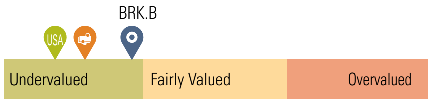
Berkshire Hathaway Inc BRK.B (XNYS)

Morningstar Rating	Last Price	Fair Value Estimate	Price/Fair Value	Trailing Dividend Yield %	Forward Dividend Yield %	Market Cap (Bil)	Industry	Stewardship
★★★★ 16 Nov 2020 22:23, UTC	233.10 USD 16 Nov 2020	253.00 USD 12 Nov 2020 20:17, UTC	0.92	— 16 Nov 2020	0.00 16 Nov 2020	546.48 16 Nov 2020	Insurance - Diversified	Exemplary

Morningstar Pillars	Analyst	Quantitative
Economic Moat	Wide	Wide
Valuation	★★★★	Undervalued
Uncertainty	Medium	Medium
Financial Health	—	Moderate

Source: Morningstar Equity Research

Quantitative Valuation



	Current	5-Yr Avg	Sector	Country
Price/Quant Fair Value	0.93	0.94	0.87	0.83
Price/Earnings	15.5	20.5	12.7	20.1
Forward P/E	16.9	—	10.5	13.9
Price/Cash Flow	13.3	11.9	9.5	13.1
Price/Free Cash Flow	20.4	20.1	10.9	19.5
Trailing Dividend Yield%	—	—	3.64	2.35

Source: Morningstar

Bulls Say

- Book value per share, which is a good proxy for measuring changes in Berkshire's intrinsic value, increased at an estimated 18.8% CAGR during 1965-2019, compared with a 10.1% return for the S&P 500 TR Index.
- Berkshire's stock performance has generally been solid as well, increasing at an 8.5% (13.1%) CAGR during 2015-19 (2010-19), compared with an 11.7% (13.6%) average annual return for the S&P 500 TR Index.
- At the end of September 2020, Berkshire had an estimated $135 billion in insurance float. The cost of the firm's float has been negative for much of the past decade.

Bears Say

- Given the size of its operations, Berkshire's biggest long-term hurdle will be its ability to consistently find deals that not only add value but are large enough to be meaningful.
- Another big issue facing the firm is the longevity of chairman and CEO Warren Buffett (who turned 90 at the end of August 2020) and managing partner Charlie Munger (who turns 97 in January 2021).
- Berkshire's insurance business faces competitive and highly cyclical markets that occasionally produce large losses, and several of its noninsurance operations are economically sensitive and focused on U.S. markets.

Berkshire a Net Purchaser of Equities in Q3; Apple Remains Top Holding at 47.8% of Holdings

Business Strategy and Outlook

Greggory Warren, CFA, Analyst, 12 November 2020

We think Berkshire Hathaway's decentralized business model, broad business diversification, high cash-generation capabilities, and unmatched balance sheet strength provide opportunities for its subsidiaries that might elude other firms and offer some downside protection in a downturn. The company remains a broadly diversified conglomerate, with a collection of moaty businesses in industries ranging from property-casualty insurance to railroads, utilities and pipelines, and manufacturing, service, and retailing.

Aside from having economic moats built on cost advantage, efficient scale, and intangible assets, most of these businesses have operated essentially as private companies under the Berkshire umbrella--while still taking advantage of the parent company's strong balance sheet, diverse income statement, and larger consolidated tax return. While Berkshire will be negatively affected by the impact that the COVID-19 pandemic and subsequent recession are having on global markets and economies, we believe the advantages inherent in the company's business model should allow it to continue to grow book value per share at a high-single-digit rate on average during most years, comfortably above our estimate of the firm's cost of capital.

Although CEO Warren Buffett has lamented the dearth of investment opportunities over much of the past decade, which has allowed large sums of cash to build on Berkshire's balance sheet (approaching $139 billion at the end of September 2020), it has also been a natural byproduct of the company's disciplined approach to investing, a lack of a dividend, and a limited amount of share repurchases over the years.

We expect a fair amount of its excess cash will finally get put to work in the near to medium term as Buffett takes advantage of the economic environment to pursue undervalued assets, as well as invest in firms that need capital and, in some cases, the Buffett seal of approval. We also believe Berkshire is evolving from a reinvestment machine to one returning more and more capital to shareholders--expecting the company to buy back meaningful amounts of its own common stock in the near to medium term.

Analyst Note

Greggory Warren, CFA, Analyst, 16 November 2020

Unlike most periods, there were a few surprises in wide-moat Berkshire Hathaway's third-quarter 13-F filing, with the firm actually taking positions in four different healthcare firms--AbbVie, Merck, Bristol-Myers Squibb, and Pfizer--while making meaningful reductions in several of its bank holdings--JPMorgan Chase, PNC Financial Services, Wells Fargo, and M&T Bank. We had some sense about the Wells Fargo trades, noting that Berkshire (through information provided in its Form 4 and Schedule 13G filings intra-quarter) seemed to be swapping out of Wells Fargo in favor of Bank of America (where the insurer now holds more than 1 billion shares following the purchase of an additional 85 million shares during the third quarter).

While Bank of America accounted for 10.6% of Berkshire's $228.9 billion 13-F portfolio at the end of September 2020, Apple (despite the sale of some 36 million share post the company's 4-for-1 split) remained its largest holding, accounting for 47.8% of the portfolio's holdings (up from 44.1% at the end of June 2020). Other sales during the September quarter included a 40% reduction in the insurer's stake in Barrick Gold, and mid-single-digit declines in holdings in Liberty Global, DaVita, and Axalta.

Proceeds from these sales helped fund the new-money purchases of the aforementioned healthcare names, as well as a new-money purchase of T-Mobile US and participation in the Snowflake initial public offering. Other positions that Berkshire added to during the quarter included Kroger, Liberty Latin America, and General Motors. As holdings in foreign investments that are held abroad, such as Berkshire's $5 billion stake in BYD Corporation, are not disclosed in the company's 13-F filing, it did not pick up the 5% stakes that the insurer took in each of five leading Japanese trading companies--Itochu, Marubeni, Mitsubishi, Mitsui, and Sumitomo--which were worth around $6 billion on a combined basis at the end of

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Close Competitors	Currency (Mil)	Market Cap	TTM Sales	Operating Margin	TTM/PE
Progressive Corp PGR	USD	56,159	41,963	0.00	11.11
Allstate Corp ALL	USD	29,817	44,245	0.00	6.91
Markel Corp MKL	USD	14,725	8,908	0.00	32.89

last month.

