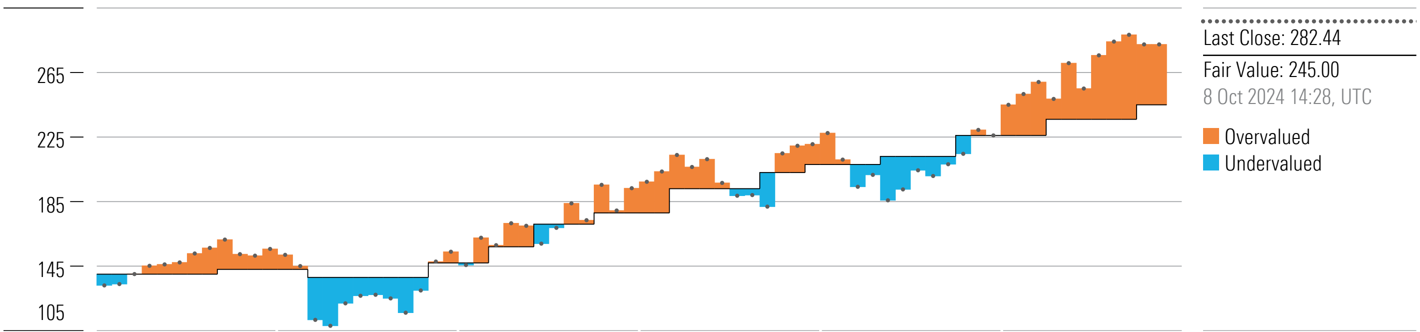
Morningstar Equity Analyst Report | Report as of 2 Nov 2024 04:15, UTC | Reporting Currency: USD | Trading Currency: USD | Exchange: NEW YORK STOCK EXCHANGE, INC. Page 1 of 21

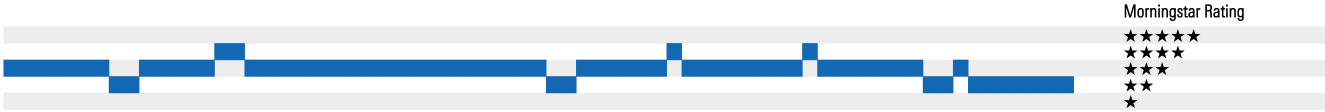
Chubb Ltd CB ★★ 1 Nov 2024 21:36, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
282.44 USD 31 Oct 2024	245.00 USD 8 Oct 2024 14:28, UTC	1.15	112.06 USD Bil 1 Nov 2024	Narrow	Large Blend	Medium	Standard	2 Oct 2024 05:00, UTC

Price vs. Fair Value



	2019	2020	2021	2022	2023	YTD	
	1.09	1.05	1.09	1.06	1.00	1.15	Price/Fair Value
	22.81	0.87	27.66	15.82	3.99	26.16	Total Return %



Total Return % as of 31 Oct 2024. Last Close as of 31 Oct 2024. Fair Value as of 8 Oct 2024 14:28, UTC.

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

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

Chubb Earnings: Tailwinds Persist

Analyst Note Brett Horn, CFA, Senior Equity Analyst, 30 Oct 2024

Like its peers, Chubb is benefiting from tailwinds on both sides of the business, as favorable underwriting conditions and higher interest rates are buoying profitability across the P&C insurance space. We are pleased to see that the narrow-moat company is fully exploiting this situation, with an adjusted annualized tangible return on equity of 22% in the quarter. We will maintain our $245 fair value estimate and see shares as modestly overvalued. While we appreciate the strength of the near-term outlook, we view insurance as an inherently mean-reverting industry and think the current market valuation implies that favorable market conditions will persist for a longer period than we think is likely.

Net written premiums in P&C lines grew 6% in the quarter, with 7% and 11% respective growth in commercial and personal lines partially offset by a 9% decline in agricultural premiums. Still, premium growth in personal lines appears to be moderating as the company starts to lap the strong pricing increases it has seen.

The underlying combined ratio came in at 83.4%, compared with 84.3% last year and 83.2% last quarter. We've seen underwriting margins for Chubb and commercial line peers flatten out over the past year or two, and that trend appears to be holding. While we think commercial underwriting margins have peaked, we see it as a positive that underwriting margins are holding at an attractive level. Despite some notable events, catastrophe losses as a percentage of premiums increased only slightly from last year.

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Sector

Financial Services

Industry

Insurance - Property & Casualty

Business Description

ACE acquired Chubb in the first quarter of 2016 and assumed the Chubb name. The combination made the new Chubb one of the largest domestic property and casualty insurers, with operations in 54 countries spanning commercial and personal P&C insurance, reinsurance, and life insurance.

Net investment income increased 15% year over year. Like its peers, Chubb is enjoying a boost from higher interest rates. However, the history of the industry strongly suggests that if interest rates stay elevated, industry underwriting margins will weaken as an offset, although this process takes time.

Business Strategy & Outlook Brett Horn, CFA, Senior Equity Analyst, 8 Oct 2024

In January 2016, ACE acquired Chubb in a deal valued at about $28 billion and assumed its name. From a long-term perspective, we were most enthusiastic about the fact that the combination created a moaty international insurer with exposure across most insurance lines for the first time, marking Chubb as potentially the most attractive long-term core holding in the space from a fundamental point of view.

In 2020, the coronavirus affected the industry's and Chubb's results, and the company's covid-19 losses were roughly in line with peers' as a percentage of premiums. However, the impact at Chubb and peers was manageable and well within the range of events that the industry has successfully absorbed in the past.

