk to cause material value destruction. Exxon's primary ESG risk stems from carbon

Exxon Mobil Corp XOM ★★★★★

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emissions in its operations and use of its products, emissions, effluents, and waste generated in operations, such as oil spills and poor community relations.

The risk from carbon emissions is most likely to materialize through a carbon tax, which increases the price of end products to consumers, reducing demand over time and threatening Exxon's core business. We expect carbon taxes to gain greater adoption over time, but think the impact on hydrocarbon demand remains more than a decade away.

Exxon's upstream greenhouse gas intensity is rather high for its peer group at 36.4 kg CO₂e/boe (2020) by our estimates due to its oil sands operations, making it a higher-cost producer. However, it is investing to improve its emissions intensity and reduce methane leakage and flaring. It has introduced emission reduction targets including reducing corporatewide greenhouse gas intensity by 20%-30% by 2030 from 2016 levels and to achieve net zero Scope 1 and 2 emissions from operated assets by 2050. However, about 90% of emissions from oil and natural gas occur during combustion (Scope 3) which the company can do little about.

Oil spills are an ever-present risk for oil companies operating offshore and can be devastating to a firm's value, as BP's Macondo incident in the Gulf of Mexico shows. While oil companies regularly cause spills, most are immaterial in size and associated fines and cleanup costs are manageable. Large spills such as Macondo are very rare and do not factor into any of our scenario modeling.

Lastly, global oil companies such as Exxon often operate in frontier areas such as Guyana, Mozambique, and Papua New Guinea, where oil and gas development is new and can cause friction with local communities. Poor community relations can cause development delays, higher costs, or concession disputes. In more mature areas such as Nigeria, Exxon has experienced social unrest that resulted in disrupted operations. These risks come with the territory and are manageable, in our view. A delay or disruption of any one project is unlikely to materially affect the value of a firm of Exxon's size.

Fair Value and Profit Drivers Allen Good, CFA, Director, 19 Aug 2024

We are reducing our fair value estimate to \$135 per share from \$138 after incorporating the latest strategic guidance, financial results, and commodity prices. This implies a forward enterprise value/EBITDA multiple of 7.2 times our 2025 EBITDA forecast of \$85.2 billion. Our fair value estimate is derived using Morningstar's standard three-stage discounted cash flow methodology. With this methodology, a terminal value is derived using our assumptions for long-term earnings growth and return on new invested capital. This valuation methodology also incorporates our moat rating, which reflects how long we expect a given firm to deliver excess returns on invested capital from a discounted cash flow analysis.

In our DCF model, we assume Brent prices of \$83 per barrel in 2024 and \$76 per barrel in 2025. Our

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long-term oil price assumption is \$60 per barrel. We assume a cost of equity of 7.5% and weighted average cost of capital of 7.3%.

We assume Exxon's production will grow modestly during the next five years, nearly reaching its guided target of 4.2 mmbob/d in 2027, excluding Pioneer, but could be lower because of divestments, which we do not explicitly model. Otherwise, we include margin expansion on higher prices and the addition of higher-margin volumes from the Permian and Guyana. We forecast steady earnings growth in the downstream and chemical segments as new projects and capacity are brought online during the next five years as Exxon expects to triple earnings by 2027.

Risk and Uncertainty Allen Good, CFA, Director, 19 Aug 2024

Exxon holds a High Morningstar Uncertainty Rating based on fundamental exposure to commodity prices, evaluation of ESG risks, and the range of return outcomes used by our star rating system.

Exxon faces the risk that global oil demand falls quickly, leaving it unable to fully develop its reserves. Our research suggests oil demand will not decline materially for some time, implying more supply will be needed and the risk of stranded assets for Exxon is low. More rapid adoption of electric vehicles in the US and Europe could threaten the long-term viability of Exxon's downstream assets, but we think they will remain viable for decades given their low cost, complexity, size, and integration with chemicals.

Investment in large, capital-intensive projects, such as natural gas liquefaction, exposes Exxon to the risk that lower commodity prices or budgets overruns will make those projects no longer economical.

Exxon also holds several ESG-related risks, but based on our framework, they are not collectively material enough to alter our scenario analysis-determined Uncertainty Rating. ESG-related risks include changes in policy related to climate change, such as a carbon tax that could result in higher costs, reduced demand, or stranded resources. A more immediate risk involves lawsuits related to past climate change disclosure whose outcome is uncertain. As a developer of projects in frontier regions such as Mozambique or Papua New Guinea, Exxon faces the risk that disputes over development plans with local communities could result in disruption to new construction or existing operations. Operating in offshore environments exposes Exxon to the risk of large oil spills that could result in material losses through lost revenue, fines or penalties, or loss of license to operate.

Capital Allocation Allen Good, CFA, Director, 19 Aug 2024

Based on our capital allocation framework, which evaluates the soundness of the balance sheet, investment strategy, and appropriateness of shareholder distributions, Exxon earns an Exemplary Morningstar Capital Allocation Rating.

Exxon Mobil Corp XOM ★★★★★

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Although Exxon's business has a high amount of operating leverage as well as revenue cyclicality, management typically operates with relatively low levels of debt that retain flexibility in times of market weakness. This is evident in its ability to raise debt during 2020, combined with capital expenditure reductions, to protect the dividend and still keep net debt/capital under 30%. Thanks to cost reductions, lower spending, and improved market conditions, deleveraging has already occurred, all of which amounts to a sound balance sheet in our framework.

Exxon scores a standard rating for its investment strategy, in our view, although this might rate as controversial. Management's past capital allocation decisions, including ill-timed acquisitions and large, high-cost projects, cost Exxon its historical returns on capital premium relative to peers. Also, Exxon's recent investment plans were relatively aggressive to peers, even though they were aimed at projects to improve its cost position across its integrated platform. However, our rating is forward-looking, and Exxon has trimmed spending and will peruse moat-enhancing, low-cost, high-margin upstream projects in Guyana, the Permian, and LNG (PNG and Mozambique) while its downstream projects are improving refining yields of high-value products and increase production of high-value chemicals. We concede that some of the longer-life projects like LNG and investments in downstream leave Exxon open to the risk of faster-than-expected renewable power installation or EV adoption, which could leave those assets stranded.

Recently completed acquisitions of Denbury and Pioneer Natural Resources make strategic sense and were done at fair valuations.

We view positively Exxon's break with peers in avoiding investment in renewable power generation, where it lacks expertise and it is difficult to carve out a competitive advantage. Instead, its investment in low-carbon solutions will focus on carbon capture where it's already a leader and where an innovation could ultimately improve the competitive position of its existing operations by reducing emissions in specific projects. Although the technology remains expensive in most applications and currently is not viable to deploy on a large scale, Exxon's investment of \$20 billion by 2027 is measured.

We rate Exxon's shareholder distribution policy as mixed. It struggled to pay the dividend in 2020, but recent actions to reduce costs and capital spending should keep it affordable in future. In the past, Exxon has relied on share repurchases to return excess cash. This policy has resulted in the bulk of repurchases occurring during times of high oil prices and thus high share prices. Although 90% of repurchases were completed when share prices were below our fair value estimate at the time, most also occurred when share prices were at relatively high levels, much higher than now. So, although the repurchases looked reasonable at the time, in hindsight they appear ill-timed, given subsequent low share prices and the need to fund the dividend with debt. Exxon has resumed repurchasing shares, but first reduced debt and breakeven levels, ensuring that the dividend is not at risk.