Economic Moat

Greggory Warren, Analyst, 12 November 2020

Berkshire's wide economic moat is more than just a sum of its parts, although the parts that make up the whole of the firm are fairly moaty in their own regard. The company's insurance operations--Geico, Berkshire Hathaway Reinsurance Group, or BHRG, and Berkshire Hathaway Primary Group, or BHPG--remain important contributors to the overall business. Not only do they account for around a quarter of Berkshire's pretax earnings (and just over 40% of our current valuation of the firm owing to the insurance operations being overcapitalized and maintaining a larger than normal equity investment portfolio for a property and casualty insurer), but they also generate low-cost float. These temporary cash holdings, which arise from premiums being collected in advance of future claims, have allowed Berkshire to generate additional returns as the company has invested these funds in assets that are commensurate with the duration of the business that is being underwritten, and have tended to come at little to no cost to Berkshire given the company's proclivity for generating underwriting gains the past several decades. That said, from an economic moat perspective, we don't believe the insurance industry is particularly conducive to the development of sustainable competitive advantages. While there are some high-quality companies operating in the industry (with Berkshire having some of the best operators in the different segments where it competes), the product that insurers sell is basically a commodity, with excess returns being difficult to achieve on a consistent basis.

Buyers of insurance are not inclined to pay a premium for brands, and the products themselves are easily replicable. Competition among insurance firms is fierce, and participants have been known to slash prices or simply undercut competitors to gain market share. Insurance is also one of the few industries where the cost of goods sold (signified by claims) may not be known for years, providing an incentive for companies to sacrifice long-term profitability in favor of near-term growth. In reinsurance, this dynamic can be even more pronounced, as losses in this business tend to be large in nature and may not be realized for years after a policy is written. Insurers can, however, develop sustainable cost advantages by either focusing on less commodified areas of the market or by developing efficient and/or scalable distribution platforms. What they can't do is gain a sustainable competitive advantage through investing, even when gains are the result of the investing prowess of someone like Buffett. We believe insurers that consistently achieve positive underwriting profitability are better bets in the long run, as insurance profitability tends to be more sustainable than investment income.

Given the continued growth of its auto insurance operations, and the more meager growth in its reinsurance operations, Geico has become the largest generator of earned premiums for Berkshire. The auto insurer has made great strides with its direct-selling operations, moving from its position as the seventh-largest U.S. private passenger auto insurance underwriter two decades ago (with less than 5% market share) to the second-largest at the end of 2019, responsible for 13.8% of written premiums last year, compared with the industry leader State Farm at 16.1%. Much like its closest competitor, Progressive (which generated 12.3% of written premiums during 2018), Geico has set itself apart from the rest of the industry by its scale in the direct response channel. While scaling is typically difficult for insurance companies, personal line insurers like Geico and Progressive have been better at spreading fixed costs over a wider base, as their business models do not require as much human capital and specialized underwriters as other insurance lines. Given the similarity in their auto insurance operations, with both firms at the forefront of the shift into non-agent-derived business, as well as the level and consistency of each insurer's underwriting profitability the past decade (with Geico producing an average annual combined ratio, including the impact of hurricanes and other natural disasters, of 95.8% during 2010-19 compared with Progressive at 92.9%), we believe that Geico, much like Progressive, has a narrow economic moat.

With regards to Berkshire's reinsurance arm--BHRG--we believe it (at best) has a narrow economic moat. For a premium, reinsurers assume all or part of an insurance or reinsurance policy written by another insurer. While any

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insurance company can underwrite reinsurance, a handful of larger companies--Munich Re, Swiss Re, Berkshire Hathaway, Hannover Rueck, and SCOR SE--hold sway over the lion's share of global premiums written. The policies underwritten by reinsurers often contain large long-tail risks that few companies have the capacity to endure and, when priced appropriately, can generate favorable long-term returns. That said, reinsurers compete almost exclusively on price and capital strength, making it almost impossible to build structural cost advantages. Losses in the reinsurance market are also lumpy and may not be realized for years after a policy is written, magnifying the importance of disciplined and accurate underwriting. While we don't normally view reinsurers as benefiting from favorable competitive positions, there are some specialty lines where a long history of underwriting incidence and/or from unique relationships can allow a firm to build a sustainable competitive advantage. We believe Berkshire's reinsurance operations are unique. The company's overall balance sheet strength makes it capable of taking on large amounts of super-catastrophe underwriting (covering events like terrorism and natural catastrophes) that few companies have the capacity to endure. It has also historically had the luxury of walking away from business when an appropriate premium cannot be obtained, something its publicly traded peers cannot always do. Underwriting profitability has been less consistent, though, because of the nature of the risks BHRG is underwriting. The company sticks with reinsurance, though, even if it proves to be unprofitable from time to time, because it generates float that can be invested for longer periods of time than short-tail business lines such as auto insurance.

As for BHPG, which has been Berkshire's most profitable insurance business the past two decades, we believe the segment has developed a narrow economic moat. What is all the more remarkable about this is that BHPG is a conglomeration of several different insurance operations, including National Indemnity's primary group, Berkshire Hathaway Homestate Companies, Berkshire Hathaway Specialty Insurance, Medical Protective Company, U.S. Investment Corporation, Berkshire Hathaway Guard Insurance Companies, and Applied Underwriters, which Berkshire is in the process of divesting. These entities offer coverage as varied as workers' compensation and commercial auto and property coverage to excess and surplus lines. By focusing more on specialty lines that require extensive experience or unique relationships to underwrite effectively, BHPG has been able to put together a continuous record of solid earned premium growth and underwriting profitability, which is a rarity in the insurance business (with most P&C insurers willing to take underwriting losses from time to time in order to generate earned premium growth, believing that they can make up the difference with investment gains).

Of the more than 70 noninsurance businesses that make up Berkshire's remaining subsidiaries, Burlington Northern Santa Fe and Berkshire Hathaway Energy are usually lumped together under the company's railroad utilities and energy segment in Berkshire's financial statements. While their contribution to pretax earnings and our own fair value estimate for the firm are now overshadowed a bit by the manufacturing, service, and retailing segment (which rolled up Berkshire's finance and financial products division at the end of 2018), they are far more transparent than the company's other operating segments. On a combined basis, BNSF and BHE generated close to a third of Berkshire's pretax earnings on average and currently contribute close to 30% to our estimate of the company's overall fair value. The most interesting thing about these two businesses is that neither one was a major contributor to Berkshire's pretax earnings just over a decade ago. Buffett's shift into such debt-heavy capital-intensive businesses as railroads and utilities has represented a marked departure from many of Berkshire's other acquisitions over the years, which have tended to require less ongoing capital investment and have had little to no debt and have tended to produce higher returns on average. That said, were Buffett to focus on buying more asset-light companies with fewer capital investment needs, it would have left his successors with even greater amounts of cash to have to reinvest annually in the longer term. During 2015-19, the firm generated an average of $22.9 billion annually in free cash flow. The amount of excess cash Buffett would have needed to find a home for would have been meaningfully higher had Berkshire purchased similar-size companies to BNSF and BHE with similar cash flow profiles that were not investing close to $10 billion on average annually collectively in their own property and equipment.