But the pandemic ultimately created a tailwind. Pricing momentum picked up in primary commercial lines in 2019, and this positive trend only accelerated in 2020 and has largely maintained its momentum over the next two years. More recently, commercial pricing has started to level off, but over the past few years the industry has enjoyed the highest increases it has seen in two decades. While higher pricing was necessary to some extent to offset a rise in social inflation and other claims trends, pricing increases were more than sufficient to offset these factors.

As a result, Chubb and its commercial line peers have experienced a positive trend in underlying underwriting profitability, similar to the period that followed 9/11. In this scenario, we think narrow-moat and highly disciplined operators such as Chubb are positioned to earn very attractive returns. However, the industry remains well capitalized, which could put something of a lid on the magnitude and duration of any excess returns, and recent results suggest underwriting profitability is leveling off, albeit at an attractive level. More recently, higher interest rates have provided an additional boost. While this will have a positive impact on near-term returns, historical industry results suggest underwriting margins will ultimately contract if interest rates stay high.

Bulls Say Brett Horn, CFA, Senior Equity Analyst, 8 Oct 2024

- Chubb is one of the few companies with global footprint large enough to service multinational corporations. Its network has created a barrier to entry for potential competitors.
- Chubb is a large insurer with leading positions in the most moaty areas of the P&C insurance industry.
- Chubb's international operations benefit from significant growth opportunities.

Bears Say Brett Horn, CFA, Senior Equity Analyst, 8 Oct 2024

- Large corporations often have substantial bargaining power, which may hurt Chubb when negotiating

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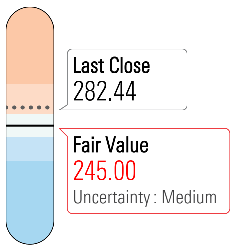
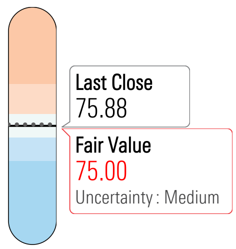
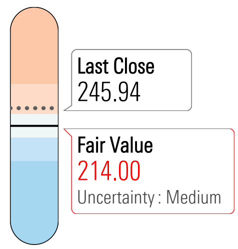
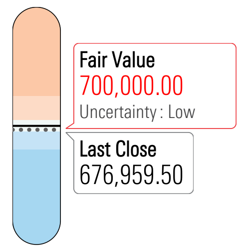
Competitors

	Chubb Ltd CB	American International Group Inc AIG	The Travelers Companies Inc TRV	Berkshire Hathaway Inc Class A BRK.A
				
Economic Moat	Narrow	None	Narrow	Narrow
Currency	USD	USD	USD	USD
Fair Value	245.00 8 Oct 2024 14:28, UTC	75.00 11 Oct 2024 00:46, UTC	214.00 17 Sep 2024 20:47, UTC	700,000.00 21 Oct 2024 18:23, UTC
1-Star Price	330.75	101.25	288.90	875,000.00
5-Star Price	171.50	52.50	149.80	560,000.00
Assessment	Overvalued 1 Nov 2024	Fairly Valued 1 Nov 2024	Overvalued 1 Nov 2024	Fairly Valued 1 Nov 2024
Morningstar Rating	★★1 Nov 2024 21:36, UTC	★★★1 Nov 2024 21:40, UTC	★★1 Nov 2024 21:37, UTC	★★★1 Nov 2024 21:37, UTC
Analyst	Brett Horn, Senior Equity Analyst	Brett Horn, Senior Equity Analyst	Brett Horn, Senior Equity Analyst	Greggory Warren, Strategist
Capital Allocation	Standard	Standard	Standard	Exemplary
Price/Fair Value	1.15	1.01	1.15	0.97
Price/Sales	2.07	1.45	1.25	2.44
Price/Book	1.70	1.11	2.01	1.62
Price/Earning	11.54	10.64	12.61	23.20
Dividend Yield	1.28%	2.01%	1.67%	0.00%
Market Cap	112.06 Bil	48.76 Bil	55.99 Bil	974.08 Bil
52-Week Range	215.31—302.05	62.52—80.83	165.84—269.56	515,921.31—741,971.40
Investment Style	Large Blend	Mid Value	Mid Blend	Large Blend

on premium pricing.

- Higher political and economic uncertainties often accompany the higher growth rate of developing markets.
- We think Chubb's life insurance operations are dilutive to the company's moat, and we don't see a valid strategic connection with its core P&C operations.

Economic Moat Brett Horn, CFA, Senior Equity Analyst, 8 Oct 2024

In general, insurers do not benefit from favorable competitive positions. Industry competition is fierce, and the products are essentially commodities. Furthermore, most participants do not know their cost of goods sold for a number of years, allowing them to underprice policies without knowing it. Firms are encouraged to chase growth without regard for profitability, a cycle that repeats itself as competitors are forced to match artificially low prices or risk losing business.

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Despite the fact that Chubb is a large, diversified insurer, we think its underlying business is moaty. ACE and Chubb's legacy businesses centered on commercial lines, but they served different segments. ACE historically focused on serving large, global clients. Often, these companies have risks that do not fit nicely into one country or one particular policy line. To service complex accounts, an insurance company must be able to match these unique and diverse risks with an equally diversified global network. Since its formation in 1985, ACE built a franchise with operations in more than 50 countries, and in so doing, carved out a strong position in this niche. Few have such a footprint, and ACE consequently benefited from strong relationships with many members of the Fortune 1000. ACE's cost advantage showed up in its strong property and casualty combined ratio of approximately 91% over the decade before the merger.

Chubb historically served middle-market commercial clients. While competitive barriers are lower in this area, we think Chubb's middle-market business is moaty, as the company is an entrenched leader in the space. Further, the business contains a large portion of lines that we would consider specialty—for instance, its executive liability and surety business. Chubb's moat in this area is demonstrated by an average combined ratio of about 89% over the 10 years before the merger.

