





Chevron Corp

CVX

★★★★★

1 Nov 2024 21:41, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment¹
153.07 USD 1 Nov 2024	176.00 USD 18 Mar 2024 18:12, UTC	0.87	277.78 USD Bil 1 Nov 2024	 Narrow	 Large Value	High	Exemplary	 2 Oct 2024 05:00, UTC

Sector	Industry
 Energy	Oil & Gas Integrated

Business Description

Chevron is an integrated energy company with exploration, production, and refining operations worldwide. It is the second-largest oil company in the United States with production of 3.1 million of barrels of oil equivalent a day, including 7.7 million cubic feet a day of natural gas and 1.8 million of barrels of liquids a day. Production activities take place in North America, South America, Europe, Africa, Asia, and Australia. Its refineries are in the US and Asia for total refining capacity of 1.8 million barrels of oil a day. Proven reserves at year-end 2023 stood at 11.1 billion barrels of oil equivalent, including 6.0 billion barrels of liquids and 30.4 trillion cubic feet of natural gas.

Business Strategy & Outlook Allen Good, CFA, Director, 18 Mar 2024

We expect Chevron to deliver higher returns and margin expansion thanks to an oil-leveraged portfolio as well as the next phase of growth, which is focused on developing its large, advantaged Permian Basin position.

Its latest capital plan maintains its focus on capital discipline without sacrificing growth. Thanks to improved cost efficiencies, Chevron plans to increase production to nearly 4.0 million barrels of oil equivalent per day by 2027 from about 3.0 mmboe/d in 2023. New volumes will largely come from new production from its Permian Basin position (differentiated by size, quality, and lack of royalties), where it expects to grow volumes to 1.25 mmboe/d by 2027 from about 700 mboe/d in 2022 while delivering returns of nearly 30% and about \$5 billion of free cash flow by 2027.

Permian growth will be supplemented by expansion projects at Tengiz in Kazakhstan, new developments in the Gulf of Mexico, potential new discoveries in Mexico and Brazil, and offshore gas fields in the Eastern Mediterranean.

Oil and gas prices will dictate Chevron’s earnings and cash flow for the foreseeable future. However, the company is investing in low-carbon businesses to adapt to the energy transition. It recently tripled its investment to \$10 billion cumulatively by 2028, with this capital flowing to emerging low-carbon areas that fit with Chevron’s existing value chains and experience. Greenhouse gas reduction projects and carbon capture and offset will enable Chevron to achieve its emission targets while investments in hydrogen and renewable fuels will give it a toehold in emerging businesses that could expand in the future.

Although specific targets will probably change if the Hess acquisition closes, we expect Chevron to maintain its overall strategic direction. This means the combination of new higher-margin projects along with ongoing cost reductions and operational improvements will drive return on capital employed higher. Also, strong free cash flow will go toward steady dividend growth and repurchases, demonstrating management’s ongoing commitment to capital discipline and shareholder returns.

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

- Returns and free cash flow generation should improve, thanks to a cap on capital spending and the addition of higher-margin production volumes.
- Chevron’s large Permian position is mostly composed of legacy acreage, meaning the firm did not overpay to enter the play; 75% has a low royalty rate or none, giving it a cost advantage.
- Chevron should realize improved downstream earnings and returns as conditions in its California refineries improve and new chemical production capacity is added via its CPChem joint venture.

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## Competitors

	Chevron Corp CVX	Exxon Mobil Corp XOM	BP PLC BP.	TotalEnergies SE TTE
	 Fair Value 176.00 Uncertainty: High Last Close 153.07	 Fair Value 135.00 Uncertainty: High Last Close 114.95	 Fair Value 490.00 Uncertainty: High Last Close 378.20	 Fair Value 68.00 Uncertainty: High Last Close 57.90
Economic Moat	Narrow	Narrow	None	None
Currency	USD	USD	GBX	EUR
Fair Value	176.00 18 Mar 2024 18:12, UTC	135.00 19 Aug 2024 14:20, UTC	490.00 19 Aug 2024 16:48, UTC	68.00 11 Mar 2024 18:44, UTC
1-Star Price	272.80	209.25	759.50	105.40
5-Star Price	105.60	81.00	294.00	40.80
Assessment	Undervalued 1 Nov 2024	Fairly Valued 1 Nov 2024	Undervalued 1 Nov 2024	Fairly Valued 1 Nov 2024
Morningstar Rating	★★★★★ 1 Nov 2024 21:41, UTC	★★★★★ 1 Nov 2024 21:37, UTC	★★★★★ 2 Nov 2024 02:14, UTC	★★★★★ 2 Nov 2024 02:28, UTC
Analyst	Allen Good, Director	Allen Good, Director	Allen Good, Director	Allen Good, Director
Capital Allocation	Exemplary	Exemplary	Standard	Standard
Price/Fair Value	0.87	0.85	0.77	0.85
Price/Sales	1.45	1.42	0.41	0.72
Price/Book	1.75	1.88	1.16	1.27
Price/Earning	16.82	14.32	9.05	7.74
Dividend Yield	4.18%	3.31%	6.12%	5.29%
Market Cap	277.78 Bil	510.70 Bil	6,024.10 Bil	132.10 Bil
52-Week Range	135.37 — 167.11	95.77 — 126.34	371.10 — 541.00	57.17 — 70.11
Investment Style	Large Value	Large Value	Large Value	Large Value

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

- Chevron is unlikely to ever see earnings or returns on par with historical averages, given past investments and lower oil prices.
- Chevron's focus on the Permian for growth could leave it exposed to cost inflation, given the high levels of activity in the region relative to other basins. Alternatively, it has a high-decline asset that requires high levels of reinvestment.
- Relatively little investment in new businesses outside hydrocarbons leaves Chevron exposed to potential value destruction and stranded resources if oil demand falls faster than expected.