Exxon Mobil Corp XOM ★★★★★

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Analyst Notes Archive

Exxon Earnings: Strong Quarter Demonstrates Progress on Long-Term Objectives; Shares Undervalued

Allen Good, CFA, Director, 2 Aug 2024

Exxon's second-quarter adjusted earnings increased to \$9.2 billion from \$7.9 billion the year before, surpassing market expectations. The increase was largely attributable to the inclusion of two months of Pioneer results and the contribution of structural cost savings that offset weaker energy product results from weaker refining margins.

Exxon reduced structural costs by another \$0.6 billion during the quarter and \$1.0 billion year to date, bringing the cumulative amount to \$10.7 billion compared with 2019 while keeping it on track to achieve its \$5 billion target by 2027 from 2023. Year-over-year production increased to 4,358 thousand barrels of oil equivalent per day from 3,608 mboe/d thanks to the inclusion of Pioneer but also strong Permian and Guyana growth. As we've noted earlier, the addition of these high-margin volumes, along with the cost reductions, should continue for the next few years, improving upstream profitability.

For the quarter, Exxon paid dividends of \$4.3 billion and repurchased \$5.2 billion in shares, in line with guidance. Given the closing of the Pioneer deal, Exxon can increase repurchases and plans to repurchase a total of \$19 billion this year, implying about \$11 billion in the second half of the year, with a rate of \$20 billion annually through 2025.

We plan to update our model but do not anticipate any material changes to our narrow moat rating or \$138 fair value estimate, leaving shares undervalued. Exxon remains one of the most undervalued integrated oils in our coverage and our preferred play given its earnings growth potential.

OPEC+ Production Cut Extensions Send Clear Signal That Oil Markets Remain Oversupplied

Stephen Ellis, Strategist, 3 Jun 2024

The complexity of OPEC's meeting outcome from June 2 should not obscure our view that it continues to operate from a position of weakness in an oversupplied market, pointing to near-term oil price weakness. We anticipate oil prices are more likely to hit \$70 a barrel (WTI) and perhaps below \$65 by the end of 2024. OPEC has three separate cuts in progress at the moment, totaling 5.86 million barrels per day. A groupwide cut of about 2 million barrels per day was originally set to expire at the end of 2024 but was extended to the end of 2025. Similarly, a 1.7 million barrels per day voluntary cut by certain members was also extended to the end of 2025 from the end of 2024. Finally, a second 2.2 million barrels per day voluntary cut by certain members was extended in full for another quarter, as it was due to expire at the end of June, before gradually being phased out by September 2025.

Undervalued options have been harder to find in the energy space recently, but we favor SLB, Enbridge, TC Energy, APA, and Exxon Mobil.

Exxon Mobil Corp XOM ★★★★★

11 Sep 2024 21:22, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment ¹
110.82 USD 10 Sep 2024	135.00 USD 19 Aug 2024 14:20, UTC	0.82	487.47 USD Bil 11 Sep 2024	 Narrow	 Large Value	High	Exemplary	 7 Aug 2024 05:00, UTC

The key phrase in the announcement, in our view, was that the monthly increases from the reversal of the 2.2 million barrels per day cut can be “paused or reversed subject to market conditions.” In other words, we could expect the 2.2 million barrels per day reversal to be placed on hold, if the market remains oversupplied.

The extensions look particularly weak when OPEC is assuming about 2.25 million barrels per day of oil demand growth in 2024, while the International Energy Agency is less than half of that at 1.06 million barrels per day. Further, the International Energy Agency and US Energy Information Administration have been cutting demand growth forecasts for 2024, while OPEC’s forecast has been unchanged since the start of 2024. In other words, OPEC’s own demand forecast looks potentially stale, and even if OPEC believes it remains accurate, it has now been undercut by the extensions of production cuts.

Exxon Earnings: Ignore Earnings Shortfall as Long-term Growth and Improvement on Track Allen Good, CFA, Director, 26 Apr 2024

Exxon's first-quarter adjusted earnings fell to \$8.2 billion from \$11.6 billion the year before, falling slightly short of market expectations. The decline was largely attributable to lower gas prices and narrower refining margins, both of which fell back toward historical averages from highs last year.

Exxon reduced structural costs by another \$0.4 billion during the quarter, bringing the cumulative amount to \$10.1 billion compared with 2019 while keeping it on track to achieve its \$15 billion target by 2027. Year-over-year production fell slightly including divestments but grew slightly excluding these impacts. Importantly, high-margin volumes from Guyana continue to grow while divested assets represent lower margin production, continuing the portfolio high-grading that should continue for the next few years. Both the cost reductions and greater earnings capacity from its businesses underpin the target of doubling earnings and cash flow from 2019 levels by 2027.

For the quarter, Exxon paid dividends of \$3.8 billion and repurchased \$3.0 billion in shares, in line with guidance. The share repurchase program was paused prior to the Pioneer Natural Resources shareholder special meeting. After the closing of the deal, expected in the second quarter, Exxon will increase the repurchase rate to \$20 billion annually. We have already incorporated the impact into our model, keeping our \$133 fair value estimate unchanged. Exxon continues to trade at a meaningful discount to our valuation.

Shares sold off on the earnings miss, but nothing has changed in our view, keeping narrow-moat Exxon our preferred integrated oil company, given its earnings growth potential on a combination of high-quality asset additions and cost savings, which should ultimately lead to a stronger competitive position and greater shareholder returns.

Israel’s Response to Iran’s Strike Confirms Minimal Escalation View; Oil Markets Remain

Exxon Mobil Corp XOM ★★★★★

11 Sep 2024 21:22, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment ¹
110.82 USD 10 Sep 2024	135.00 USD 19 Aug 2024 14:20, UTC	0.82	487.47 USD Bil 11 Sep 2024	 Narrow	 Large Value	High	Exemplary	 7 Aug 2024 05:00, UTC

Oversupplied Stephen Ellis, Strategist, 19 Apr 2024

Israel has launched strikes against Iran in retaliation for an attack on April 14 (see our April 15 note for more analysis). The limited scope of Israel's attack, which also included targets in Syria and Iraq; Iran's subdued response; and the ample warning Israel provided confirm our view that both parties wish to de-escalate tensions. We'd characterize this as a de-escalation attack. This view is in line with broader US and Group of Seven goals.

We reiterate our view that the recent upward movement in oil prices since February 2024 has been largely attributable to geopolitical risks, not supply, and we see more downside risks to \$75 a barrel by the end of 2024 compared with a maintained movement beyond \$100 a barrel. Saudi Arabia and OPEC+ have more than 5 million barrels per day of supply that can be added back to the markets if needed to cool off an oil price spike.

The US did announce new sanctions on Iran on April 18, but we see them as minimal. The Biden administration is heavily incentivized to keep oil markets calm during an election year. We see this in the type of sanctions announced, which are targeted toward Iranian military entities versus oil-related activities.

For now, this situation shields Iranian oil exports, which were about 1.5 million-1.6 million barrels per day in early 2024 compared with total Iran oil production of about 3.1 million barrels per day. We remain wary of a potential disruption to the Hormuz Strait, which handles about 30% of the world's crude. However, the majority of the crude that transits the strait heads to Asia, and virtually all of Iran's crude is purchased by China. As a result, the US has very limited influence and ability to pressure Iran, as China is unlikely to stop buying Iranian crude. A more concerted effort by the US to pressure Iran and China via diplomatic means and sanctions is also likely to threaten US-China relationships, creating a new set of challenges.