The personal lines business also primarily comes from the old Chubb business. We think that building a moat in personal lines is generally a bit tougher than in commercial lines, given the standardized nature of most personal policies. However, Chubb primarily targets high-net-worth individuals. Because of the high value of their assets and their sometimes unique nature (such as yachts or fine art), insurance companies require assessments on the current value of their property, which increases policyholder duration and lowers acquisition costs.

Furthermore, individual exposures are large, so an insurer needs substantial size for the law of large numbers to hold, which limits the number of carriers that can successfully operate in this area. Finally, Chubb's international presence is a plus in this line, as high-net-worth individuals often have insurable assets spread across multiple countries. Thus, its personal lines are a unique example of a niche noncommercial line, in our view. Chubb's personal lines averaged a combined ratio of 89% over the 10 years before the merger, highlighting its strong position.

While we don't believe the combined company's smaller lines necessarily have moats, they have been solid performers, and the commercial and personal segments account for about 75% of premiums. As such, we believe a narrow economic moat rating is appropriate for the firm as a whole.

Fair Value and Profit Drivers Brett Horn, CFA, Senior Equity Analyst, 8 Oct 2024

We are increasing our fair value estimate to $245 per share from $236 due to time value of money since our last update and some minor adjustments to our assumptions. Our fair value estimate is equivalent to 1.6 and 2.4 times 2023 year-end book value and book value excluding goodwill and accumulated other comprehensive income, respectively.

We forecast a 5% compound annual growth rate for premiums through our projection period, with slightly higher growth in the near term based on the current industry pricing trends. The company's international operations do modestly boost its long-term growth prospects, but we believe Chubb's size will make it difficult to dramatically outstrip industry growth over time.

We expect the combined ratio to average 91% throughout our projection period, in line with the company's average over the past five years. We think recent pricing increases will allow the company to generate stronger underwriting margins in the near term. However, we do expect industry combined ratios to creep up over time, as we expect higher interest rates and investment income will reduce the need to generate strong underwriting profits. Our projections include one large catastrophe loss year to incorporate the inherent volatility of the lines Chubb underwrites.

But these combined trends should help to drive higher returns overall in the near term. The net effect of our forecast is an average tangible return on equity of 23% over the projection period, compared with an average of 16% since the acquisition of Chubb. By the end of the projection period, tangible ROE has returned to a level close to the company's historical average.

We use a cost of equity of 9%.

Risk and Uncertainty Brett Horn, CFA, Senior Equity Analyst, 8 Oct 2024
We assign Chubb a Morningstar Uncertainty Rating of Medium.

As with other insurers, the biggest risks are claims in excess of the amount reserved or material impairments within the investment portfolio. The company operates in some lines with long tails, where pricing mistakes are more difficult to rectify. Further, Chubb has meaningful exposure to natural catastrophes and other weather-related losses, which can be quite volatile year to year. Historically, Chubb has been a disciplined underwriter, which is a positive, but also leads to limited growth and periods where the company is sitting on excess capital that can hamper returns in soft pricing markets. About 40% of premiums come from outside the United States, exposing the company to currency and event risk. The pandemic created some legal uncertainty surrounding business interruption claims. We believe legal rulings to date have largely gone in the industry's favor, but it will take time for this risk to fully dissipate.

Some environmental, social, and governance issues for P&C insurers arise in a secondhand fashion, through the industries the insurer serves or investments. For commercial insurers, insuring industries with a high level of ESG risk could draw criticism and lead to lost revenue if the situation becomes untenable. Insurers can also draw criticism with regard to the extent to which they incorporate ESG into their investment decisions. But we see this issue as relatively minor, as shifting investment practices should be a relatively easy fix. The biggest issue for P&C insurers is climate change, as insurers typically cover weather-related losses, and climate change is likely to increase the frequency and severity of extreme weather events. Profitability could be significantly impaired if insurers do not recognize these risks and adjust their underwriting practices accordingly. While Chubb faces all of these issues, we do not see any particular flags for the company.

Capital Allocation Brett Horn, CFA, Senior Equity Analyst, 8 Oct 2024

Our Morningstar Capital Allocation Rating for Chubb is Standard. In our opinion, the company’s balance sheet is sound, its capital investment decisions are fair, and its capital return strategy is appropriate.

Following the acquisition of Chubb, Evan Greenberg, who had been CEO at ACE, became chair and CEO of the combined firm. We have a generally favorable view of Greenberg’s management record, and we believe the company is in good hands. During his tenure, Greenberg has been aggressive in expanding the company's operations through acquisitions, but we don't believe his acquisitions have diluted the company's moat. In our view, his attraction to Chubb, in particular, demonstrates that he appreciates the value of moaty franchises when evaluating targets, although we have a more skeptical view of more recent moves.

Management faced a daunting task in fully integrating these two firms, but Chubb avoided any material operational hiccups, and management upped its initial and already sizable estimate of cost synergies. In the long run, we think maintaining the companies' superior underwriting results is the key to success and that has been the case.

We think Chubb's size and position in a mature industry could limit long-term growth, but we would expect Greenberg to be more aggressive in realizing opportunities. It's certainly possible, given Greenberg's history, that the Chubb merger might not be his last big deal—and recent events suggest it's unlikely he'll sit completely still.

In March 2021, Chubb announced its intent to acquire The Hartford. While this proposal seemed to have some similarities with the Chubb combination, we don’t think The Hartford is nearly as strong of a franchise, and the proposed premium looked substantial. We believed the deal would have diluted Chubb's moat. Ultimately, The Hartford rejected Chubb's initial offer and Chubb refused to increase its bid. We appreciate management's willingness to walk away.