With BNSF, which was acquired in full in February 2010, Berkshire picked up a Class I railroad operator--an industry designation for a large operator with an extensive system of interconnected rails, yards, terminals, and expansive fleets of motive power and rolling stock. We believe that

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all of the major North American Class I railroads benefit from colossal barriers to entry due to their established, practically impossible-to-replicate networks of rights of way and continuously welded steel rail. While barges, ships, aircraft, and trucks also haul freight, railroads are by far the lowest-cost option when no waterway connects the origin and destination, especially for freight with low value per unit weight. Customers have few choices thus wield limited buyer power, with most Class I railroads operating as duopolies (and some being a monopoly supplier) to the end client in many markets. This provides the major North American Class I railroads with efficient scale. Believing that operators like BNSF will continue to leverage their competitive advantages of low cost and efficient scale to generate returns on invested capital in excess of their cost of capital, we have awarded them wide-moat ratings. As for Berkshire Hathaway Energy, which Buffett built up through investments in MidAmerican Energy (supplanting a 76% equity stake taken in early 2000 with additional purchases that have raised its interest to 91.1%), PacifiCorp (acquired in full during 2005), NV Energy (acquired in full at the end of 2013), and AltaLink (acquired in full at the end of 2014), we think the business overall is endowed with a narrow economic moat. While BHE has picked up pipeline assets--which have wide-moat characteristics--the majority of its revenue and profitability (and ongoing capital investment) are driven by its three main regulated utilities: MidAmerican Energy, PacifiCorp, and NV Energy. We think that regulated utilities cannot establish more than a narrow moat around their businesses, even with their difficult-to-replicate networks of power generation, transmission, and distribution, given that their rates, as well as their returns, are set by state and federal regulators.

While Berkshire's manufacturing, service, and retailing operations are now one of the largest contributors to pretax earnings, following the folding of the old finance and financial products segment into the MSR unit, getting a handle on the profitability (and economic moats) of the wide array of businesses (operating in more than a handful of different industries) that make up the segment is difficult at best. Unlike BNSF and BHE, both of which file quarterly and annual reports with the Securities and Exchange Commission, there is little financial information available on the firms operating in this segment. That said, given Buffett's penchant for acquiring companies that have consistent earnings power, generate above-average returns on capital, hold little debt, and are run by solid management teams, we believe that the vast majority of the businesses that make up the segment are collectively endowed with a narrow economic moat. We'd also note that during 2019, the five largest companies (on a pretax earnings basis) in the MSR segment--Precision Castparts, Lubrizol, Clayton Homes, Marmon, and IMC/ISCAR--accounted for more than half of the pretax earnings produced by the division. Each of these subsidiaries, by our estimates, has a fairly solid narrow moat around its operations. When combined with the next five largest subsidiaries--Shaw Industries, Forest River, Johns Manville, TTI, and MiTek Industries--the 10 subsidiaries accounted for more than 70% of the MSR segment's pretax earnings during 2019, with a moat rating overall that skews to the narrow end of the spectrum.

With Buffett running Berkshire on a decentralized basis, the managers of the company's operating subsidiaries are empowered to make their own business decisions. In most cases, the managers running Berkshire's subsidiaries are the same individuals who sold their firms to Buffett, leaving them with a vested interest in the businesses they run. Barring a truly disruptive event in their industries, we expect these firms to continue to have the same advantages that attracted Buffett to them in the first place. That does not mean that there won't be subsidiaries whose competitive advantages diminish over time (exemplified by the demise of the textile manufacturer that Berkshire Hathaway derives its own name from), it's just that the large collection of moaty firms that reside within Berkshire's manufacturing, service, and retailing operations, is more likely to maintain a narrow economic moat in aggregate, even as a few firms along the way succumb to changing competitive dynamics within their industries.

Fair Value & Profit Drivers

Greggory Warren, Analyst, 12 November 2020

We've increased our fair value estimate for Berkshire Hathaway to $253 per Class B share from $237. With the company's book value expected to increase at a low-single-digit rate this year and then a mid-single-digit rate next year, our new estimate is equivalent to 1.42 and 1.36 times our estimates for the company's book value per share at the end of 2020 and 2021, respectively. For some perspective, during the past five (10) years, Berkshire's shares have traded at an average of 1.44 (1.36) times the company's trailing calendar year-end book value per share.

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We use a 9.0% cost of equity in our valuation.

We use a sum-of-the-parts methodology to arrive at our fair value estimate. Our valuation for Berkshire's insurance operations is $104 per Class B share (up from $98 previously) mostly due to improved performance of the equity portfolio since our last update. Our five-year forecast, which includes a year of catastrophe-related losses, has earned premium growth averaging 6.7% per year during 2020-24, with the insurance group's combined ratio averaging 97.6% annually. During 2015-19 (2010-19), earned premiums grew at an average annual rate of 8.2% (8.2%), with the operations maintaining a combined ratio of 98.4% (96.5%) on average.

Our fair value estimate for the company's railroad operations is $48 per Class B share (up from $45 previously). In this forecast, we expect unit volumes to increase at a 0.7% CAGR during 2020-24, with freight revenue expanding 1.9% on average annually and the company's operating ratio falling below 62% by the end of 2024. For Berkshire's utilities and energy division, the purchase of Dominion GT&S at a lower price point, as well as continued constructive rate-case outcomes for each of the division's U.S. regulated utilities, has lifted our valuation for the unit to $24 per Class B share (from $23 previously).

As for Berkshire's manufacturing, service, and retail operations, we estimate that it is worth $77 per Class B share (up from $71 previously). This forecast assumes average annual revenue growth of 2.1% during 2020-24 (up from 1.6% previously), with pretax operating margins (which have held up better than expected) averaging around 8.1% annually (up from 7.8% previously). Although the MSR segment has provided plenty of opportunity to deploy capital through acquisitions and internal investments, we expect more modest levels of investment going forward.

Risk & Uncertainty

Greggory Warren, Analyst, 12 November 2020

Berkshire is exposed to large potential losses through its insurance operations. While the company believes its catastrophe and supercatastrophe underwriting can generate solid long-term results, the volatility of these business lines, which have the potential to subject the firm to especially large losses, tends to be high. Berkshire maintains much higher capital levels than almost all other insurers, though, which we believe mitigates much of this risk.

Several of the firm's key businesses--insurance, energy generation and distribution, and rail transport--operate in industries that are subject to higher degrees of regulatory oversight, which could have an impact on future business combinations, as well as the setting of rates that are charged to customers. On top of that, many of the firm's noninsurance operations are exposed to the cyclicality of the economy, with results typically suffering during economic slowdowns and recessions.