Iran's Escalation Is Already Priced Into Oil Prices; We See More Price Downside Than Upside

Stephen Ellis, Strategist, 15 Apr 2024

We believe the Iranian drone and missile attack on Israel over the weekend places some additional stress on the oil markets. However, the ample warning from Iran ahead of time publicly and privately amid rising geopolitical tensions means the attack was already reflected via a higher geopolitical risk premium in oil prices, in our view. We attribute nearly all of the increase in oil prices to around \$91 a barrel from the mid-70s in February to geopolitical concerns versus supply risks. On the supply side, Saudi Arabia and OPEC+ have about 5 million barrels per day of supply—if not more—that can be returned to the oil markets if prices were to overheat and spike well above \$100 a barrel. We expect there to be more downside risks than upside at the moment to oil prices. In fact, we see higher potential to touch \$75 by the end of 2024 versus a sustained movement beyond \$100 a barrel.

Exxon Mobil Corp XOM ★★★★★ 11 Sep 2024 21:22, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment¹
110.82 USD <small>10 Sep 2024</small>	135.00 USD <small>19 Aug 2024 14:20, UTC</small>	0.82	487.47 USD Bil <small>11 Sep 2024</small>	 Narrow	 Large Value	High	Exemplary	 <small>7 Aug 2024 05:00, UTC</small>

We warned in our Oct. 9 note that the major risk for the oil markets remains a direct escalation of hostilities between Iran and Israel. This is not that scenario. We see this as a more limited retaliation for an earlier Israeli strike on the Iranian embassy in Syria, and with this attack, Iran stated it considered the matter complete. While we would consider tensions in the region to be somewhat combustible, Saudi Arabia and Iran recently restored diplomatic ties, suggesting we are far away from a scenario similar to the one that led to the attack on the Saudi Arabian Abqaiq oil facility in 2019, temporarily shutting down more than half of Saudi Arabia’s oil production. The US and other Group 7 countries are urging Israel to consider the successful defense against the strike as a success and not retaliate.

In Expected Move, OPEC+ Extends Voluntary Oil Production Cuts Stephen Ellis, Strategist, 4 Mar 2024

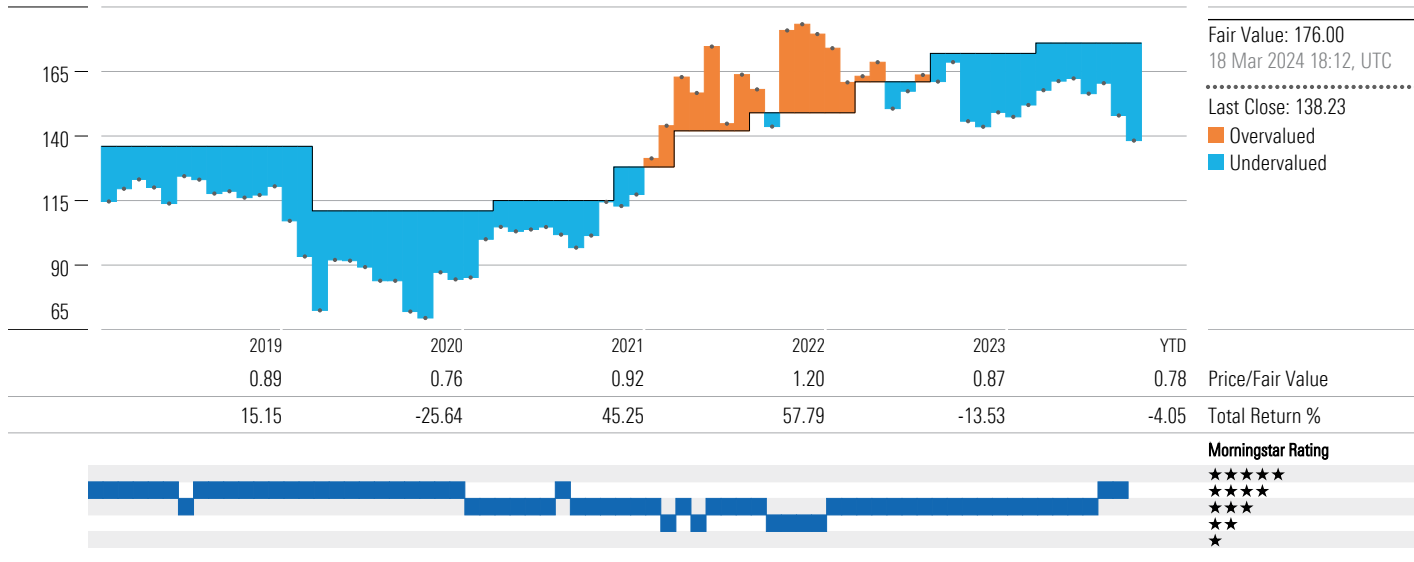
OPEC announced that its voluntary cuts due to expire at the end of March have been extended until the end of June. Since oil markets remain weak, we had expected OPEC and its allies to extend the voluntary cuts for another quarter. The 2.2 million barrels per day in voluntary cuts, largely shouldered by Saudi Arabia and to a lesser extent Russia, were originally implemented as a temporary effort last year but have been extended several times as the market has remained oversupplied, in our view.

Per Saudi Arabia, the cuts will be reversed “gradually,” subject to market conditions. We don’t expect any hurry from OPEC+ to bring these barrels back to market, especially as the market faces oil inventory builds later this year, suggesting continued oversupply. We remain skeptical that these cuts will be reversed in the second half of the year. Saudi Arabia’s recent decision to forgo an expansion of its production capacity to 13 million barrels per day by 2027—an incremental 1 million barrels per day improvement—is also supportive of the country attempting to defend oil prices by taking more speculative capacity out of the market. ■■