In October 2021, Chubb announced it would acquire the personal accident, supplemental health, and life insurance business of Cigna in six Asia-Pacific markets and Turkey for $5.75 billion in cash. Net written premiums for these businesses totaled $3 billion in 2020. Chubb believes it can achieve over $80 million in cost synergies. While the price didn't appear unreasonable and the deal is too small to alter our overall view of the company's moat and valuation, we're not enthusiastic about acquisitions outside

Chubb's commercial and high-net-worth operations, as we believe these areas are the heart of its economic moat.

Analyst Notes Archive

Chubb Earnings: Industry Tailwinds Continue to Drive Strong Results Brett Horn, CFA, Senior Equity Analyst, 24 Jul 2024

Chubb produced another strong quarter, as the company is seeing tailwinds on both sides of the business. Attractive underwriting margins and higher investment income are combining to produce very attractive returns, with the annualized adjusted tangible ROE in the quarter coming in at 21%, basically in line with the previous quarter. We will maintain our $236 fair value estimate for the narrow-moat company and see shares as modestly overvalued. While we appreciate the favorable outlook, we see insurance as an inherently mean-reverting industry and think the market is overly focused on near-term positives.

Net written premiums in P&C lines grew 10% year over year, with 9% growth in commercial lines and 18% growth in personal lines. This represents some moderation from the previous quarter, but growth remains solid in an absolute sense, and we think personal lines, in particular, continue to benefit from strong pricing increases.

The underlying P&C combined ratio was 83.2% in the quarter, compared with 83.3% last year and 83.7% in the previous quarter. We’ve seen underlying underwriting margins for Chubb and peers flatten out as we have moved deeper into the hard market, and we think underwriting profitability has peaked. However, underwriting margins remain attractive in an absolute sense, and we think just holding at the current level creates value.

Adjusted net investment income increased 26% year over year. Like its peers, Chubb is seeing a significant benefit from higher interest rates. However, history strongly suggests that if interest rates stay elevated, industry underwriting margins will weaken over time as an offset.

Despite the Interest Rate Tailwind, P&C Insurers Are Overvalued Brett Horn, CFA, Senior Equity Analyst, 22 May 2024

Higher interest rates have boosted investment income and have had a material positive impact on overall returns for our domestic property-casualty insurance coverage. While insurers with low fixed-income duration have seen the largest impact, the effect has flowed through our coverage. Interest rates and investment income are only part of the story for insurers, but the outlook for underwriting is strong as well, in our view. Following a few years of solid price increases, commercial insurers have seen underwriting margins stabilize at an attractive level. Personal auto insurers have endured some difficulties recently, but strong pricing increases have improved combined ratios. With both sides of the profit picture already strong or improving, we expect our P&C insurers to generate unusually attractive results in the near term. However, we believe the market has overreacted to these tailwinds, and we see our coverage as generally overvalued. Investigating historical underwriting results for a P&C insurance peer group strongly suggests that underwriting results adjust over time to changes in interest rates, and underwriting margins have improved over the past few decades as interest rates fell. If interest rates stay high, we expect underwriting margins will compress, and returns will normalize. Our fair value estimates hinge on the idea that returns for our coverage will ultimately return to a level roughly in line with historical averages. If the industry does mean-revert over the next few years, investors will pay an overly rich price today for most of our coverage.

Chubb Earnings: Impressive Results Driven by Tailwinds on Both Sides of the Business Brett Horn, CFA, Senior Equity Analyst, 24 Apr 2024

Like its peers, Chubb is posting strong results at the moment amid a hard pricing environment and higher interest rates. Annualized core tangible return on equity was impressive at 22%, but not out of line with what we've seen from peers. We think the near-term outlook is bright for Chubb and see the narrow-moat company as one of the strongest names in the space. We will maintain our $236 fair value estimate and see shares as about fairly valued.

Net written premiums in P&C lines grew 12% year over year, with 10% growth in commercial lines and 23% growth in personal lines. We think higher pricing is the primary driver of this growth, particularly in personal lines. Growth in commercial lines was stable with the previous quarter but growth in personal lines picked up a bit.

Underwriting results stayed strong, with the underlying combined ratio for P&C operations coming in at 83.7%, compared with 83.4% last year and 84.3% in the last quarter. We've seen underwriting margins for commercial P&C operators start to plateau over the past year or so, suggesting the impact of the hard market has peaked. However, holding at this level should allow for relatively attractive returns.

Chubb's investment income increased 26% year over year. Like its peers, Chubb is benefiting from higher interest rates. Because of its relatively long fixed income duration, Chubb has been a bit slow to realize higher yields, but the impact seems to be more fully flowing through now.

With strong underwriting results and a better investment picture, Chubb is seeing tailwinds on both sides of its business, and we think it can continue to generate higher-than-normal profitability in the near term. However, insurance is inherently mean-reverting, and industry capital levels remain healthy. As such, it's possible these excess returns could get competed away fairly quickly.

Chubb Earnings: Underlying Results Hold Strong Brett Horn, CFA, Senior Equity Analyst, 31 Jan 2024

Narrow-moat Chubb's reported fourth-quarter earnings were aided by a $1.1 billion one-time tax benefit

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related to a new income tax law in Bermuda. However, even excluding this impact, results largely held strong, with annualized return on equity coming in at 16%, or 24% on a core tangible basis. For the full year, ROE was 22% on a core tangible basis, excluding the tax impact. Like its peers, Chubb has been benefiting from a hard pricing environment, but we also think that relatively disciplined insurers like Chubb have more leverage to this type of market condition. We will maintain our $226 fair value estimate and see the shares as roughly fairly valued at the moment.