### Economic Moat Allen Good, CFA, Director, 18 Mar 2024

Chevron's returns on capital suffered from 2015 to 2020 as a period of high investment was followed by one of low commodity prices. Although it was able to reset its cost structure in the wake of the 2015

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collapse in prices, it has not been able to do enough to lift returns back to historical levels when oil prices averaged \$100 a barrel. However, we continue to rate Chevron as a narrow-moat company as we think during the next 10 years it will be able to deliver excess returns, albeit well below historical levels, on a combination of an improved cost structure and addition of higher-return production volumes. Chevron is only targeting a return on capital employed of at least 13% by 2028, assuming \$60/bbl, lower than the 16% average during 2010-14 but improved from the 3.5% average during 2015-19. We forecast our return on invested capital metric used to evaluate moats to remain above the cost of capital during the next five years and rise to 12% by 2027, compared with our cost of capital assumption of 7.3%, sufficient for Chevron to earn a narrow moat rating. Our moat rating does not include assets from the potential Hess acquisition, but given the asset quality and offer price, we assume the deal would be moat-accretive.

Although Chevron is an integrated energy company, its narrow moat largely rests on the quality of its upstream portfolio. Chevron's upstream segment holds a low-cost position based on an evaluation of its oil- and gas-producing assets. Its greater exposure to liquids and liquids-linked natural gas production, accounting for over 70% of total volumes, has produced peer-leading cash margins and returns of nearly 20% historically. Since 2015, however, returns have suffered in part as oil prices have fallen, but also due to overinvestment at the peak of the last cycle.

The best examples are Chevron's LNG projects Gorgon and Wheatstone in Western Australia. Combined, the two projects added about 400 mboe/d of production capacity with high margins thanks to contractually set, liquids-based pricing. The projects were already low-return and capital-intensive, given the costs associated with timing, location, and complexity, but their returns were depressed further by large cost overruns. As a result, full-cycle returns are likely to be only marginally above the cost of capital, weighing on overall segment and firm returns even as they contribute to higher per-barrel margins.

Overall segment returns should improve, however, thanks to higher oil prices during the next five years and the addition of higher-return projects. Newer projects have superior economics and can earn higher returns at lower oil prices after rounds of cost reductions, reengineering (standardization and simplification), and service price deflation.

Outside the Permian, growth during the next five years should largely come from the expansion of the Tengiz project in Kazakhstan, which adds high-margin oil volumes at low breakeven prices. Also, past exploration success in the Gulf of Mexico endows the company with a large set of brownfield development opportunities that are economical at less than \$45/bbl. Beyond the next five years, Chevron also has opportunities for incremental capacity increases at its Australian LNG projects, which should be high-return, and a new, large resource basin in the Mediterranean natural gas reserves acquired with Noble for development.

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Chevron's downstream operations consist of its refining and marketing portfolio and its interest in the Chevron Phillips Chemical joint venture. Compared with peers, its downstream segment is relatively small with only 1.8 mmboe/d of refining capacity and few owned retail sites. We typically do not consider refining to be a business capable of earning a moat, with the exception of some US refineries that hold a feedstock cost advantage. While Chevron does hold some refineries that qualify on the Gulf Coast and in the midcontinent, the bulk of its capacity does not have such an advantage, given that it is located in California. However, in past years it has improved the performance of its operations, divested lower-quality assets, and improved returns. Meanwhile, the CPChem joint venture is a high-quality chemical manufacturer with low-cost feedstock access in the US and Middle East. While its earnings contribution is small relative to the upstream segment (30% by our forecast in 2030), it generated strong returns on capital of 18% from 2011 to 2019. We forecast at midcycle levels, returns will approach 18%, supporting Chevron's narrow moat rating.

Chevron is exposed to several environmental, social, and governance-related risks, but these do not imperil its moat, 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. Chevron's primary ESG risk stems from carbon 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 Chevron'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. Chevron's upstream greenhouse gas intensity is rather high for its peer group at 29 kilograms CO<sub>2</sub>e/boe (2021), making it a higher-cost producer. It is investing in efforts to improve its emissions intensity, reduce methane leakage, and reduce flaring but lacks the very long-term targets of some of its peers as well as plans to diversify away from hydrocarbons. It aims to reduce its upstream emissions intensity to 24 kg CO<sub>2</sub>e/boe by 2028, or about 35% from 2016 levels, and be net zero by 2050. That just covers scope 1 and 2 emissions, however; about 90% of emissions from oil and natural gas occur during combustion (scope 3), which the company can do little about.

Chevron recently tripled its low-carbon investment to \$10 billion cumulatively by 2028 to fund projects in the areas of greenhouse gas reduction, carbon capture and offset, hydrogen, and renewable fuels. The amount is less than some peers but is more focused on areas that are tangential to Chevron's core hydrocarbon business or in the value chains it currently participates. Although these areas are still in the early stages and outcomes are uncertain, they hold greater potential for high returns and competitive advantages than more mature areas such as renewable power, where many other integrated oils are investing. Chevron expects these investments to deliver over \$1 billion on operating

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cash flow by 2030, but given their relatively small size and uncertain future, they do not factor into our narrow moat rating.

Oil spills are an ever-present risk for oil companies operating offshore and can be devastating to firm 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.

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

We are maintaining our fair value estimate of \$176 per share after incorporating the latest strategic guidance and financial results into our model as well as updated commodity prices. Our forecast does not explicitly include the proposed Hess acquisition, but we do not expect a material change to our valuation if the deal closes. Our fair value estimate implies a forward enterprise value/EBITDA multiple of 6.1 times our 2025 EBITDA forecast of \$50.9 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 more explicitly 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 US natural gas prices of \$2.31 per thousand cubic feet in 2024 and \$3.23 in 2025. Our long-term assumption is \$3.30 beginning in 2027. For oil, we assume Brent prices of \$82 per barrel in 2024 and \$76 per barrel in 2025. Our 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%.