Exxon Mobil Corp XOM ★★★★★ 11 Sep 2024 21:22, UTC

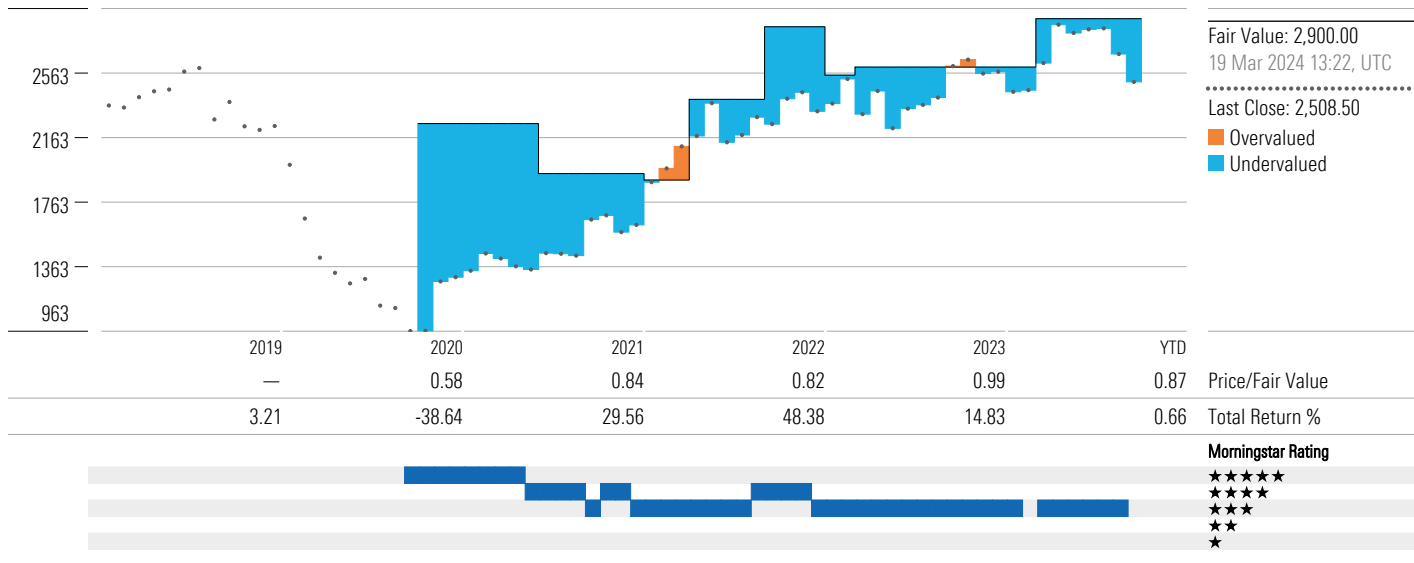
Competitors Price vs. Fair Value

Chevron Corp CVX



Total Return % as of 10 Sep 2024. Last Close as of 10 Sep 2024. Fair Value as of 18 Mar 2024 18:12, UTC.

Shell PLC SHEL

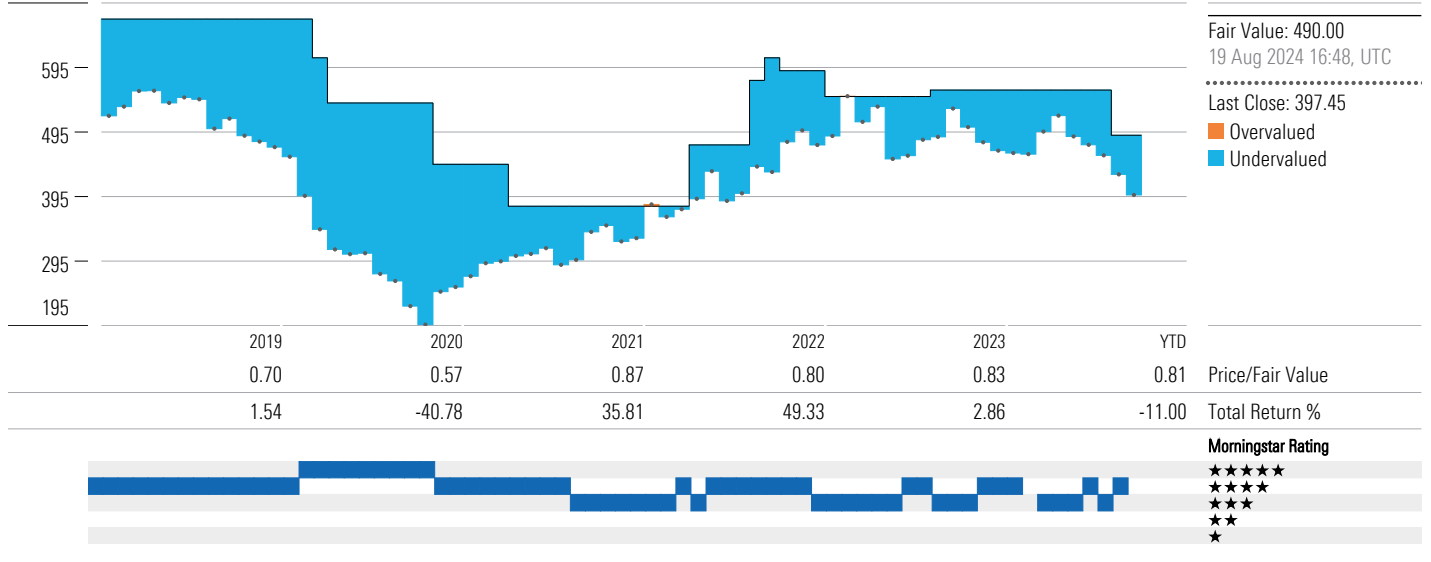


Total Return % as of 10 Sep 2024. Last Close as of 10 Sep 2024. Fair Value as of 19 Mar 2024 13:22, UTC.

Exxon Mobil Corp XOM ★★★★★ 11 Sep 2024 21:22, UTC

Competitors Price vs. Fair Value

BP PLC BP.



Total Return % as of 10 Sep 2024. Last Close as of 10 Sep 2024. Fair Value as of 19 Aug 2024 16:48, UTC.

Exxon Mobil Corp XOM ★★★★★

11 Sep 2024 21:22, UTC

Last Price 110.82 USD 10 Sep 2024	Fair Value Estimate 135.00 USD 19 Aug 2024 14:20, UTC	Price/FVE 0.82	Market Cap 487.47 USD Bil 11 Sep 2024	Economic Moat™ Narrow	Equity Style Box Large Value	Uncertainty High	Capital Allocation Exemplary	ESG Risk Rating Assessment† 7 Aug 2024 05:00, UTC
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Morningstar Historical Summary

Financials as of 30 Jun 2024

Fiscal Year, ends 31 Dec	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	YTD	TTM
Revenue (USD Bil)	394	240	201	237	279	256	179	277	399	335	170	341
Revenue Growth %	-6.4	-39.1	-16.4	18.2	17.8	-8.5	-30.1	54.9	44.1	-16.1	3.6	-6.4
EBITDA (USD Bil)	69	40	31	39	50	40	18	53	103	74	37	74
EBITDA Margin %	17.6	16.8	15.3	16.5	18.1	15.6	10.2	19.1	25.7	22.2	21.8	21.7
Operating Income (USD Bil)	34.08	12.88	0.94	12.07	20.84	11.53	-30.65	23.23	63.55	43.75	20.78	40.70
Operating Margin %	8.6	5.4	0.5	5.1	7.5	4.5	-17.2	8.4	15.9	13.1	12.2	12.0
Net Income (USD Bil)	32.52	16.15	7.84	19.71	20.84	14.34	-22.44	23.04	55.74	36.01	17.46	34.16
Net Margin %	8.3	6.7	3.9	8.3	7.5	5.6	-12.6	8.3	14.0	10.8	10.3	10.0
Diluted Shares Outstanding (Mil)	4,282	4,196	4,177	4,256	4,270	4,270	4,271	4,275	4,205	4,052	4,158	4,089
Diluted Earnings Per Share (USD)	7.60	3.85	1.88	4.63	4.88	3.36	-5.25	5.39	13.26	8.89	4.20	8.36
Dividends Per Share (USD)	2.70	2.88	2.98	3.06	3.23	3.43	3.48	3.49	3.55	3.68	1.90	3.76