Net written premiums in global property and casualty lines grew 11% year over year, with 10% growth in commercial lines and 20% growth in personal lines. We think growth is coming primarily from higher pricing, particularly in personal lines, and this quarter's level was largely in line with the last quarter.

As we have moved deeper into the hard market in commercial lines, underwriting results for Chubb and its peers have started to level out. Chubb did, however, see a slight improvement in the fourth quarter, with the underlying combined ratio for global P&C lines coming in at 82.4%, compared with 82.9% last year and 83.0% last quarter. We see this quarter as largely supporting the idea that underwriting margins have basically peaked, and we don't expect any material improvement going forward. Still, underwriting margins remain strong on an absolute basis, which we believe creates an attractive near-term outlook.

Chubb's investment income improved 30% year over year, as the firm benefited from the opportunity to reinvest at higher interest rates. With a relatively long fixed-income duration compared with peers, Chubb was a bit slow to see a benefit from higher rates but appears to be catching up now.

Better Prices for P&C Insurers but They Have Different Outlooks Brett Horn, CFA, Senior Equity Analyst, 13 Nov 2023

P&C insurers have had substantial pricing increases across lines recently, but otherwise, commercial and personal insurers are in very different places. For commercial insurers, an extended period of strong price increases has them in a hard market and realizing attractive underwriting margins. Underlying combined ratios have flattened out recently, and we don't expect any significant improvement. Still, this should leave commercial insurers in a strong position over the next couple of years. Personal auto insurers have endured a difficult period in the wake of the pandemic, due to a variety of negative claims trends, and have been pushing pricing to catch up. While they are not out of trouble yet, we think the third quarter could mark the start of a turn toward more normalized underwriting results.

Outside of the cycle, climate-related losses have been an issue in recent years. While the impact of catastrophes in 2023 varied across our coverage, the potential increase in climate-related losses is a meaningful long-term point of uncertainty. However, we are encouraged by recent actions that suggest insurers are approaching this issue with the appropriate amount of discipline. Pricing in lines affected by catastrophes has improved significantly, and insurers have shown a willingness to walk away if

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pricing is not adequate. On the investment side, insurers that tactically lowered their fixed-income duration are enjoying a relative boost due to higher interest rates, but we believe the time has come to return to matching fixed-income and claims duration, as interest-rate risk is more balanced. We don't see a lot of bargains in the space at the moment, but Travelers is our favorite idea. We think Travelers enjoys a narrow moat but has underperformed a bit in recent years because of a variety of temporary issues. We think the market now underestimates the long-term quality of the business as a result.

Chubb Earnings: Another Strong Quarter as Chubb Benefits From a Hard Market Brett Horn, CFA, Senior Equity Analyst, 25 Oct 2023

Chubb continued its string of strong results with another good showing in the third quarter. We consider the annualized return on equity of 16% in the quarter to be a solid result for the narrow-moat insurer, and the level this quarter improved modestly sequentially. While this is partially the result of favorable market conditions, we think disciplined insurers like Chubb have more leverage to a hard market. We will maintain our $213 fair value estimate and see shares as roughly fairly valued at the moment.

Global P&C lines, excluding agriculture, saw net written premiums grow 12% year over year, with 10% growth in commercial lines and 18% growth in personal lines. An acquisition added 2 percentage points of growth. We believe the company's growth is primarily coming from higher pricing.

Chubb continues to generate strong underwriting profitability. The reported combined ratio for Global P&C lines, excluding agriculture, improved to 87.6% from 93.6% last year. However, the improvement mainly came from lower catastrophe losses. The underlying combined ratio came in at 83.0%, compared with 83.2% last year. We've seen underlying underwriting margins for Chubb and peers start to flatten over the past few quarters, suggesting commercial lines have peaked. While we don't expect any significant improvement going forward, underwriting profitability appears to be stabilizing at an attractive level, which should allow Chubb to continue to generate strong returns.

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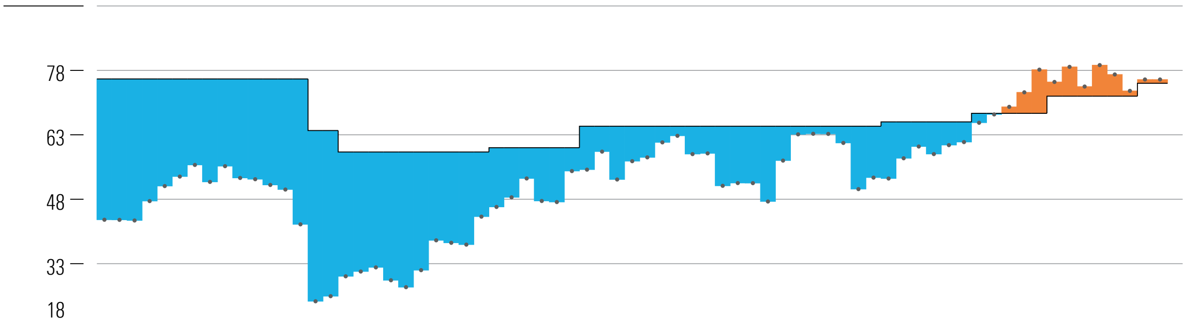
Competitors Price vs. Fair Value