Berkshire is also exposed to foreign currency, equity price, and credit default risk through its various investments and operating companies. The company's derivative contracts, in particular, could affect the firm's earnings and capital position, especially during more volatile markets, given that they are recorded at fair value and are, therefore, updated periodically to reflect the ongoing changes in the value of these contracts. These contracts started expiring in 2019 and will continue to do so until 2025.

Berkshire depends on two key employees, Warren Buffett and Charlie Munger, for almost all of its investment and capital-allocation decisions. With Buffett having turned 90 in August 2020 and Munger turning 97 in January 2020, it has become increasingly likely that our valuation horizon will end up exceeding their life spans, with the quality of investment returns and capital allocation likely to deteriorate under new management.

Stewardship

Greggory Warren, Analyst, 12 November 2020

Warren Buffett has been the chairman and CEO of Berkshire Hathaway since 1970. Charlie Munger has served as the company's vice chairman since 1978. Berkshire has two classes of common stock, with Class B shares holding 1/1,500th of the economic rights of Class A shares and only 1/10,000th of the voting rights. Buffett is Berkshire's largest shareholder, with a 31.03% voting stake and a 15.54% economic interest in the firm as of July 2020. He has been a strong steward of investor capital, consistently aligning his own interests with those of shareholders, with Berkshire's wide economic moat derived in part from the success that he has had in melding the firm's financial strength and underwriting ability with his own investment acumen. Buffett's stewardship has allowed Berkshire to increase its book value per share (by

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our estimates) at a compound annual growth rate of 18.8% during 1965-2019, compared with a 10.1% return for the S&P 500 TR Index. The firm has not only increased its book value per share at a double-digit rate annually 43 separate times during 1965-2019 but has reported declines in book value just twice the past 55 years (in 2001 and 2008--with 2020 likely to be only the third year Berkshire has posted a decline). While Buffett has attempted to discourage investors from focusing on book value per share growth, stating in Berkshire's 2018 annual report that the "metric has lost the relevance it once had," we still view it as a valuable gauge for assessing changes in intrinsic value--that is, until such time that Berkshire is buying back a ton of its own common stock. Until then, we expect the firm to increase book value per share at a high-single- to low-double-digit rate--comfortably above its cost of capital--in most years, much as we've seen the company do since the start of the millennium.

Given the impressive long-term track record that Buffett and Munger have put together at Berkshire, it is important that much of what they've built remains intact once they depart the scene. Succession was not formally addressed by the company until 2005, when Berkshire noted that Buffett's three main jobs--chairman, chief executive, and chief investment officer--would be handled by one chairman (expected to be his son, Howard Buffett), one CEO (with candidates identified but not revealed), and several external hires (reporting directly to the CEO) to manage the investment portfolio. While we have clarity on the investment side of things, with Todd Combs (who is now serving as Geico's CEO) and Ted Weschler expected to be the only outside hires to work with Berkshire's investment portfolio, questions continue to linger over who the firm's next CEO will be. We envision the main role of Berkshire's next chief executive to be one of capital allocator in chief. With all of the company's operating businesses managed on a decentralized basis, eliminating the need for layers of management control and pushing responsibility for each business down to the subsidiary level, Buffett and Munger have had the freedom to focus on managing the firm's investments and making capital-allocation decisions. Buffett has noted at times, though, that the job requires more than just investment prowess and, as such, he would not advocate for a candidate to run Berkshire who only had investing experience, with no operational experience to speak of. Buffett has also been vocal about the next CEO coming from within the company's ranks.

We believe Ajit Jain, who was added to Berkshire's board at the start of 2018 and assumed the title of Vice Chairman-Insurance Operations, and Greg Abel, who also joined the board and was elevated to Vice Chairman-Noninsurance Business Operations, are the top two candidates to replace Buffett. While Jain is an alluring target to replace Buffett once he departs (given his success on the insurance side of things), we think Berkshire would be better served longer term having him focus primarily on insurance and offering up advice when the moment calls for it. While Jain's experience has primarily been on the underwriting side of the business, his success there has been built on his ability to avoid making "dumb decisions" rather than making "brilliant" ones. If the firm's next CEO is expected to do nothing more than act as a caretaker for the business, tending to the needs of the managers of the different subsidiaries, overseeing the actions of the investment managers handling the company's investment portfolio, and dealing with the capital-allocation and risk assessments that need to be made along the way, then we could not think of a better candidate than Jain. The only problem is that Jain has been on the record several times saying he does not want the job, which is the main reason we regard Abel--who not only brings with him the operational experience of running Berkshire Hathaway Energy for many years but has a ton of experience doing acquisitions--as the most likely choice to succeed Buffett.

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Analyst Notes Archive

Berkshire Hathaway Adds to Energy Assets With $9.7 Billion Deal for Dominion Energy's Gas Operations

Greggory Warren, Analyst, 06 July 2020

We do not expect to alter our fair value estimate of $342,500 ($228) per Class A (B) share for wide-moat-rated Berkshire Hathaway following news that the firm has agreed to acquire nearly all of wide-moat-rated Dominion Energy's natural gas transmission and storage operations for $4 billion, or $9.7 billion when including assumed debt. Berkshire closed the March quarter with a record $137 billion in cash and cash equivalents and likely has even more cash on hand coming into the current quarter (it's expected to generate more than $20 billion in free cash flow annually the next several years), so this deal represents only a small reduction in its substantial cash hoard, which continues to serve as a drag on overall returns, especially with short-term interest rates dropping to near zero.

That said, we are encouraged to see Berkshire finally putting some capital to work following CEO Warren Buffett's hesitance to jump into the fray following the COVID-19 shutdown. While the deal may not move the needle all that much from a balance sheet perspective, it should produce around $1 billion in net income annually, based on results for Dominion's gas distribution and gas transmission and storage operations the past several years. As we've noted for a number of years, we believe Berkshire's primary area of focus for future deals will be in the utilities and energy parts of its portfolio, an area that Greg Abel (vice chairman in charge of Berkshire's noninsurance business operations and our lead candidate to eventually succeed Buffett) is intimately involved in.

Absent other deals or lucrative internal investments, we still believe the best use of capital for Berkshire in the near term would be repurchasing its own common stock, which continues to trade at around a 20% discount to our fair value estimate and 1.2 times and 1.1 times our projected book value per share for the end of 2020 and 2021, respectively.