Valuation as of 30 Aug 2024

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Recent Qtr	TTM
Price/Sales	1.0	1.1	1.7	1.4	1.1	1.1	0.9	1.1	1.2	1.2	1.4	1.4
Price/Earnings	11.6	16.4	42.2	27.2	12.5	20.3	52.9	-44.1	9.0	9.9	14.1	14.1
Price/Cash Flow	8.3	9.8	19.8	11.8	8.4	9.3	10.3	7.5	6.1	6.9	8.6	8.8
Dividend Yield %	2.92	3.69	3.3	3.66	4.74	4.92	8.44	5.7	3.22	3.68	3.27	3.22
Price/Book	2.2	1.9	2.2	1.9	1.5	1.6	1.0	1.6	2.4	2.0	2.5	2.0
EV/EBITDA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Operating Performance / Profitability as of 30 Jun 2024

Fiscal Year, ends 31 Dec	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	YTD	TTM
ROA %	9.3	4.7	2.4	5.8	6.0	4.1	-6.5	6.9	15.8	9.7	4.2	8.3
ROE %	18.7	9.4	4.6	11.1	11.0	7.5	-12.9	14.1	30.7	18.0	7.4	14.6
ROIC %	16.3	7.9	3.9	9.1	9.3	6.4	-9.3	10.7	24.9	15.2	6.4	12.6
Asset Turnover	1.1	0.7	0.6	0.7	0.8	0.7	0.5	0.8	1.1	0.9	0.4	0.8

Financial Leverage

Fiscal Year, ends 31 Dec	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Recent Qtr	TTM
Debt/Capital %	6.3	10.5	14.7	11.5	9.7	12.1	23.1	20.5	17.2	15.5	12.0	—
Equity/Assets %	49.9	50.7	50.7	53.8	55.4	52.9	47.2	49.7	52.8	54.4	58.3	—
Total Debt/EBITDA	0.4	1.0	1.4	1.1	0.7	1.2	3.7	0.9	0.4	0.6	1.2	—
EBITDA/Interest Expense	242.0	129.6	67.8	65.2	65.9	48.1	15.8	55.8	128.6	87.5	75.5	79.4

Morningstar Analyst Historical/Forecast Summary as of 19 Aug 2024

Financials	Estimates					Forward Valuation	Estimates					
	2022	2023	2024	2025	2026		2022	2023	2024	2025	2026	
Fiscal Year, ends 31 Dec 2023												
Revenue (USD Mil)	413,680	344,582	340,905	327,851	304,953	Price/Sales	1.1	1.2	1.4	1.5	1.6	
Revenue Growth %	44.8	-16.7	-1.1	-3.8	-7.0	Price/Earnings	8.2	11.0	11.9	11.3	10.7	
EBITDA (USD Mil)	103,073	74,987	78,998	85,211	87,661	Price/Cash Flow	—	—	—	—	—	
EBITDA Margin %	24.9	21.8	23.2	26.0	28.7	Dividend Yield %	3.2	3.7	3.5	3.7	3.9	
Operating Income (USD Mil)	79,033	54,346	57,522	61,209	62,623	Price/Book	2.3	1.9	2.1	2.1	2.0	
Operating Margin %	19.1	15.8	16.9	18.7	20.5	EV/EBITDA	4.6	5.4	6.4	5.9	5.8	
Net Income (USD Mil)	56,222	36,724	38,492	41,920	42,968							
Net Margin %	13.6	10.7	11.3	12.8	14.1							
Diluted Shares Outstanding (Mil)	4,205	4,052	4,179	4,325	4,206							
Diluted Earnings Per Share(USD)	13.37	9.06	9.21	9.69	10.22							
Dividends Per Share(USD)	3.54	3.68	3.85	4.04	4.22							

Exxon Mobil Corp **XOM** ★★★★★ 11 Sep 2024 21:22, UTC

Last Price 110.82 USD 10 Sep 2024	Fair Value Estimate 135.00 USD 19 Aug 2024 14:20, UTC	Price/FVE 0.82	Market Cap 487.47 USD Bil 11 Sep 2024	Economic Moat™ Narrow	Equity Style Box Large Value	Uncertainty High	Capital Allocation Exemplary	ESG Risk Rating Assessment¹ 7 Aug 2024 05:00, UTC
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ESG Risk Rating Breakdown

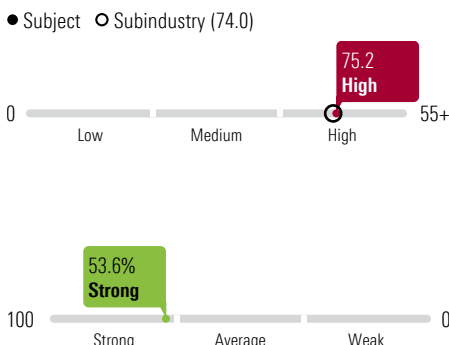
Exposure

Company Exposure ¹	75.2
– Manageable Risk	63.2
Unmanageable Risk²	12.0

Management

Manageable Risk	63.2
– Managed Risk ³	33.9
Management Gap⁴	29.3

Overall Unmanaged Risk 41.3



- ▶ Exposure represents a company’s vulnerability to ESG risks driven by their business model
- ▶ Exposure is assessed at the Subindustry level and then specified at the company level
- ▶ Scoring ranges from 0-55+ with categories of low, medium, and high-risk exposure
- ▶ Management measures a company’s ability to manage ESG risks through its commitments and actions
- ▶ Management assesses a company’s efficiency on ESG programs, practices, and policies
- ▶ Management score ranges from 0-100% showing how much manageable risk a company is managing

ESG Risk Rating



ESG Risk Rating Assessment⁵



ESG Risk Rating is of Aug 07, 2024. Highest Controversy Level is as of Sep 08, 2024. Sustainalytics Subindustry: Integrated Oil & Gas. Sustainalytics provides Morningstar with company ESG ratings and metrics on a monthly basis and as such, the ratings in Morningstar may not necessarily reflect current Sustainalytics’ scores for the company. For the most up to date rating and more information, please visit: sustainalytics.com/esg-ratings/.

ESG Risk Ratings measure the degree to which a company’s value is impacted by environmental, social, and governance risks, by evaluating the company’s ability to manage the ESG risks it faces.

1. A company’s Exposure to material ESG issues 2. Unmanageable Risk refers to risks that are inherent to a particular business model that cannot be managed by programs or initiatives 3. Managed Risk = Manageable Risk multiplied by a Management score of 53.6% 4. Management Gap assesses risks that are not managed, but are considered manageable 5. ESG Risk Rating Assessment = Overall Unmanaged Risk = Management Gap plus Unmanageable Risk

Peer Analysis 07 Aug 2024

Peers are selected from the company’s Sustainalytics-defined Subindustry and are displayed based on the closest market cap values

Company Name	Exposure	Management	ESG Risk Rating
Exxon Mobil Corp	75.2 High 0 — ● 55+	53.6 Strong 100 — ● 0	41.3 Severe 0 — ● 40+
BP PLC	79.6 High 0 — ● 55+	68.5 Strong 100 — ● 0	33.8 High 0 — ● 40+
Chevron Corp	72.1 High 0 — ● 55+	60.8 Strong 100 — ● 0	35.3 High 0 — ● 40+
Shell PLC	75.8 High 0 — ● 55+	67.8 Strong 100 — ● 0	32.4 High 0 — ● 40+
TotalEnergies SE	73.3 High 0 — ● 55+	77.2 Strong 100 — ● 0	25.6 Medium 0 — ● 40+