Chevron's latest plans call for production of nearly 4.0 mmboe/d in 2027 due to completion of the Tengiz expansion and Permian growth to 1.25 mmboe/d. We model a gradual return to normalized downstream earnings by 2025.

**Risk and Uncertainty** Allen Good, CFA, Director, 18 Mar 2024

Chevron 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.

Chevron's primary risk is the future level of oil and natural gas prices, which is the primary determinant in cash flow and valuation. Chevron faces the risk 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 Chevron is low. However, greater adoption of electric vehicles in the US, specifically California, could reduce demand for refined

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products, impairing the value of Chevron’s refineries.

For a company with global operations, geopolitical risk is always an issue. Past events in Nigeria and Venezuela underscore the risk associated with doing business in those countries. By investing in large, capital-intensive projects, such as LNG liquefaction, Chevron also runs the risk that commodity prices will decrease dramatically or it will exceed budgets, making those projects no longer economical.

Chevron 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. Operating in offshore environments exposes Chevron 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. Finally, as a large chemical producer whose products are key components of plastics, Chevron faces the risk that environmental concerns result in bans or usage reduction that lowers demand for its products or higher costs related to reuse or recycling.

**Capital Allocation** Allen Good, CFA, Director, 18 Mar 2024

Based on our capital allocation framework, which evaluates soundness of the balance sheet, investment strategy, and appropriateness of shareholder distributions, Chevron earns an Exemplary rating.

Although Chevron’s business has a high amount of operating leverage as well as revenue cyclicity, management typically operates with relatively low levels of debt to retain flexibility in times of market weakness. This is evident in its ability to raise debt during the recent downturn, combined with capital expenditure reductions, in order to protect the dividend and still keep net debt to capital under 25%. Given cost reductions, lower spending, and improved market conditions, we expect some deleveraging during the next couple of years. All of this amounts to a sound balance sheet in our framework.

Chevron scores an exceptional rating for its investment strategy. In the past, Chevron has demonstrated a measured approach to acquiring US unconventional assets and stayed out of places such as southern Iraq, where the returns are questionable. We think this indicates Chevron's overall emphasis on returns over growth and is reflected in its returns on capital, which rate near the highest in the sector. Unlike other majors, Chevron has been reluctant to rush into acquisitions or add projects in foreign countries where it cannot add value for the host countries or shareholders. Chevron CEO Michael Wirth seems to be maintaining these policies by not entering a bidding war after making an initial offer for Anadarko and instead turning to a more accretive deal for Noble. The recent deal for PDC Energy was measured and value-accretive, by our estimates. Although a bit pricey, the proposed Hess acquisition is still reasonable and fits strategically.

The company remains focused on capital discipline with a cap on capital spending and the bulk of



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growth capital going toward the Permian, where it holds a low-cost position, supporting its moat. Furthermore, it can flex investment levels there based on oil prices, which should preserve returns. Unlike many peers, it is avoiding investment in renewable power generation, where it lacks expertise and it is difficult to carve out a competitive advantage. Instead, it is investing in carbon abatement to reduce operating emissions (scope 1 and 2) while investing in renewable fuels where it already participates in value chains. It expects to spend \$10 billion by 2028 on these initiatives.

We rate Chevron’s shareholder distribution policy as appropriate. Although it required debt to pay the dividend in 2020, it had ample capacity to borrow without straining the balance sheet. Furthermore, it has reduced its breakeven to below \$50/bbl and can easily afford it at our midcycle price at \$60/bbl. As such we view current dividend levels as appropriate and leave room for growth. At \$50/bbl oil, Chevron expects to generate excess cash, which it will direct toward repurchases. Repurchases afford flexibility and are prudent, given the volatility of commodity prices. Historically, Chevron has had a similar policy, but its record on repurchases is mixed as it often repurchased more shares at higher prices. However, all of its repurchases during the last 10 years occurred at prices below our fair value estimate at the time. To avoid repeating the mistake of buying the most amount of shares when oil prices and share prices are high, Chevron has reintroduced a repurchase program it believes can be maintained through the cycle and is willing to rely on the balance sheet in times of low prices to do so. As a result, it should be continually buying shares through the cycle, maximizing the potential for value creation.

## Analyst Notes Archive

**Chevron Earnings: Results Fall Short; Delay of Hess Arbitration Adds Uncertainty** Allen Good, CFA, Director, 2 Aug 2024

Chevron reported that second-quarter adjusted earnings fell to \$4.7 billion from \$5.8 billion the year before, largely due to narrower refining margins. Earnings fell short of market expectations, which management attributed to operational issues and discrete items. Production increased to 3,292 thousand barrels of oil equivalent per day from 2,959 mboe/d the year before, due largely to the acquisition of PDC Energy and continued growth in the Permian, which offset downtime in Australia.

Earlier in the week, Chevron revealed that the arbitration panel addressing the Stabroek joint operating agreement (Guyana) won’t rule until May 2025, further delaying the potential close of the Hess acquisition.

We plan to incorporate the update into our model but do not expect a material change to our \$176 fair value estimate or narrow moat rating, leaving shares undervalued. The delay of the Hess deal has no impact on our fair value, since we do not explicitly include it in our forecast. However, it does add uncertainty that could weigh on shares. We think Chevron has a compelling investment case without Hess, but with it, Chevron has another long-term growth leg it’s currently lacking.



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Management reiterated previous guidance on Tengizchevroil, with the future growth project still slated to start in first-half 2025. Chevron expects the whole project to deliver \$4 billion in free cash flow in 2025 and \$5 billion in 2026, assuming \$60/bbl Brent. It also remains on track to produce 1 mmb/d from the Permian in 2025 as it also improves reliability and efficiency.