Unrealized Investment Gains Lift Berkshire's Q2 Results as Subsidiaries Cope With the Coronavirus

Greggory Warren, Analyst, 08 August 2020

With wide-moat Berkshire Hathaway's second-quarter (and first half) results not varying too widely from our expectations, we expect to leave our $342,500 ($228) per Class A (B) share fair value estimate in place. As we continue to uncover more and more tidbits of information related to the impact that the COVID-19 pandemic will likely have on Berkshire's different operating subsidiaries, though, we will make further adjustments to our near-term assumptions, which could alter our fair value estimate.

Second-quarter (first-half) revenue, which includes unrealized and realized gains/losses from Berkshire's investments and derivatives portfolios, increased 31.6% (declined 43.2%) year over year to $96.9 billion ($87.9 billion). Excluding the impact of investment and derivative gains/losses and other adjustments, second-quarter (first-half) operating revenue declined 10.6% (4.9%) to $56.8 billion ($117.9 billion).

Operating earnings, exclusive of the impact of investment and derivative gains/losses but including goodwill and intangible asset impairments (including $9.8 billion attributable to Berkshire's 2016 acquisition of Precision Castparts), decreased 10.2% (2.3%) year over year to $5.5 billion ($11.4 billion) during the June quarter (first half of 2020). When including the impact of the investment and derivative gains/losses, net earnings increased 86.8% (fell 165.6%) to $26.3 billion (negative $23.5 billion).

The company closed out the June quarter with a record $146.6 billion in cash and cash equivalents, up from $137.3 billion at the end of March, having netted around $13 billion from equity sales and buying back around $5 billion worth of Berkshire's common stock during the second quarter (as well as retaining excess cash from its operating subsidiaries). This left Berkshire (by our estimates) with $121 billion in dry powder that could be committed to investments, acquisitions, and share repurchases in the third quarter of 2020.

Berkshire a Net Seller of Equities in Q2; Sales of Bank Stocks Reduce Financial Services Exposure

Greggory Warren, Analyst, 14 August 2020

There were few surprises in wide-moat Berkshire Hathaway's second-quarter 13-F filing. In fact, having known that the insurer eliminated its stakes in the four major airlines--American Airlines, Delta Air Lines, Southwest Airlines, and United Airlines--as well as Goldman Sachs in early April, while picking up an

Berkshire Hathaway Inc BRK.B (XNYS)

Morningstar Rating	Last Price	Fair Value Estimate	Price/Fair Value	Trailing Dividend Yield %	Forward Dividend Yield %	Market Cap (Bil)	Industry	Stewardship
★★★★	233.10 USD	253.00 USD	0.92	—	0.00	546.48	Insurance - Diversified	Exemplary
16 Nov 2020 22:23, UTC	16 Nov 2020	12 Nov 2020 20:17, UTC		16 Nov 2020	16 Nov 2020	16 Nov 2020		

additional 108 million shares of Bank of America since the start of the third quarter, makes the filing feel a bit dated. That said, there was a fair amount of trimming of, as well as additions to, existing share positions during the quarter, as well as a new-money purchase of Barrick Gold to consider.

Much like the first quarter, Berkshire was a net seller of stocks during the June quarter, reporting $10.9 billion in net proceeds from its purchases and sales in its recent 10-Q. Looking first at the purchases, Berkshire picked up 21 million shares of Barrick Gold for an estimated $470 million, and increased its stakes in Liberty Media SiriusXM, Store Capital, Kroger, and Suncor Energy. It should be noted, though, that each of these holdings accounted for less than 1% (if not less than 0.5%) of Berkshire's $202.4 billion portfolio at the end of the second quarter.

As for the sales, the largest was JPMorgan Chase, with Berkshire selling 36 million shares for an estimated $3.3 billion. The company also reduced its stake in Wells Fargo by close to a third, selling 86 million shares for an estimated $2.3 billion, and trimmed holdings in PNC Financial, Bank of New York Mellon, and M&T Bank, and (as we noted above) eliminated its position in Goldman Sachs. There were also reductions in Berkshire's stakes in Visa and Mastercard, further reducing its commitment to financial services stocks during the quarter. Meanwhile, the sales of the four airline stocks netted the firm an estimated $5.2 billion, while the sales of shares of Charter Communications, Occidental Petroleum, Restaurant Brands, and SiriusXM radio likely brought in another $1 billion.

Berkshire Continues Deploying Capital by Buying Back Shares and Adding to Its Equity Portfolio

Greggory Warren, Analyst, 31 August 2020

Wide-moat-rated Berkshire Hathaway has started putting money to work more strategically the past few months. Following up on the repurchase of $5.1 billion of its own shares in May and June, it looks like Berkshire may have bought back another $2.4 billion worth of stock in July (based on reported shares outstanding in the company's 10-Q filing at the end of June and shares outstanding as of July 30, 2020). The insurer also committed $4 billion in early July to the acquisition of nearly all of Dominion Energy's natural gas transmission and storage operations, and announced this week that over the past 12 months it had purchased 5% stakes in each of five leading Japanese trading companies--Itochu, Marubeni, Mitsubishi, Mitsui, and Sumitomo--which are currently worth around $6 billion.

As you may recall from our previous commentary on the firm, Berkshire continues to have a cash problem--closing out the June quarter with a record $146.6 billion in cash and equivalents ($121 billion of which we considered to be dry powder available for acquisitions, investments, and share repurchases). While it is good to see the company finally putting some capital to work (especially on the share repurchase front) it will take more than what we've seen to date for Berkshire to push its cash balance well below the $150 billion threshold CEO Warren Buffett has claimed would be difficult for him to defend to shareholders--especially with the firm likely to continue generating around $5 billion in free cash flow quarterly. As these deals are more likely to be filling gaps that have been created by stock sales and economic setbacks in some of Berkshire's operating subsidiaries, they're unlikely to have a meaningful impact on our fair value estimate.

Unrealized Investment Gains and Better-Than-Expected MSR Performance Lift Berkshire's Q3 Results

Greggory Warren, Analyst, 07 November 2020

With wide-moat-rated Berkshire Hathaway's third-quarter (and year-to-date) results not varying too widely from our expectations, we do not anticipate making any major changes to our $355,000 ($237) per Class A (B) share fair value estimate. That said, our assumptions related to the impact that the COVID-19 pandemic and subsequent recession are likely to have on Berkshire's different operating subsidiaries could change as we completely digest the company's most recent results.

Third-quarter (year-to-date) revenue, which includes unrealized and realized gains/losses from Berkshire's investments and derivatives portfolios, increased 24.6% (declined 20.8%) year over year to $94.6 billion ($182.5 billion). Excluding the impact of investment and derivative gains/losses and other adjustments, third-quarter (year-to-date) operating revenue declined 2.6% (4.1%) to $63.0 billion ($180.9 billion).