Appendix

Historical Morningstar Rating

Exxon Mobil Corp XOM 11 Sep 2024 21:22, UTC

Dec 2024	Nov 2024	Oct 2024	Sep 2024	Aug 2024	Jul 2024	Jun 2024	May 2024	Apr 2024	Mar 2024	Feb 2024	Jan 2024
—	—	—	★★★★	★★★	★★★★	★★★★	★★★★	★★★	★★★★	★★★★	★★★★
Dec 2023	Nov 2023	Oct 2023	Sep 2023	Aug 2023	Jul 2023	Jun 2023	May 2023	Apr 2023	Mar 2023	Feb 2023	Jan 2023
★★★★	★★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★
Dec 2022	Nov 2022	Oct 2022	Sep 2022	Aug 2022	Jul 2022	Jun 2022	May 2022	Apr 2022	Mar 2022	Feb 2022	Jan 2022
★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★
Dec 2021	Nov 2021	Oct 2021	Sep 2021	Aug 2021	Jul 2021	Jun 2021	May 2021	Apr 2021	Mar 2021	Feb 2021	Jan 2021
★★★★	★★★★	★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★
Dec 2020	Nov 2020	Oct 2020	Sep 2020	Aug 2020	Jul 2020	Jun 2020	May 2020	Apr 2020	Mar 2020	Feb 2020	Jan 2020
★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Dec 2019	Nov 2019	Oct 2019	Sep 2019	Aug 2019	Jul 2019	Jun 2019	May 2019	Apr 2019	Mar 2019	Feb 2019	Jan 2019
★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★

Chevron Corp CVX 11 Sep 2024 21:23, UTC

Dec 2024	Nov 2024	Oct 2024	Sep 2024	Aug 2024	Jul 2024	Jun 2024	May 2024	Apr 2024	Mar 2024	Feb 2024	Jan 2024
—	—	—	★★★★	★★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★
Dec 2023	Nov 2023	Oct 2023	Sep 2023	Aug 2023	Jul 2023	Jun 2023	May 2023	Apr 2023	Mar 2023	Feb 2023	Jan 2023
★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★
Dec 2022	Nov 2022	Oct 2022	Sep 2022	Aug 2022	Jul 2022	Jun 2022	May 2022	Apr 2022	Mar 2022	Feb 2022	Jan 2022
★★	★★	★★	★★★	★★★	★★★	★★★	★★	★★★	★★	★★★	★★★
Dec 2021	Nov 2021	Oct 2021	Sep 2021	Aug 2021	Jul 2021	Jun 2021	May 2021	Apr 2021	Mar 2021	Feb 2021	Jan 2021
★★★	★★★	★★★	★★★	★★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★★
Dec 2020	Nov 2020	Oct 2020	Sep 2020	Aug 2020	Jul 2020	Jun 2020	May 2020	Apr 2020	Mar 2020	Feb 2020	Jan 2020
★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★
Dec 2019	Nov 2019	Oct 2019	Sep 2019	Aug 2019	Jul 2019	Jun 2019	May 2019	Apr 2019	Mar 2019	Feb 2019	Jan 2019
★★★★	★★★★	★★★★	★★★★	★★★★	★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★

Shell PLC SHEL 11 Sep 2024 01:38, UTC

Dec 2024	Nov 2024	Oct 2024	Sep 2024	Aug 2024	Jul 2024	Jun 2024	May 2024	Apr 2024	Mar 2024	Feb 2024	Jan 2024
—	—	—	★★★	★★★	★★★	★★★	★★★	★★★	—	★★★	★★★
Dec 2023	Nov 2023	Oct 2023	Sep 2023	Aug 2023	Jul 2023	Jun 2023	May 2023	Apr 2023	Mar 2023	Feb 2023	Jan 2023
★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★
Dec 2022	Nov 2022	Oct 2022	Sep 2022	Aug 2022	Jul 2022	Jun 2022	May 2022	Apr 2022	Mar 2022	Feb 2022	Jan 2022
★★★★	★★★★	★★★★	★★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★
Dec 2021	Nov 2021	Oct 2021	Sep 2021	Aug 2021	Jul 2021	Jun 2021	May 2021	Apr 2021	Mar 2021	Feb 2021	Jan 2021
★★★★	★★★★	★★★	★★★★	★★★★	★★★★	★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Dec 2020	Nov 2020	Oct 2020	Sep 2020	Aug 2020	Jul 2020	Jun 2020	May 2020	Apr 2020	Mar 2020	Feb 2020	Jan 2020
★★★★★	★★★★★	★★★★★	—	—	—	—	—	—	—	—	—
Dec 2019	Nov 2019	Oct 2019	Sep 2019	Aug 2019	Jul 2019	Jun 2019	May 2019	Apr 2019	Mar 2019	Feb 2019	Jan 2019
—	—	—	—	—	—	—	—	—	—	—	—

BP PLC BP. 11 Sep 2024 01:34, UTC

Dec 2024 —	Nov 2024 —	Oct 2024 —	Sep 2024 ★★★★	Aug 2024 ★★★	Jul 2024 ★★★★	Jun 2024 ★★★	May 2024 ★★★	Apr 2024 ★★★	Mar 2024 —	Feb 2024 ★★★★	Jan 2024 ★★★★
Dec 2023 ★★★★	Nov 2023 ★★★	Oct 2023 ★★★	Sep 2023 ★★★	Aug 2023 ★★★★	Jul 2023 ★★★★	Jun 2023 ★★★	May 2023 ★★★	Apr 2023 ★★★	Mar 2023 ★★★	Feb 2023 ★★★	Jan 2023 ★★★
Dec 2022 ★★★★	Nov 2022 ★★★★	Oct 2022 ★★★★	Sep 2022 ★★★★	Aug 2022 ★★★★	Jul 2022 ★★★★	Jun 2022 ★★★★	May 2022 ★★★	Apr 2022 ★★★★	Mar 2022 ★★★	Feb 2022 ★★★	Jan 2022 ★★★
Dec 2021 ★★★	Nov 2021 ★★★	Oct 2021 ★★★	Sep 2021 ★★★	Aug 2021 ★★★★	Jul 2021 ★★★★	Jun 2021 ★★★★	May 2021 ★★★★	Apr 2021 ★★★★	Mar 2021 ★★★★	Feb 2021 ★★★★	Jan 2021 ★★★★
Dec 2020 ★★★★	Nov 2020 ★★★★★	Oct 2020 ★★★★★	Sep 2020 ★★★★★	Aug 2020 ★★★★★	Jul 2020 ★★★★★	Jun 2020 ★★★★★	May 2020 ★★★★★	Apr 2020 ★★★★★	Mar 2020 ★★★★★	Feb 2020 ★★★★★	Jan 2020 ★★★★★
Dec 2019 ★★★★	Nov 2019 ★★★★	Oct 2019 ★★★★	Sep 2019 ★★★★	Aug 2019 ★★★★	Jul 2019 ★★★★	Jun 2019 ★★★★	May 2019 ★★★★	Apr 2019 ★★★★	Mar 2019 ★★★★	Feb 2019 ★★★★	Jan 2019 ★★★★

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Overview

At the heart of our valuation system is a detailed projection of a company's future cash flows, resulting from our analysts' research. Analysts create custom industry and company assumptions to feed income statement, balance sheet, and capital investment assumptions into our globally standardized, proprietary discounted cash flow, or DCF, modeling templates. We use scenario analysis, in-depth competitive advantage analysis, and a variety of other analytical tools to augment this process. Moreover, we think analyzing valuation through discounted cash flows presents a better lens for viewing cyclical companies, high-growth firms, businesses with finite lives (e.g., mines), or companies expected to generate negative earnings over the next few years. That said, we don't dismiss multiples altogether but rather use them as supporting cross-checks for our DCF-based fair value estimates. We also acknowledge that DCF models offer their own challenges (including a potential proliferation of estimated inputs and the possibility that the method may miss short-term market-price movements), but we believe these negatives are mitigated by deep analysis and our long-term approach.