During the quarter, Chevron paid \$3.0 billion in dividends and repurchased \$3.0 billion in shares, in line with the prior quarter. For the third quarter, it will increase repurchases to \$4 billion-\$4.75 billion as it targets an annual rate of \$17.5 billion.

## **Chevron Earnings: Results Largely as Expected; Hess Resolution Likely at End-2024** Allen Good, CFA, Director, 29 Apr 2024

Chevron's first-quarter reported adjusted earnings of \$5.4 billion compared with \$6.7 billion the year before, meeting market expectations. The earnings decline was largely attributable to weaker refining margins, which weighed on downstream results. Production increased to 3,346 thousand barrels of oil equivalent per day from 2,979 mboe/d the year before due largely to the acquisition of PDC Energy and continued growth in the Permian, which offset weaker natural gas realizations to increase upstream earnings year over year.

We plan to incorporate the update into our model, but do not expect a material change to our \$176 fair value estimate or narrow moat rating.

Management provided an update on Tengizchevroil, with the startup of the wellhead pressure management project starting this month and noting progress is on track with the future growth project, which is expected to start in first-half 2025. Chevron expects the whole project to deliver \$4 billion in free cash flow in 2025 and \$5 billion in 2026, assuming \$60/bbl Brent.

During the quarter, Chevron paid \$3.0 billion in dividends and repurchased \$3.0 billion in shares, in line with the prior quarter. Management plans to repurchase \$2.5 billion-\$3.0 billion during the second quarter. Repurchases are limited by the SEC through the Hess shareholder vote, but Chevron plans to resume buybacks at an annual rate of \$17.5 billion after. Regarding the Hess deal, management remains confident that preemption rights do not apply and the merger will proceed once arbitration has been completed, estimated to be in fourth-quarter 2024.

## **Chevron Earnings: Exceeding Expectations and Boosting Dividend 8%** Allen Good, CFA, Director, 2 Feb 2024

Chevron's fourth-quarter adjusted earnings of \$6.5 billion fell from \$7.9 billion a year before but modestly exceeded market expectations. Adjusted earnings exclude a previously announced \$1.8 billion upstream impairment charge, mainly in California, and \$1.9 billion in decommissioning obligations from previously sold assets in the Gulf of Mexico. The earnings decline was largely attributable to lower oil

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and natural gas prices that offset an increase in production volumes to 3,392 thousand barrels of oil equivalent per day from 3,011 mboe/d the year before due largely to the acquisition of PDC Energy and continued growth in the Permian. Both also lead to a record annual production of 3,120 mboed. Management expects volume growth of 4%-7% in 2024 thanks to a full year of PDC volumes and 10% Permian growth that should offset divestments. The continued volume growth demonstrates Chevron's hydrocarbon-focused strategy.

We plan to incorporate the update into our model but do not expect a material change to our \$172 fair value estimate or narrow moat rating. Shares have come under pressure in the wake of delays to the TCO asset in Kazakhstan, weak earnings reports, and the Hess acquisition announcement, but we see the decline as unwarranted. However, these issues could continue to provide a headwind in the near term until Chevron demonstrates it is behind it. Ultimately, however, we have confidence management will maintain its capital discipline and correct operational issues.

During the quarter, Chevron paid \$2.8 billion in dividends and repurchased \$3.4 billion in shares, in line with the prior quarter. Management kept its repurchase guidance at \$3 billion, give or take 20%, given the Hess acquisition. However, it did announce an 8% increase in the regular quarterly dividend to \$1.63/share.


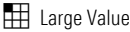

## **Chevron Earnings: Weaker-Than-Expected Results, TCO Delays Weigh on Shares, but Outlook Unchanged** Allen Good, CFA, Director, 27 Oct 2023

Chevron's third-quarter earnings not only fell below market expectations, but management also announced a further delay and cost increase to its two major projects at its TCO asset in Kazakhstan. Both the Wellhead Pressure Management Project and Future Growth Project will start about six months later than previously expected, in first-half 2024 and first-half 2025, respectively, while the projects' total costs will be 3%-5% higher than expected. Production in 2024 will be lower than in 2023 because of heavier turnarounds as well. Finally, TCO cash flow will be about \$1 billion lower in 2025 than previous guidance, given lower volumes from the project delays. The combined news of weaker-than-expected earnings and delays to Chevron's major projects sent shares lower. However, we think the selloff (about \$17 billion in lost market cap) is short-sighted and largely an overreaction.

We plan to incorporate the update into our model but do not expect a material change to our \$172 fair value estimate or narrow moat rating. Although the projects have been plagued by issues, including having to make special accommodations to continue work through the pandemic, the long-term economics seem intact. As does Chevron's overall competitive position with continued Permian growth and now the addition of Guyana with the Hess acquisition that supports its long-term growth outlook. Including today's selloff, shares are trading about 15% below our fair value estimate.

Adjusted earnings fell to \$5.7 billion from \$10.8 billion a year before due to lower upstream price

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realizations and weaker global refining margins. Production increased to 3,146 thousand barrels of oil equivalent per day from 3,027 mboe/d the year before due largely to the acquisition of PDC Energy and continued growth in the Permian.

## **Chevron: Acquisition of Hess Fills Long-Term Growth Gap With Prolific Guyana** Allen Good, CFA, Director, 23 Oct 2023

On Oct. 23, Chevron announced its intention to acquire Hess for \$171 per share, or \$53 billion, in an all-equity deal (1.025 Chevron shares per Hess share) based on Chevron's closing price on Oct. 20. With Hess, Chevron gains meaningful positions in Guyana and the Bakken, including Hess' midstream assets, as well as smaller positions in the Gulf of Mexico and natural gas assets in Southeast Asia. Given its size and economics, Guyana is the most attractive of the group and likely the key driver of the deal, as it adds a source of long-term growth Chevron had been lacking.