Operating earnings, excluding the impact of investment and derivative gains/losses but including goodwill and

Berkshire Hathaway Inc BRK.B (XNYS)

Morningstar Rating	Last Price	Fair Value Estimate	Price/Fair Value	Trailing Dividend Yield %	Forward Dividend Yield %	Market Cap (Bil)	Industry	Stewardship
★★★★	233.10 USD	253.00 USD	0.92	—	0.00	546.48	Insurance - Diversified	Exemplary
16 Nov 2020 22:23, UTC	16 Nov 2020	12 Nov 2020 20:17, UTC		16 Nov 2020	16 Nov 2020	16 Nov 2020		

intangible asset impairments (including $9.8 billion attributable to Berkshire's 2016 acquisition of Precision Castparts), decreased 32.1% (14.5%) year over year to $5.5 billion ($16.9 billion) during the September quarter (first nine months of 2020). When including the impact of the investment and derivative gains/losses, net earnings increased 82.4% (fell 87.2%) to $30.1 billion (negative $6.7 billion).

Berkshire closed out September with $138.9 billion in cash (after excluding $6.8 billion payable for U.S. Treasuries at the end of the quarter), down from a record $146.6 billion at the end of June, with Berkshire (by our estimates) having around $113 billion in dry powder that could be committed to investments, acquisitions, and share repurchases in the fourth quarter of 2020 (with the company already laying out $2.7 billion for Dominion GT&S in early November). The firm repurchased $9.3 billion worth of its common stock during the third quarter.

Berkshire a Net Purchaser of Equities in Q3; Apple Remains Top Holding at 47.8% of Holdings

Greggory Warren, Analyst, 16 November 2020

Unlike most periods, there were a few surprises in wide-moat Berkshire Hathaway's third-quarter 13-F filing, with the firm actually taking positions in four different healthcare firms--AbbVie, Merck, Bristol-Myers Squibb, and Pfizer--while making meaningful reductions in several of its bank holdings--JPMorgan Chase, PNC Financial Services, Wells Fargo, and M&T Bank. We had some sense about the Wells Fargo trades, noting that Berkshire (through information provided in its Form 4 and Schedule 13G filings intra-quarter) seemed to be swapping out of Wells Fargo in favor of Bank of America (where the insurer now holds more than 1 billion shares following the purchase of an additional 85 million shares during the third quarter).

While Bank of America accounted for 10.6% of Berkshire's $228.9 billion 13-F portfolio at the end of September 2020, Apple (despite the sale of some 36 million share post the company's 4-for-1 split) remained its largest holding, accounting for 47.8% of the portfolio's holdings (up from 44.1% at the end of June 2020). Other sales during the September quarter included a 40% reduction in the insurer's stake in Barrick Gold, and mid-single-digit declines in holdings in Liberty Global, DaVita, and Axalta.

Proceeds from these sales helped fund the new-money purchases of the aforementioned healthcare names, as well as a new-money purchase of T-Mobile US and participation in the Snowflake initial public offering. Other positions that Berkshire added to during the quarter included Kroger, Liberty Latin America, and General Motors. As holdings in foreign investments that are held abroad, such as Berkshire's $5 billion stake in BYD Corporation, are not disclosed in the company's 13-F filing, it did not pick up the 5% stakes that the insurer took in each of five leading Japanese trading companies--Itochu, Marubeni, Mitsubishi, Mitsui, and Sumitomo--which were worth around $6 billion on a combined basis at the end of last month.

Quantitative Equity Report | Release: 16 Nov 2020, 18:54, GMT-06:00 | Reporting Currency: USD | Trading Currency: USD | Exchange:XNYS

Berkshire Hathaway Inc Class B BRK.B ★★★★Q

16 Nov 2020 02:00 UTC

Last Close	Fair ValueQ	Market Cap	Sector	Industry	Country of Domicile
16 Nov 2020	16 Nov 2020 02:00 UTC	16 Nov 2020			
233.10	250.69	533.6 Bil	Financial Services	Insurance - Diversified	USA United States

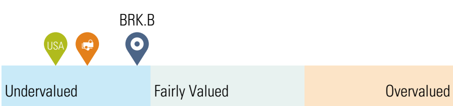
There is no one analyst in which a Quantitative Fair Value Estimate and Quantitative Star Rating are attributed to; however, Mr. Lee Davidson, Head of Quantitative Research for Morningstar, Inc., is responsible for overseeing the methodology that supports the quantitative fair value. As an employee of Morningstar, Inc., Mr. Davidson is guided by Morningstar, Inc.'s Code of Ethics and Personal Securities Trading Policy in carrying out his responsibilities. For information regarding Conflicts of Interests, visit http://global.morningstar.com/equitydisclosures

Company Profile

Berkshire Hathaway is a holding company with a wide array of subsidiaries engaged in diverse activities. The firm's core business segment is insurance, run primarily through Geico, Berkshire Hathaway Reinsurance Group and Berkshire Hathaway Primary Group. Berkshire has used the excess cash thrown off from these and its other operations over the years to acquire Burlington Northern Santa Fe (railroad), Berkshire Hathaway Energy (utilities and energy distributors), and the firms that make up its manufacturing, service, and retailing

Quantitative Scores

		Scores		
		All	Rel Sector	Rel Country
Quantitative Moat	Wide	100	100	99
Valuation	Undervalued	28	15	27
Quantitative Uncertainty	Medium	100	100	98
Financial Health	Moderate	89	46	89



Source: Morningstar Equity Research

Valuation

	Current	5-Yr Avg	Sector Median	Country Median
Price/Quant Fair Value	0.93	0.94	0.87	0.83
Price/Earnings	15.5	20.5	12.7	20.1
Forward P/E	16.9	—	10.5	13.9
Price/Cash Flow	13.3	11.9	9.5	13.1
Price/Free Cash Flow	20.4	20.1	10.9	19.5
Trailing Dividend Yield %	—	—	3.64	2.35
Price/Book	1.3	1.4	1.1	2.4
Price/Sales	2.0	1.9	2.9	2.4

Profitability

	Current	5-Yr Avg	Sector Median	Country Median
Return on Equity %	8.8	11.0	10.1	12.9
Return on Assets %	4.4	5.3	1.4	5.2
Revenue/Employee (K)	713.2	660.4	762.0	325.9

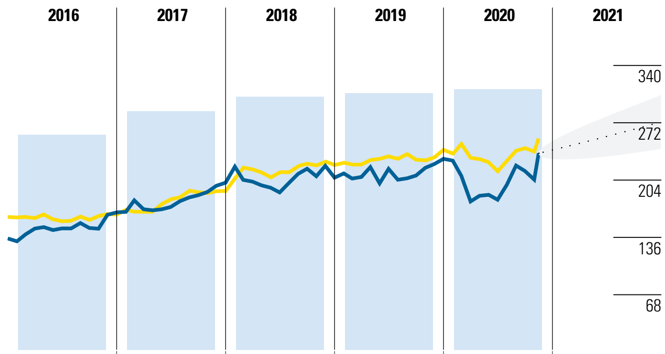
Financial Health

	Current	5-Yr Avg	Sector Median	Country Median
Distance to Default	0.7	0.8	0.8	0.5
Solvency Score	—	—	503.7	552.4
Assets/Equity	1.9	2.1	3.7	1.7
Long-Term Debt/Equity	0.2	0.3	0.3	0.4