American International Group Inc AIG



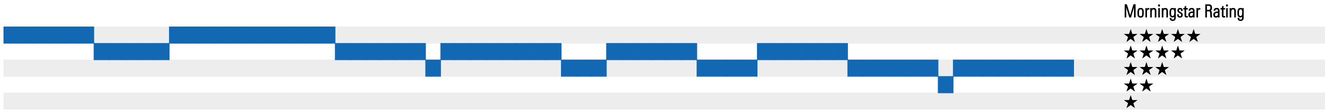
Last Close: 75.88

Fair Value: 75.00
11 Oct 2024 00:46, UTC

Overvalued
Undervalued

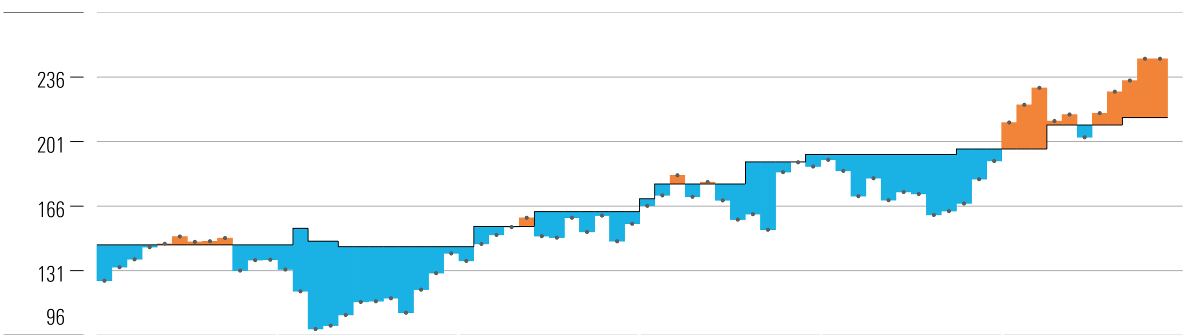
2019	2020	2021	2022	2023	YTD	
0.68	0.64	0.87	0.97	1.00	1.01	Price/Fair Value
33.49	-23.75	53.57	13.47	9.35	13.71	Total Return %

Morningstar Rating



Total Return % as of 31 Oct 2024. Last Close as of 31 Oct 2024. Fair Value as of 11 Oct 2024 00:46, UTC.

The Travelers Companies Inc TRV



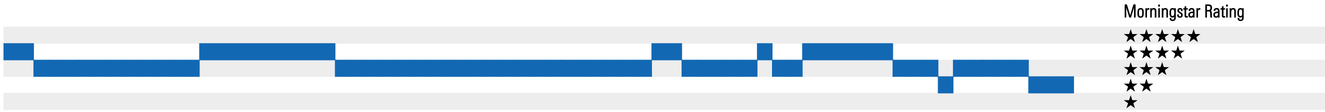
Last Close: 245.94

Fair Value: 214.00
17 Sep 2024 20:47, UTC

Overvalued
Undervalued

2019	2020	2021	2022	2023	YTD	
0.94	0.97	0.96	0.97	0.97	1.15	Price/Fair Value
17.06	4.96	13.93	22.20	3.70	30.74	Total Return %

Morningstar Rating



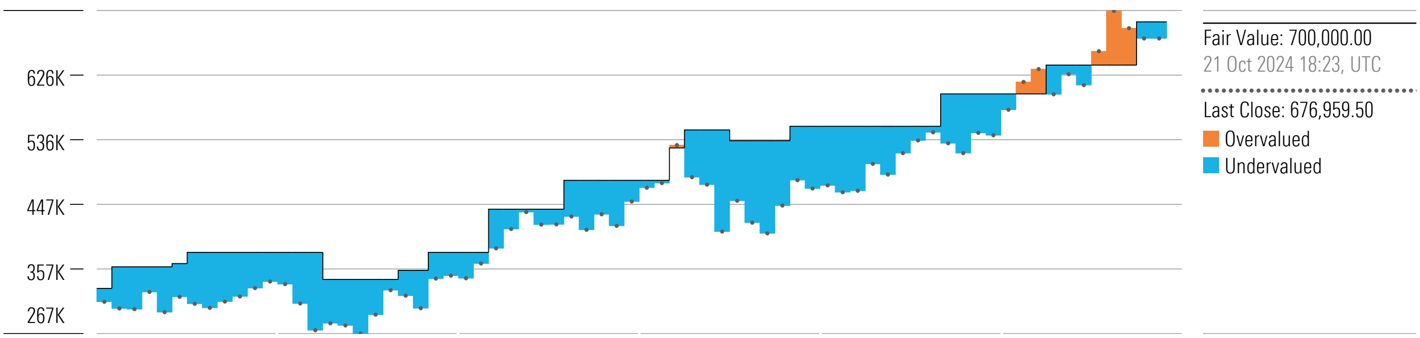
Total Return % as of 31 Oct 2024. Last Close as of 31 Oct 2024. Fair Value as of 17 Sep 2024 20:47, UTC.

Morningstar Equity Analyst Report | Report as of 2 Nov 2024 04:15, UTC | Reporting Currency: USD | Trading Currency: USD | Exchange: NEW YORK STOCK EXCHANGE, INC. Page 12 of 21

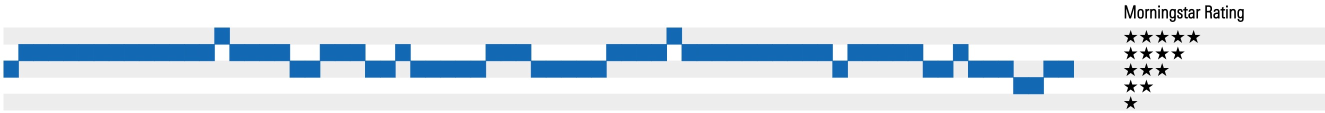
Chubb Ltd CB ★★ 1 Nov 2024 21:36, UTC

Competitors Price vs. Fair Value

Berkshire Hathaway Inc Class A BRK.A



	2019	2020	2021	2022	2023	YTD
Price/Fair Value	0.89	0.92	0.94	0.84	0.90	0.97
Total Return %	10.98	2.42	29.57	4.00	15.77	24.76



Total Return % as of 31 Oct 2024. Last Close as of 31 Oct 2024. Fair Value as of 21 Oct 2024 18:23, UTC.