We thought that much of Hess' potential from Guyana, including future exploration success, was already priced in, assuming \$60/barrel oil long-term. As such, we saw the shares as 40% overvalued before the announcement. Leaving our growth assumptions unchanged, the deal price implies a long-term oil price of about \$80/bbl—pricey, but not unreasonable. That said, it leaves less room for lower commodity prices and relies more on future exploration success from Guyana. Despite the premium, we are not changing our Chevron fair value estimate after incorporating the acquisition, given higher oil prices since our last update and including the value of the synergies. Based on the exchange ratio and our Chevron fair value estimate of \$172, our Hess fair value estimate moves to \$176 per share.

The deal will weigh on Chevron's return on capital employed, considering the step-up in asset value and likely sale of high-return assets; this means the company won't achieve its prior target of greater than 12% but should still deliver double-digit returns. Nonetheless, our narrow moat rating is intact, as the softening in returns is offset by the addition of narrow-moat Hess' assets, particularly Guyana, which adds to our confidence that Chevron will be able to deliver excess returns for the next decade.

## **ExxonMobil: Acquisition of Pioneer Done at Fair Price With Sound Strategic Fit; Fair Value Unchanged** Allen Good, CFA, Director, 12 Oct 2023

ExxonMobil confirmed prior Wall Street Journal news reports by announcing on Oct. 11 its intention to acquire narrow-moat Pioneer Natural Resources in an all-stock transaction valued at \$59.5 billion or \$253 per share, based on ExxonMobil's closing price on Oct 5. ExxonMobil shares have been slightly lower since then, implying a per-share value of about \$247 based on ExxonMobil's closing price on Oct. 11 and the exchange ratio of 2.3234 for every one Pioneer share. That is a 22% premium to our Pioneer fair value estimate of \$203 per share, which assumes a long-term oil price of \$60/barrel. This suggests a modest reduction in our fair value estimate for ExxonMobil once the deal is considered, but that is largely offset by higher oil prices since our last update as well as value assigned to synergies, which

Chevron Corp

CVX

★★★★★

1 Nov 2024 21:41, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment¹
153.07 USD 1 Nov 2024	176.00 USD 18 Mar 2024 18:12, UTC	0.87	277.78 USD Bil 1 Nov 2024	 Narrow	 Large Value	High	Exemplary	 2 Oct 2024 05:00, UTC

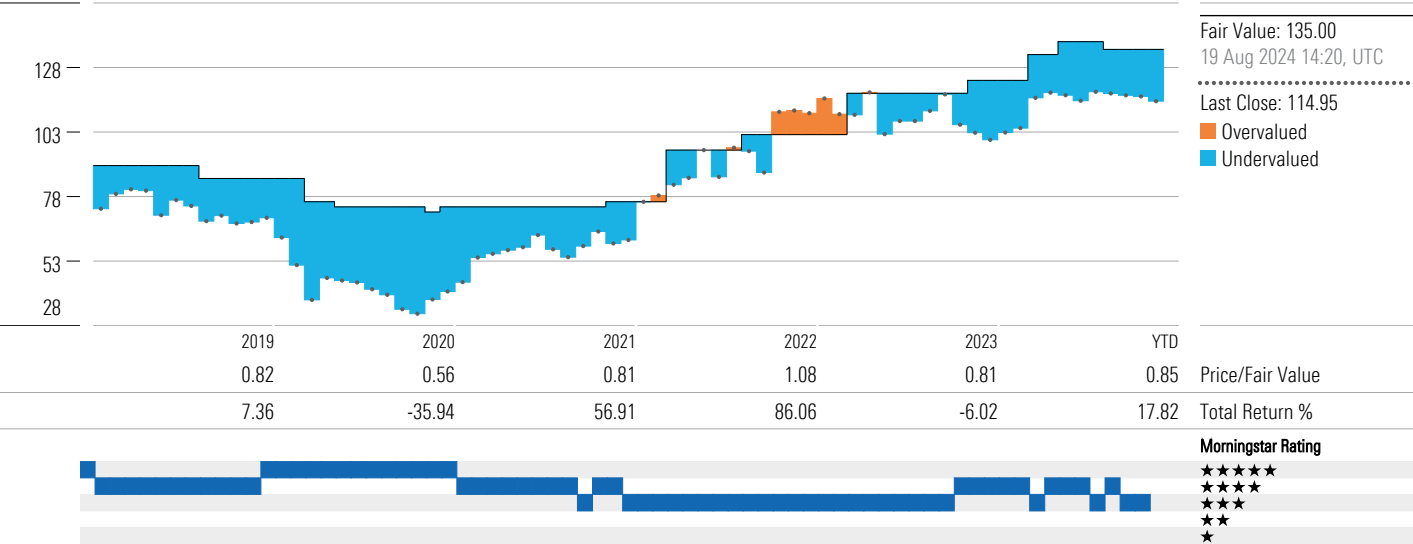
nets out leaving our fair value estimate unchanged. The acquisition price implies a long-term oil price of about \$70/bbl, which we don't consider unreasonable, suggesting the valuation for Pioneer, while above our fair value estimate, is fair. We see no impediments to the deal closing in first-half 2024 as expected.