Morningstar's equity research group ("we," "our") believes that a company's intrinsic worth results from the future cash flows it can generate. The Morningstar Rating for stocks identifies stocks trading at a discount or premium to their intrinsic worth—or fair value estimate, in Morningstar terminology. Five-star stocks sell for the biggest risk adjusted discount to their fair values, whereas 1-star stocks trade at premiums to their intrinsic worth.

Four key components drive the Morningstar rating: (1) our assessment of the firm's economic moat, (2) our estimate of the stock's fair value, (3) our uncertainty around that fair value estimate and (4) the current market price. This process ultimately culminates in our single-point star rating.

1. Economic Moat

The concept of an economic moat plays a vital role not only in our qualitative assessment of a firm's long-term investment potential, but also in the actual calculation of our fair value estimates. An economic moat is a structural feature that allows a firm to sustain excess profits over a long period of time. We define economic profits as re-

turns on invested capital (or ROIC) over and above our estimate of a firm's cost of capital, or weighted average cost of capital (or WACC). Without a moat, profits are more susceptible to competition. We have identified five sources of economic moats: intangible assets, switching costs, network effect, cost advantage, and efficient scale.

Companies with a narrow moat are those we believe are more likely than not to achieve normalized excess returns for at least the next 10 years. Wide-moat companies are those in which we have very high confidence that excess returns will remain for 10 years, with excess returns more likely than not to remain for at least 20 years. The longer a firm generates economic profits, the higher its intrinsic value. We believe low-quality, no-moat companies will see their normalized returns gravitate toward the firm's cost of capital more quickly than companies with moats.

When considering a company's moat, we also assess whether there is a substantial threat of value destruction, stemming from risks related to ESG, industry disruption, financial health, or other idiosyncratic issues. In this context, a risk is considered potentially value destructive if its occurrence would eliminate a firm's economic profit on a cumulative or mid-cycle basis. If we deem the probability of occurrence sufficiently high, we would not characterize the company as possessing an economic moat.

2. Estimated Fair Value

Combining our analysts' financial forecasts with the firm's economic moat helps us assess how long returns on invested capital are likely to exceed the firm's cost of capital. Returns of firms with a wide economic moat rating are assumed to fade to the perpetuity period over a longer period of time than the returns of narrow-moat firms, and both will fade slower than no-moat firms, increasing our estimate of their intrinsic value.

Our model is divided into three distinct stages:

Stage I: Explicit Forecast

In this stage, which can last five to 10 years, analysts make full financial statement forecasts, including items such as revenue, profit margins, tax rates, changes in working capital accounts, and capital spending. Based on these projections, we calculate earnings before interest, after taxes (EBI) and the net new investment (NNI) to de-

rive our annual free cash flow forecast.

Stage II: Fade

The second stage of our model is the period it will take the company's return on new invested capital—the return on capital of the next dollar invested ("RONIC")—to decline (or rise) to its cost of capital. During the Stage II period, we use a formula to approximate cash flows in lieu of explicitly modeling the income statement, balance sheet, and cash flow statement as we do in Stage I. The length of the second stage depends on the strength of the company's economic moat. We forecast this period to last anywhere from one year (for companies with no economic moat) to 10–15 years or more (for wide-moat companies). During this period, cash flows are forecast using four assumptions: an average growth rate for EBI over the period, a normalized investment rate, average return on new invested capital (RONIC), and the number of years until perpetuity, when excess returns cease. The investment rate and return on new invested capital decline until a perpetuity value is calculated. In the case of firms that do not earn their cost of capital, we assume marginal ROICs rise to the firm's cost of capital (usually attributable to less reinvestment), and we may truncate the second stage.

Stage III: Perpetuity

Once a company's marginal ROIC hits its cost of capital, we calculate a continuing value, using a standard perpetuity formula. At perpetuity, we assume that any growth or decline or investment in the business neither creates nor destroys value and that any new investment provides a return in line with estimated WACC.

Because a dollar earned today is worth more than a dollar earned tomorrow, we discount our projections of cash flows in stages I, II, and III to arrive at a total present value of expected future cash flows. Because we are modeling free cash flow to the firm—representing cash available to provide a return to all capital providers—we discount future cash flows using the WACC, which is a weighted average of the costs of equity, debt, and preferred stock (and any other funding sources), using expected future proportionate long-term, market-value weights.

3. Uncertainty Around That Fair Value Estimate

Morningstar's Uncertainty Rating is designed to capture the range of potential outcomes for a company's intrinsic value. This rating is used to assign the margin of safety required before investing, which in turn explicitly drives our stock star rating system. The Uncertainty Rating is aimed at identifying the confidence we should have in assigning a fair value estimate for a given stock.

Our Uncertainty Rating is meant to take into account anything that can increase the potential dispersion of future outcomes for the intrinsic value of a company, and any-

Morningstar Equity Research Star Rating Methodology



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thing that can affect our ability to accurately predict these outcomes. The rating begins with a suggested rating produced by a quantitative process based on the trailing 12-month standard deviation of daily stock returns. An analyst overlay is then applied, with analysts using the suggested rating, historical rating data, and their own knowledge of the company to inform them as they make the final Uncertainty Rating decision. Ultimately, the rating decision rests with the analyst. Analysts take into account many characteristics when making their final decision, including cyclical factors, operational and financial factors such as leverage, company-specific events, ESG risks, and anything else that might increase the potential dispersion of future outcomes and our ability to estimate those outcomes.

Our recommended margin of safety—the discount to fair value demanded before we’d recommend buying or selling the stock—widens as our uncertainty of the estimated value of the equity increases. The more uncertain we are about the potential dispersion of outcomes, the greater the discount we require relative to our estimate of the value of the firm before we would recommend the purchase of the shares. In addition, the Uncertainty Rating provides guidance in portfolio construction based on risk tolerance.

Our Uncertainty Ratings are: Low, Medium, High, Very High, and Extreme.

Margin of Safety		
Qualitative Analysis	★★★★★ Rating	★ Rating
Uncertainty Ratings	★★★★★ Rating	★ Rating
Low	20% Discount	25% Premium
Medium	30% Discount	35% Premium
High	40% Discount	55% Premium
Very High	50% Discount	75% Premium
Extreme	75% Discount	300% Premium

Our uncertainty rating is based on the interquartile range, or the middle 50% of potential outcomes, covering the 25th percentile–75th percentile. This means that when a stock hits 5 stars, we expect there is a 75% chance that the intrinsic value of that stock lies above the current market price. Similarly, when a stock hits 1 star, we expect there is a 75% chance that the intrinsic value of that stock lies below the current market price.