Growth Per Share

	1-Year	3-Year	5-Year	10-Year
Revenue %	45.2	13.6	10.9	11.3
Operating Income %	—	—	—	—
Earnings %	1,937.1	50.4	32.7	25.4
Dividends %	—	—	—	—
Book Value %	23.0	15.1	12.3	12.0
Stock Total Return %	6.1	8.6	11.8	11.3

Price vs. Quantitative Fair Value

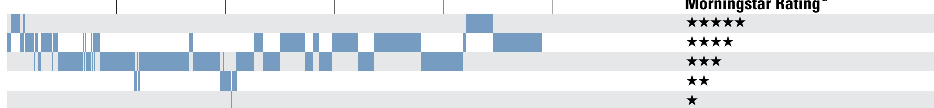


Momentum: Negative
Standard Deviation: 18.70
Liquidity: High

	52-Wk	
159.50	52-Wk	233.46
123.55	5-Yr	233.46

2016	2017	2018	2019	2020	2021	
23.4	21.6	3.0	10.9	2.9		Total Return %
11.0	0.1	8.1	-20.3	-10.7		+/– Market (Morningstar US Index)
—	—	—	—	—		Trailing Dividend Yield %
—	—	—	—	—		Forward Dividend Yield %
17.3	26.2	8.1	20.6	15.5		Price/Earnings
1.8	2.0	2.0	2.2	2.0		Price/Revenue

Morningstar RatingQ

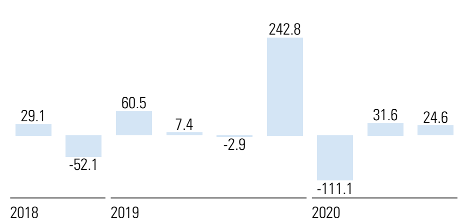


2015	2016	2017	2018	2019	TTM	Financials (Fiscal Year in Mil)
210,821	223,604	242,137	225,382	327,223	279,200	Revenue
8.3	6.1	8.3	-6.9	45.2	-14.7	% Change
—	—	—	—	—	—	Operating Income
—	—	—	—	—	—	% Change
24,083	24,074	44,940	4,021	81,417	35,845	Net Income
31,491	32,535	45,776	37,400	38,687	41,304	Operating Cash Flow
-16,082	-12,954	-11,708	-14,537	-15,979	-14,356	Capital Spending
15,409	19,581	34,068	22,863	22,708	26,948	Free Cash Flow
7.3	8.8	14.1	10.1	6.9	9.7	% Sales
9.77	9.76	18.22	1.63	33.22	14.70	EPS
21.2	-0.1	86.6	-91.0	1,937.1	-55.8	% Change
6.16	7.62	13.38	8.71	8.88	9.84	Free Cash Flow/Share
—	—	—	—	—	—	Dividends/Share
100.72	109.17	124.95	152.60	163.13	167.82	Book Value/Share
2,465	2,466	2,467	2,461	2,437	2,345	Shares Outstanding (Mil)
						Profitability
9.7	8.9	14.2	1.2	21.1	8.8	Return on Equity %
4.5	4.1	6.8	0.6	10.7	4.4	Return on Assets %
11.4	10.8	18.6	1.8	24.9	12.8	Net Margin %
0.39	0.38	0.37	0.32	0.43	0.35	Asset Turnover
2.2	2.2	2.0	2.0	1.9	2.0	Financial Leverage
—	—	—	—	—	—	Gross Margin %
—	—	—	—	—	—	Operating Margin %
82,300	99,550	96,267	93,117	98,682	104,331	Long-Term Debt
255,550	283,001	348,296	348,703	424,791	415,155	Total Equity
1.5	1.5	1.6	1.4	1.9	1.6	Fixed Asset Turns

Quarterly Revenue & EPS

Revenue (Bil)	Mar	Jun	Sep	Dec	Total
2020	-9.0	96.9	94.6	—	—
2019	81.0	73.6	75.9	96.7	327.2
2018	50.5	68.6	78.2	28.2	225.4
2017	65.2	57.5	60.5	58.9	242.1
Earnings Per Share ()					
2020	-20.44	10.88	12.66	—	—
2019	8.81	5.74	6.75	11.92	33.22
2018	-0.46	4.87	7.52	-10.32	1.63
2017	1.65	1.73	1.65	13.19	18.22

Revenue Growth Year On Year %



Research Methodology for Valuing Companies

Qualitative Equity Research 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. We believe this bottom-up, long-term, fundamentally based approach allows our analysts to focus on long-term business drivers, which have the greatest valuation impact, rather than short-term market noise.

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 an uncertainty-adjusted discount or premium to their intrinsic worth—or fair value estimate, in Morningstar terminology. Five-star stocks sell for the biggest risk-adjusted discount to their fair values whereas 1-star stocks trade at premiums to their intrinsic worth.

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

1. Economic Moat

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

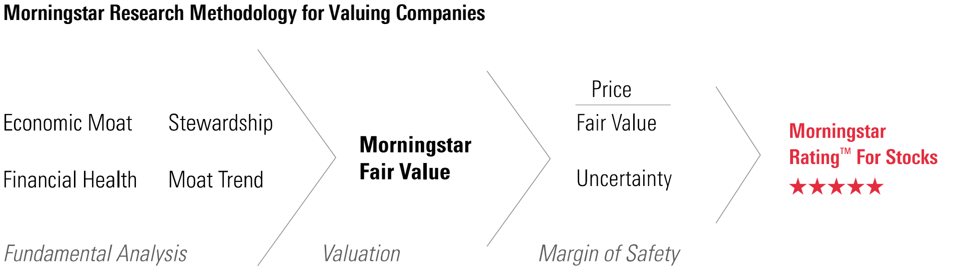
To assess the direction of the underlying competitive advantages, analysts perform ongoing assessments of the moat trend. A firm's moat trend is positive in cases where we think its sources of competitive advantage are growing stronger; stable where we don't anticipate changes to competitive advantages over the next several years; or negative when we see signs of deterioration.

All the moat and moat trend ratings undergo periodic review and any changes must be approved by the Morningstar Economic Moat Committee, comprised of senior members of Morningstar's equity research department.

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.