Strategically, the deal is sound as it adds 856,000 net acres with a break-even cost of less than \$35/bbl to ExxonMobil's already large Permian position. Including Pioneer's assets, ExxonMobil will hold a Permian resource of 16 billion oil equivalent barrels, equating to 15-20 years of remaining inventory. By 2027, the firm expects to produce 2 million barrels of oil equivalent per day from the Permian as it plans no reduction in headcount or rig count after the deal and higher production growth than the two companies would achieve otherwise on their own, which results in ExxonMobil's total production exceeding 5 mmbob/d. ExxonMobil also expects to improve recoveries and increase drilling and completion efficiencies, leading to \$1 billion in annual synergies by the second year after closing and growing to \$2 billion on average over the next decade. ■■

# Chevron Corp CVX ★★★★★ 1 Nov 2024 21:41, UTC

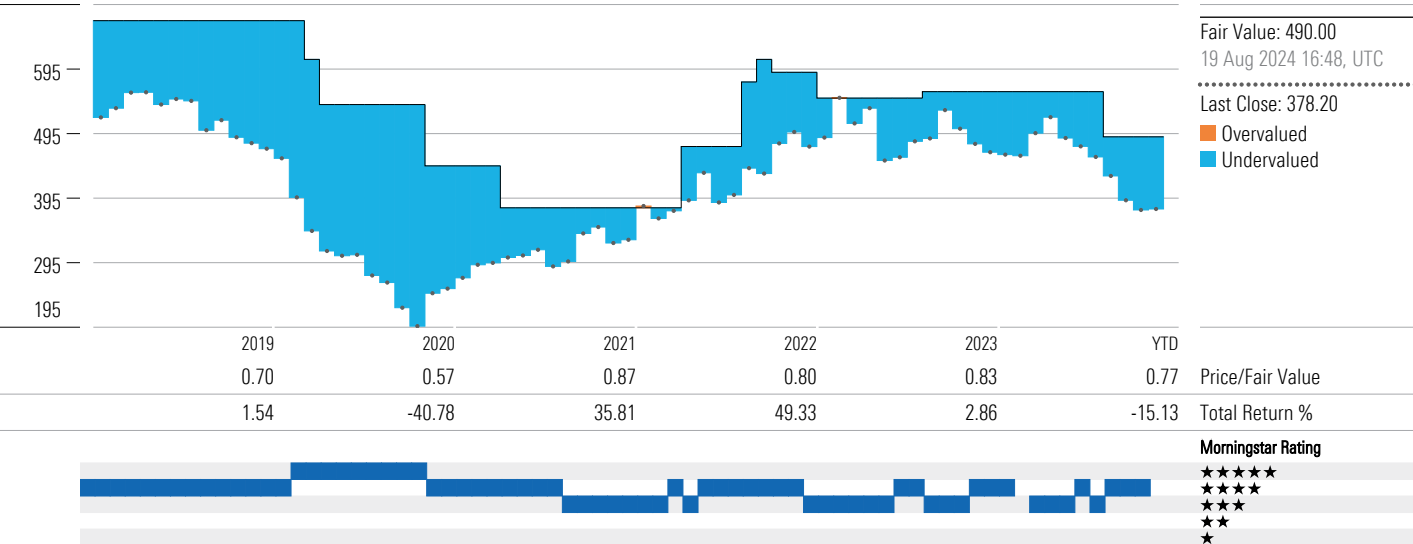
## Competitors Price vs. Fair Value

### Exxon Mobil Corp XOM



Total Return % as of 01 Nov 2024. Last Close as of 01 Nov 2024. Fair Value as of 19 Aug 2024 14:20, UTC.

### BP PLC BP.

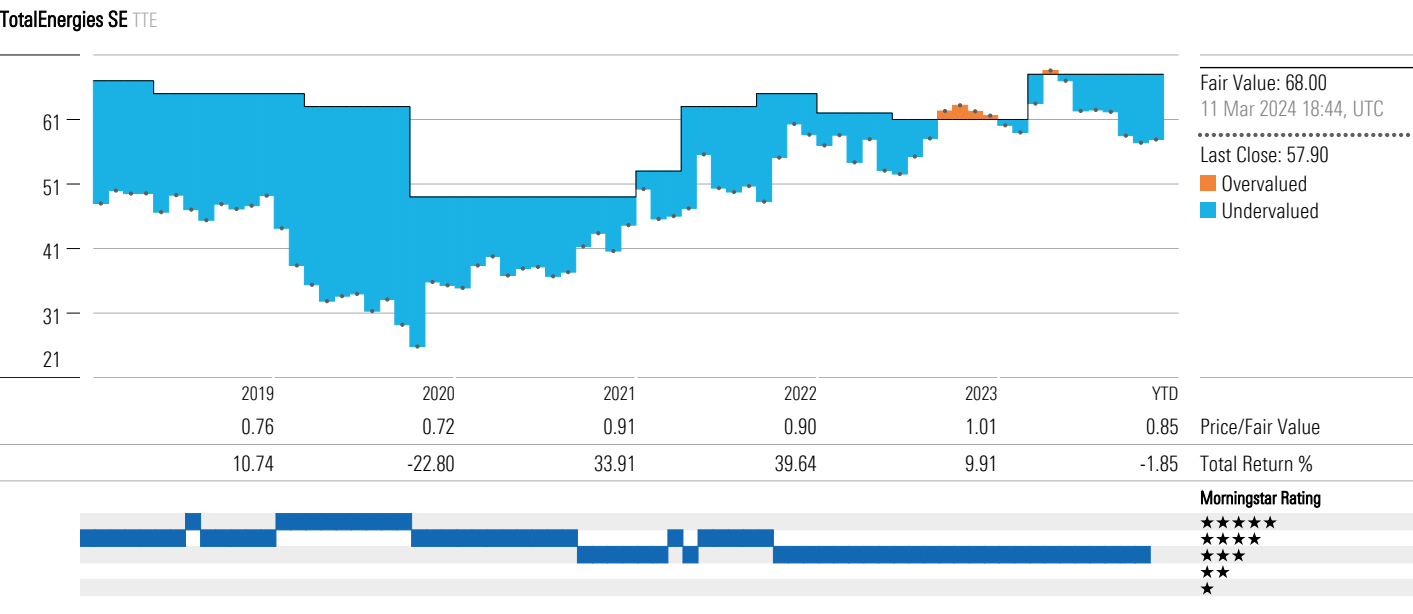


Total Return % as of 01 Nov 2024. Last Close as of 01 Nov 2024. Fair Value as of 19 Aug 2024 16:48, UTC.