Morningstar Equity Analyst Report | Report as of 2 Nov 2024 04:15, UTC | Reporting Currency: USD | Trading Currency: USD | Exchange: NEW YORK STOCK EXCHANGE, INC. Page 13 of 21

Chubb Ltd CB ★★ 1 Nov 2024 21:36, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
282.44 USD 31 Oct 2024	245.00 USD 8 Oct 2024 14:28, UTC	1.15	112.06 USD Bil 1 Nov 2024	Narrow	Large Blend	Medium	Standard	2 Oct 2024 05:00, UTC

Morningstar Historical Summary

Financials as of 30 Sep 2024

Fiscal Year, ends 31 Dec	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	YTD	TTM
Net Earned Premium												
Net Earned Premium Growth %												
Revenue (USD Bil)	19	19	31	32	33	34	36	41	43	50	42	55
Revenue Growth %	-0.5	-1.1	66.0	2.7	1.1	4.8	5.3	13.3	5.4	15.7	13.6	13.4
Operating Income (USD Tril)	—	—	—	—	—	—	—	—	—	—	—	—
Operating Margin %	—	—	—	—	—	—	—	—	—	—	—	—
Net Income (USD Mil)	2,853	2,834	4,135	3,861	3,962	4,454	3,533	8,525	5,246	9,028	6,697	9,997
Net Margin %	14.9	14.9	13.1	11.9	12.1	13.0	9.8	20.9	12.2	18.1	16.1	18.2
Diluted Shares Outstanding (Mil)	339	329	466	471	467	459	453	443	424	414	409	409
Diluted Earnings Per Share (USD)	8.42	8.62	8.87	8.19	8.49	9.71	7.79	19.24	12.39	21.80	16.38	24.39
Dividends Per Share (USD)	3.21	2.66	2.74	2.82	2.90	2.98	3.09	3.18	3.29	3.41	2.68	3.54

Valuation as of 31 Oct 2024

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Recent Qtr	TTM
Price/Earnings	11.9	14.2	17.5	17.5	11.8	19.7	30.6	9.8	15.4	13.2	12.2	11.6
Dividend Yield %	2.25	2.28	2.07	1.93	2.24	1.91	2.01	1.65	1.49	1.51	1.23	1.25
Price/Book	1.3	1.3	1.3	1.3	1.2	1.3	1.2	1.4	1.9	1.7	1.9	1.7
Price/Tangible Book	1.6	1.6	2.4	2.4	2.0	2.1	2.0	2.2	4.0	4.1	3.7	—

Operating Performance / Profitability as of 30 Sep 2024

Fiscal Year, ends 31 Dec	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	YTD	TTM
ROA %	3.0	2.8	3.2	2.4	2.4	2.6	1.9	4.4	2.6	4.2	—	4.2
ROE %	9.8	9.7	10.7	7.8	7.8	8.4	6.2	14.3	9.5	16.4	—	16.9

Financial Leverage

Fiscal Year, ends 31 Dec	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Recent Qtr	TTM
Debt/Capital %	10.2	24.4	20.7	18.4	19.4	19.7	20.1	20.3	22.2	18.0	18.1	—
Equity/Assets %	30.1	28.5	30.2	30.6	30.0	31.3	31.2	29.8	25.4	25.8	26.2	—

Morningstar Analyst Historical/Forecast Summary as of 08 Oct 2024

Financials

			Estimates		
Fiscal Year, ends 31 Dec 2023	2022	2023	2024	2025	2026
Net Earned Premium (USD Mil)	40,389	45,712	48,875	51,347	53,521
Net Earned Premium Growth %	11.1	13.2	6.9	5.1	4.2
Investment Income (USD Mil)	3,742	4,937	5,636	5,972	6,360
Investment Yield %					
Revenue (USD Mil)	43,166	49,735	55,627	58,122	60,742
Revenue Growth %	5.4	15.2	11.9	4.5	4.5
Operating Income (USD Mil)	6,568	9,526	11,309	11,618	11,252
Operating Margin %					
Net Income (USD Mil)	5,313	9,028	9,273	9,527	9,339
Net Margin %	12.3	18.2	16.7	16.4	15.4
Diluted Shares Outstanding (Mil)	423	414	385	365	358
Diluted Earnings Per Share(USD)	14.37	23.57	21.76	24.35	24.15
Dividends Per Share(USD)	3.25	3.37	3.89	4.23	4.44

Forward Valuation

			Estimates		
	2022	2023	2024	2025	2026
Price/Earnings	15.4	9.6	12.7	11.4	11.5
Dividend Yield %	1.5	1.5	1.4	1.5	1.6
Price/Book	—	—	—	—	—
Price/Tangible Book	—	—	—	—	—

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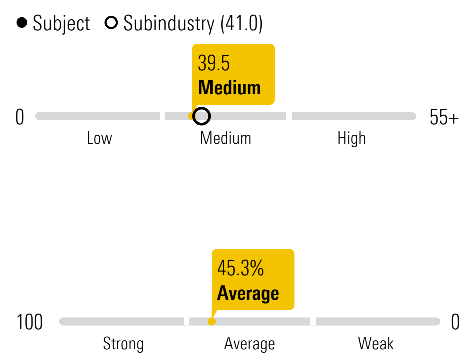
Chubb Ltd CB ★★ 1 Nov 2024 21:36, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
282.44 USD 31 Oct 2024	245.00 USD 8 Oct 2024 14:28, UTC	1.15	112.06 USD Bil 1 Nov 2024	Narrow	Large Blend	Medium	Standard	2 Oct 2024 05:00, UTC