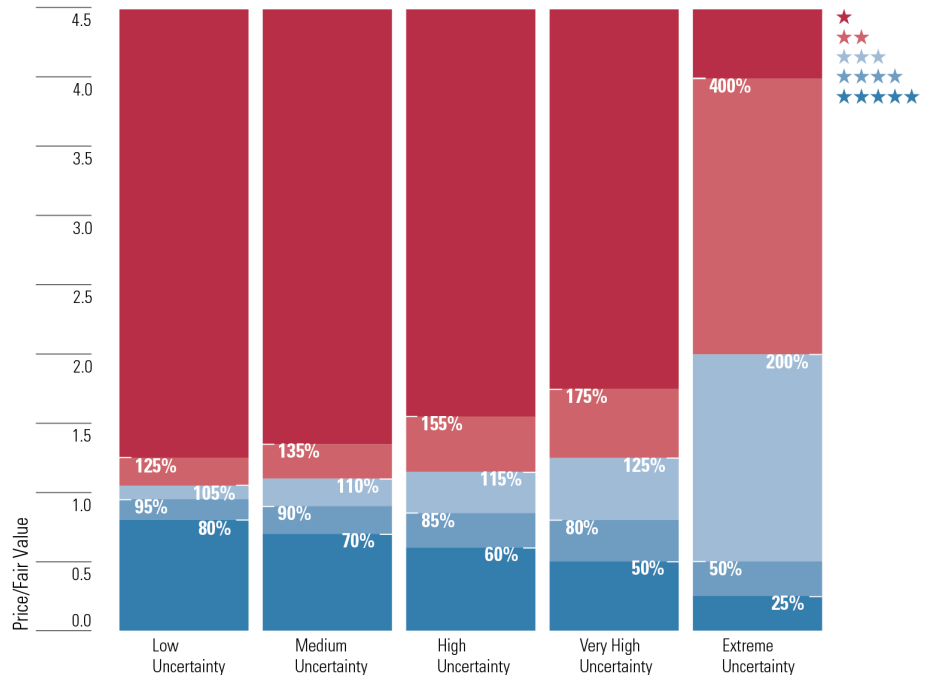
4. Market Price

The market prices used in this analysis and noted in the report come from exchange on which the stock is listed which we believe is a reliable source.

For more details about our methodology, please go to <https://shareholders.morningstar.com>

Morningstar Star Rating for Stocks

Morningstar Equity Research Star Rating Methodology



Once we determine the fair value estimate of a stock, we compare it with the stock’s current market price on a daily basis, and the star rating is automatically re-calculated at the market close on every day the market on which the stock is listed is open. Our analysts keep close tabs on the companies they follow, and, based on thorough and ongoing analysis, raise or lower their fair value estimates as warranted.

Please note, there is no predefined distribution of stars. That is, the percentage of stocks that earn 5 stars can fluctuate daily, so the star ratings, in the aggregate, can serve as a gauge of the broader market’s valuation. When there are many 5-star stocks, the stock market as a whole is more undervalued, in our opinion, than when very few companies garner our highest rating.

We expect that if our base-case assumptions are true the market price will converge on our fair value estimate over time generally within three years (although it is impossible to predict the exact time frame in which market prices may adjust).

Our star ratings are guideposts to a broad audience and individuals must consider their own specific investment goals, risk tolerance, tax situation, time horizon, income needs, and complete investment portfolio, among other factors.

The Morningstar Star Ratings for stocks are defined below:

★★★★★ We believe appreciation beyond a fair risk ad-

justed return is highly likely over a multiyear time frame. Scenario analysis developed by our analysts indicates that the current market price represents an excessively pessimistic outlook, limiting downside risk and maximizing upside potential.

★★★★ We believe appreciation beyond a fair risk-adjusted return is likely.

★★★ Indicates our belief that investors are likely to receive a fair risk-adjusted return (approximately cost of equity).

★★ We believe investors are likely to receive a less than fair risk-adjusted return.

★ Indicates a high probability of undesirable risk-adjusted returns from the current market price over a multiyear time frame, based on our analysis. Scenario analysis by our analysts indicates that the market is pricing in an excessively optimistic outlook, limiting upside potential and leaving the investor exposed to Capital loss.

Other Definitions

Last Price: Price of the stock as of the close of the market of the last trading day before date of the report.

Capital Allocation Rating: Our Capital Allocation (or Stewardship) Rating represents our assessment of the quality of management’s capital allocation, with particular emphasis on the firm’s balance sheet, investments, and shareholder distributions. Analysts consider compan-

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ies' investment strategy and valuation, balance sheet management, and dividend and share buyback policies. Corporate governance factors are only considered if they are likely to materially impact shareholder value, though either the balance sheet, investment, or shareholder distributions. Analysts assign one of three ratings: "Exemplary", "Standard", or "Poor". Analysts judge Capital Allocation from an equity holder's perspective. Ratings are determined on a forward looking and absolute basis. The Standard rating is most common as most managers will exhibit neither exceptionally strong nor poor capital allocation.

Capital Allocation (or Stewardship) analysis published prior to Dec. 9, 2020, was determined using a different process. Beyond investment strategy, financial leverage, and dividend and share buyback policies, analysts also considered execution, compensation, related party transactions, and accounting practices in the rating.

Capital Allocation Rating: Our Capital Allocation (or Stewardship) Rating represents our assessment of the quality of management's capital allocation, with particular emphasis on the firm's balance sheet, investments, and shareholder distributions. Analysts consider companies' investment strategy and valuation, balance sheet management, and dividend and share buyback policies. Corporate governance factors are only considered if they are likely to materially impact shareholder value, though either the balance sheet, investment, or shareholder distributions. Analysts assign one of three ratings: "Exemplary", "Standard", or "Poor". Analysts judge Capital Allocation from an equity holder's perspective. Ratings are determined on a forward looking and absolute basis. The Standard rating is most common as most managers will exhibit neither exceptionally strong nor poor capital allocation.

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Sustainalytics ESG Risk Rating Assessment: The ESG Risk Rating Assessment is provided by Sustainalytics; a Morningstar company.

Sustainalytics' ESG Risk Ratings measure the degree to which company's economic value at risk is driven by environment, social and governance (ESG) factors.

Sustainalytics analyzes over 1,300 data points to assess a company's exposure to and management of ESG risks. In other words, ESG Risk Ratings measures a company's unmanaged ESG Risks represented as a quantitative score. Unmanaged Risk is measured on an open-ended scale

starting at zero (no risk) with lower scores representing less unmanaged risk and, for 95% of cases, the unmanaged ESG Risk score is below 50.

Based on their quantitative scores, companies are grouped into one of five Risk Categories (negligible, low, medium, high, severe). These risk categories are absolute, meaning that a 'high risk' assessment reflects a comparable degree of unmanaged ESG risk across all subindustries covered.

The ESG Risk Rating Assessment is a visual representation of Sustainalytics ESG Risk Categories on a 1 to 5 scale. Companies with Negligible Risk = 5 Globes, Low Risk = 4, Medium Risk = 3 Globes, High Risk = 2 Globes, Severe Risk = 1 Globe. For more information, please visit sustainalytics.com/esg-ratings/

Ratings should not be used as the sole basis in evaluating a company or security. Ratings involve unknown risks and uncertainties which may cause our expectations not to occur or to differ significantly from what was expected and should not be considered an offer or solicitation to buy or sell a security.

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