Chevron Corp CVX★★★★★

1 Nov 2024 21:41, UTC

Competitors Price vs. Fair Value



Total Return % as of 31 Oct 2024. Last Close as of 31 Oct 2024. Fair Value as of 11 Mar 2024 18:44, UTC.

# Chevron Corp CVX ★★★★★ 1 Nov 2024 21:41, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment¹
153.07 USD 1 Nov 2024	176.00 USD 18 Mar 2024 18:12, UTC	0.87	277.78 USD Bil 1 Nov 2024	Narrow	Large Value	High	Exemplary	2 Oct 2024 05:00, UTC

## 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)	200	130	110	135	159	140	94	156	236	197	96	197
Revenue Growth %	-8.9	-35.2	-15.2	22.2	18.0	-12.0	-32.5	64.7	51.5	-16.5	0.1	-8.0
EBITDA (USD Bil)	49	23	14	27	40	24	10	39	65	45	23	44
EBITDA Margin %	24.4	18.0	12.8	20.3	25.2	17.4	11.1	25.3	27.8	22.9	24.4	22.2
Operating Income (USD Bil)	19.73	-3.71	-5.47	3.13	14.45	0.10	-6.10	16.18	39.95	26.23	11.54	23.73
Operating Margin %	9.8	-2.9	-5.0	2.3	9.1	0.1	-6.5	10.4	17.0	13.3	12.0	12.0
Net Income (USD Bil)	19.24	4.59	-0.50	9.20	14.82	2.92	-5.54	15.63	35.47	21.37	9.94	18.72
Net Margin %	9.6	3.5	-0.4	6.8	9.3	2.1	-5.9	10.0	15.0	10.9	10.3	9.5
Diluted Shares Outstanding (Mil)	1,884	1,875	1,873	1,898	1,914	1,895	1,920	1,920	1,940	1,880	1,841	1,857
Diluted Earnings Per Share (USD)	10.14	2.45	-0.27	4.85	7.74	1.54	-2.96	8.14	18.28	11.36	5.40	10.10
Dividends Per Share (USD)	4.21	4.28	4.29	4.32	4.48	4.76	5.16	5.31	5.68	6.04	3.26	6.28

### Valuation as of 31 Oct 2024

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Recent Qtr	TTM
Price/Sales	1.0	1.2	2.0	1.8	1.3	1.6	1.5	1.7	1.5	1.4	1.4	1.4
Price/Earnings	10.3	19.5	-147.1	36.5	14.6	17.3	-13.8	22.7	10.2	11.1	14.6	14.7
Price/Cash Flow	6.0	7.9	16.3	13.0	7.5	7.4	11.2	10.2	7.5	7.9	7.8	7.8
Dividend Yield %	3.75	4.76	3.64	3.45	4.12	3.95	6.11	4.52	3.16	4.05	4.35	4.3
Price/Book	1.4	1.1	1.5	1.6	1.3	1.5	1.2	1.7	2.2	1.7	1.6	1.7
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 %	7.4	1.7	-0.2	3.6	5.8	1.2	-2.3	6.5	14.3	8.2	3.8	7.3
ROE %	12.7	3.0	-0.3	6.3	9.8	2.0	-4.0	11.5	23.8	13.4	6.2	11.8
ROIC %	10.9	2.4	-0.2	5.0	8.2	2.0	-2.9	9.3	20.3	11.9	5.5	10.5
Asset Turnover	0.8	0.5	0.4	0.5	0.6	0.6	0.4	0.6	0.9	0.8	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 %	13.4	18.0	19.5	18.5	15.7	14.1	24.5	18.3	11.8	11.2	11.9	—
Equity/Assets %	58.3	57.7	56.0	58.4	60.9	60.7	54.9	58.1	61.8	61.5	61.1	—
Total Debt/EBITDA	0.6	1.6	3.3	1.4	0.9	1.1	4.2	0.8	0.4	0.5	1.0	—
EBITDA/Interest Expense	—	—	69.8	89.3	53.5	30.4	15.0	55.3	126.9	96.0	101.7	94.1

## Morningstar Analyst Historical/Forecast Summary as of 19 Aug 2024

Financials		Estimates					Forward Valuation		Estimates				
Fiscal Year, ends 31 Dec 2023	2022	2023	2024	2025	2026		2022	2023	2024	2025	2026		
Revenue (USD Mil)	246,252	200,949	201,445	197,391	191,881		Price/Sales	1.4	1.4	1.4	1.4	1.4	
Revenue Growth %	51.6	-18.4	0.3	-2.0	-2.8		Price/Earnings	9.8	13.1	12.8	11.1	9.7	
EBITDA (USD Mil)	66,509	47,379	48,256	50,860	54,169		Price/Cash Flow	—	—	—	—	—	
EBITDA Margin %	27.0	23.6	24.0	25.8	28.2		Dividend Yield %	3.2	4.1	4.1	4.4	4.5	
Operating Income (USD Mil)	50,190	30,053	31,295	33,110	35,670		Price/Book	2.2	1.7	1.8	1.7	1.7	
Operating Margin %	20.4	15.0	15.5	16.8	18.6		EV/EBITDA	5.3	6.2	6.1	5.7	5.4	
Net Income (USD Mil)	35,465	21,369	21,668	23,835	25,782								
Net Margin %	14.4	10.6	10.8	12.1	13.4								
Diluted Shares Outstanding (Mil)	1,940	1,880	1,817	1,730	1,639								
Diluted Earnings Per Share(USD)	18.28	11.37	11.93	13.78	15.73								
Dividends Per Share(USD)	5.68	6.04	6.34	6.66	6.86								