ESG Risk Rating Breakdown

Exposure	
Company Exposure[1]	39.5
– Manageable Risk	37.6
Unmanageable Risk[2]	**1.9**

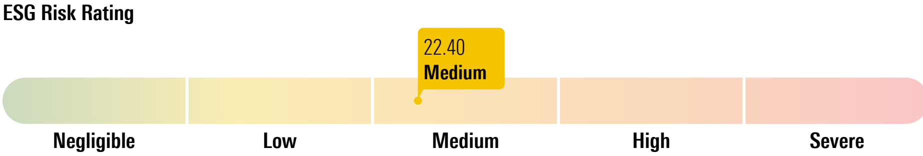
Management	
Manageable Risk	37.6
– Managed Risk[3]	17.0
Management Gap[4]	**20.6**
Overall Unmanaged Risk	**22.4**



- 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 45.3% 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 Assessment[5]

ESG Risk Rating is of Oct 02, 2024. Highest Controversy Level is as of Oct 08, 2024. Sustainalytics Subindustry: Property and Casualty Insurance. 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/.

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
Chubb Ltd	39.5 | Medium	45.3 | Average	22.4 | Medium
Berkshire Hathaway Inc	32.5 | Low	16.3 | Weak	27.3 | Medium
American International Group Inc	46.4 | Medium	50.4 | Strong	24.1 | Medium
The Travelers Companies Inc	40.8 | Medium	52.3 | Strong	20.5 | Medium
Baloise Holding AG	44.4 | Medium	59.5 | Strong	19.3 | Low

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Appendix
Historical Morningstar Rating

Chubb Ltd CB 1 Nov 2024 21:36, 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
★★★	★★★	★★★	★★	★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★

American International Group Inc AIG 1 Nov 2024 21:40, 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
★★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★

The Travelers Companies Inc TRV 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
—	★★	★★	★★	★★★	★★★	★★★	★★★	★★★	★★	★★★	★★★
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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Berkshire Hathaway Inc Class A BRK.A 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
—	★★★	★★★	★★	★★	★★★	★★★	★★★	★★★★	★★★	★★★	★★★★
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
★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★

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, indepth 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 shortterm market-price movements), but we believe these negatives are mitigated by deep analysis and our longterm 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 returns 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 (EBI) and the net new investment (NNI) to derive 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.

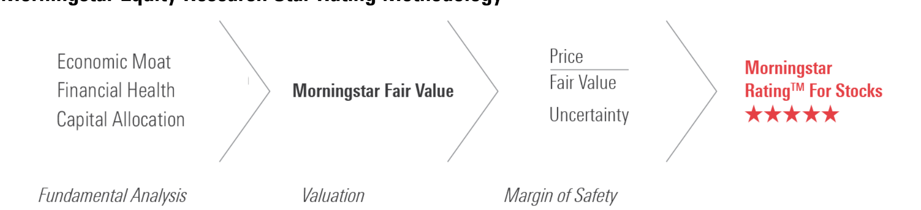
Because a dollar earned today is worth more than a dollar earned tomorrow, we discount our projections of cash flows in stages I, II, and III to arrive at a total present value of expected future cash flows. Because we are modeling free cash flow to the firm—representing cash available to provide a return 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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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 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.

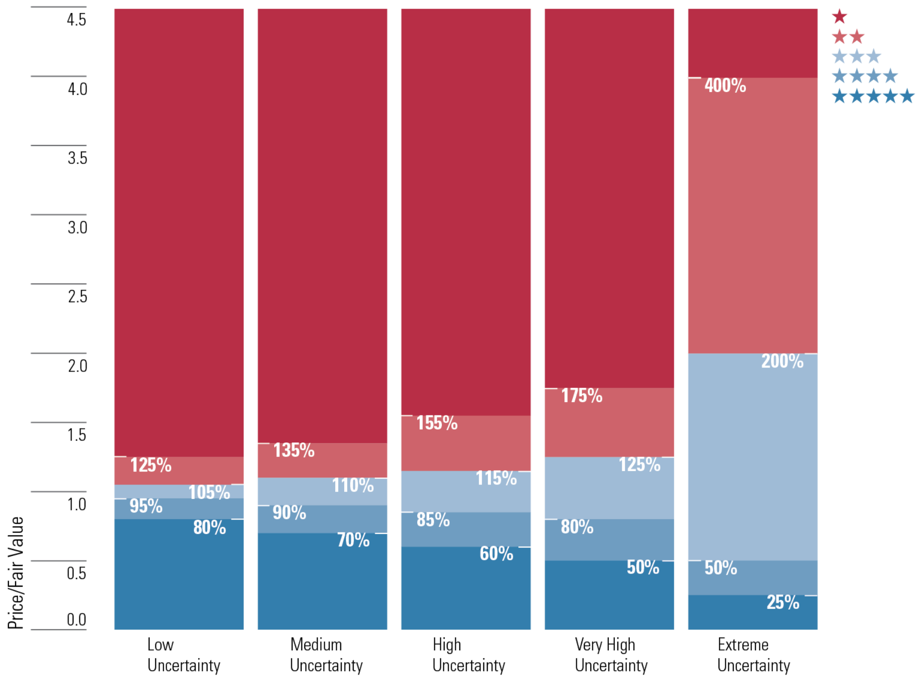
4. Market Price

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 adjusted 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.

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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/

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