Chevron Corp

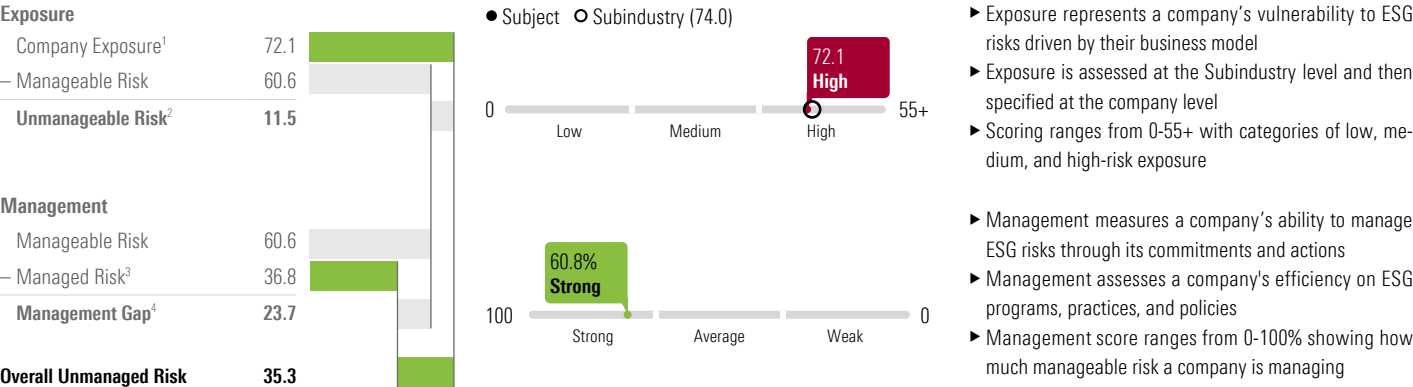
CVX

★★★★★

1 Nov 2024 21:41, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment¹
153.07 USD	176.00 USD	0.87	277.78 USD Bil	Narrow	Large Value	High	Exemplary	
1 Nov 2024	18 Mar 2024 18:12, UTC		1 Nov 2024					2 Oct 2024 05:00, UTC

ESG Risk Rating Breakdown



Overall Unmanaged Risk

35.3

● Subject ○ Subindustry (74.0)

0

Low

Medium

High

55+

72.1 High

100

Strong

Average

Weak

0

60.8 Strong

► 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 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 60.8% 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

ESG Risk Rating Assessment⁵



Peer Analysis 02 Oct 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			
Chevron Corp	72.1   High	0	55+	60.8   Strong	100	0	35.3   High	0	40+	
BP PLC	79.6   High	0	55+	68.5   Strong	100	0	33.8   High	0	40+	
Exxon Mobil Corp	75.2   High	0	55+	53.6   Strong	100	0	41.3   Severe	0	40+	
Occidental Petroleum Corp	77.2   High	0	55+	60.9   Strong	100	0	37.8   High	0	40+	
TotalEnergies SE	73.3   High	0	55+	77.2   Strong	100	0	25.6   Medium	0	40+	

# Appendix

## Historical Morningstar Rating

### Chevron Corp CVX 1 Nov 2024 21:41, 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 ★★★
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### Exxon Mobil Corp XOM 1 Nov 2024 21:37, 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 ★★★★
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**TotalEnergies SE** TTE 2 Nov 2024 02:28, 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 ★★★★
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# Research Methodology for Valuing Companies

## 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 singlepoint 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 midcycle 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 workingcapital accounts, and capital spending. Based on these projections, we calculate earnings before interest, after taxes (EBIT) 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 EBIT 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



# Research Methodology for Valuing Companies

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		
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.

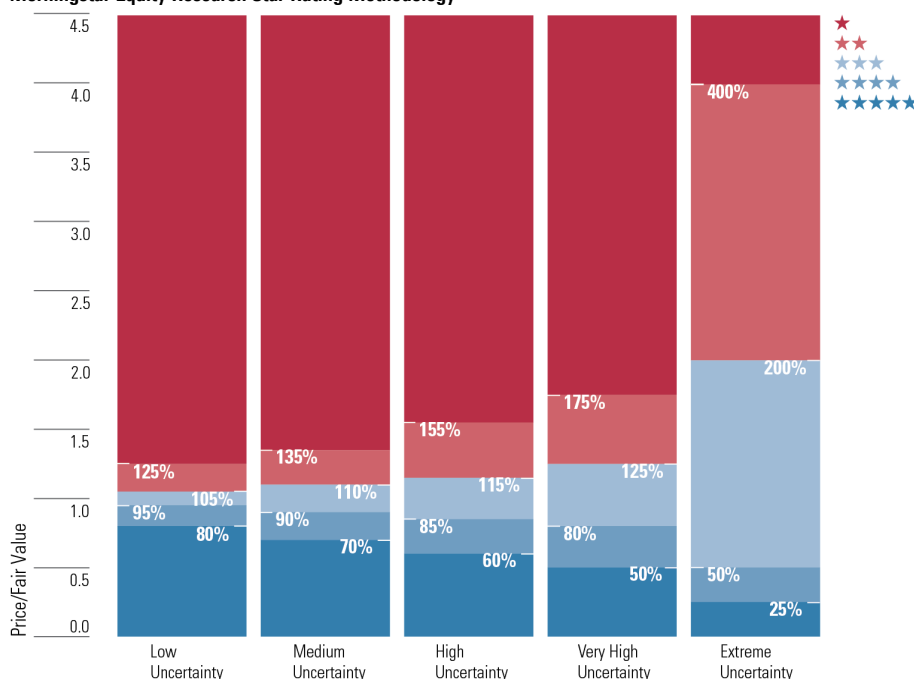
## 4. Market Price

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-

# Research Methodology for Valuing Companies

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/](https://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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