Morningstar Research Methodology for Valuing Companies



Our model is divided into three distinct stages:

Stage I: Explicit Forecast

In this stage, which can last five to 10 years, analysts make full financial statement forecasts, including items such as revenue, profit margins, tax rates, changes in working-capital accounts, and capital spending. Based on these projections, we calculate earnings before interest, after taxes, or EBI, and the net new investment, or 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, or RONIC, and the number of years until perpetuity, when excess returns cease. The investment rate and return on new invested capital decline until the perpetuity stage is reached. 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.

Research Methodology for Valuing Companies

3. Uncertainty Around That Fair Value Estimate

Morningstar's Uncertainty Rating captures a range of likely potential intrinsic values for a company and uses it to assign the margin of safety required before investing, which in turn explicitly drives our stock star rating system. The Uncertainty Rating represents the analysts' ability to bound the estimated value of the shares in a company around the fair value estimate, based on the characteristics of the business underlying the stock, including operating and financial leverage, sales sensitivity to the overall economy, product concentration, pricing power, and other company-specific factors.

Analysts consider at least two scenarios in addition to their base case: a bull case and a bear case. Assumptions are chosen such that the analyst believes there is a 25% probability that the company will perform better than the bull case, and a 25% probability that the company will perform worse than the bear case. The distance between the bull and bear cases is an important indicator of the uncertainty underlying the fair value estimate.

Our recommended margin of safety widens as our uncertainty of the estimated value of the equity increases. The more uncertain we are about the estimated value of the equity, 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 for our qualitative analysis are low, medium, high, very high, and extreme.

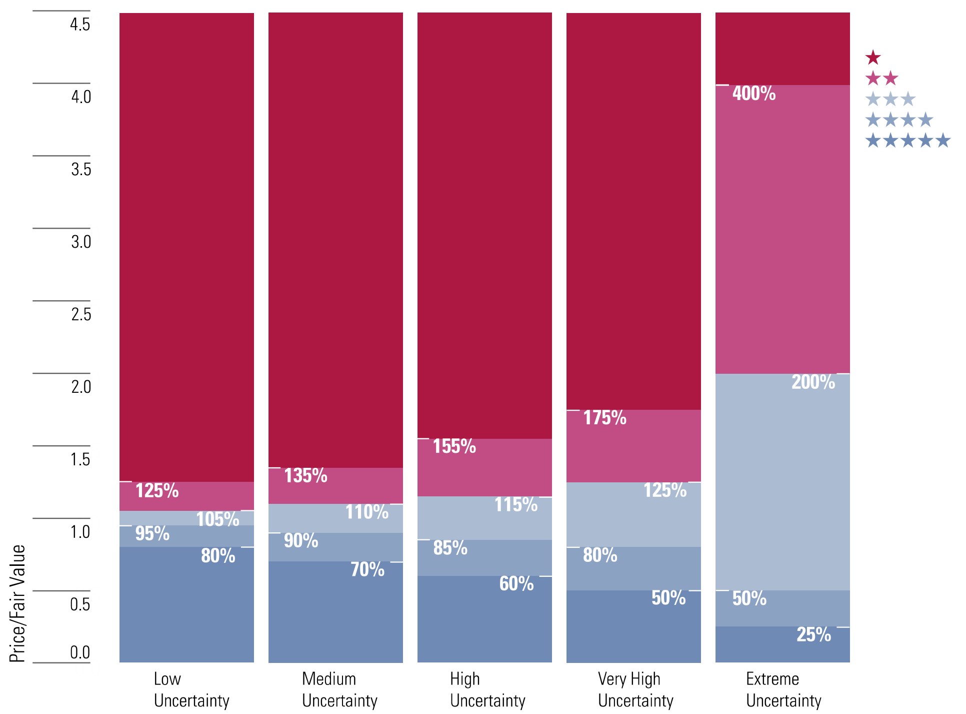
- Low–margin of safety for 5-star rating is a 20% discount and for 1-star rating is 25% premium.
- Medium–margin of safety for 5-star rating is a 30% discount and for 1-star rating is 35% premium.
- High–margin of safety for 5-star rating is a 40% discount and for 1-star rating is 55% premium.
- Very High–margin of safety for 5-star rating is a 50% discount and for 1-star rating is 75% premium.
- Extreme–margin of safety for 5-star rating is a 75% discount and for 1-star rating is 300% premium.

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 Equity Research Star Rating Methodology



Morningstar Star Rating for Stocks

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.
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. 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. The market is pricing in an excessively optimistic outlook, limiting upside potential and leaving the investor exposed to Capital loss.

Research Methodology for Valuing Companies

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.

Stewardship Rating: Represents our assessment of management's stewardship of shareholder capital, with particular emphasis on capital allocation decisions. Analysts consider companies' investment strategy and valuation, financial leverage, dividend and share buyback policies, execution, compensation, related party transactions, and accounting practices. Corporate governance practices are only considered if they've had a demonstrated impact on shareholder value. Analysts assign one of three ratings: "Exemplary," "Standard," and "Poor." Analysts judge stewardship from an equity holder's perspective. Ratings are determined on an absolute basis. Most companies will receive a Standard rating, and this is the default rating in the absence of evidence that managers have made exceptionally strong or poor capital allocation decisions.

Quantitative Valuation: Using the below terms, intended to denote the relationship between the security's Last Price and Morningstar's quantitative fair value estimate for that security.

- Undervalued: Last Price is below Morningstar's quantitative fair value estimate.
- Fairly Valued: Last Price is in line with Morningstar's quantitative fair value estimate.
- Overvalued: Last Price is above Morningstar's quantitative fair value estimate.

Risk Warning

Please note that investments in securities are subject to market and other risks and there is no assurance or guarantee that the intended investment objectives will be achieved. Past performance of a security may or may not be sustained in future and is no indication of future performance. A security investment return and an investor's principal value will fluctuate so that, when redeemed, an investor's shares may be worth more or less than their original cost. A security's current investment performance may be lower or higher than the investment performance noted within the report. Morningstar's Uncertainty Rating serves as a useful data point with respect to sensitivity analysis of the assumptions used in our determining a fair value price.

Quantitative Equity Reports Overview

The quantitative report on equities consists of data, statistics and quantitative equity ratings on equity securities. Morningstar, Inc.'s quantitative equity ratings are forward looking and are generated by a statistical model that is based on Morningstar Inc.'s analyst-driven equity ratings and quantitative statistics. Given the nature of the quantitative report and the quantitative ratings, there is no one analyst in which a given report is attributed to; however, Mr. Lee Davidson, Head of Quantitative Research for Morningstar, Inc., is responsible for overseeing the methodology that supports the quantitative equity ratings used in this report. As an employee of Morningstar, Inc., Mr. Davidson is guided by Morningstar, Inc.'s Code of Ethics and Personal Securities Trading Policy in carrying out his responsibilities.

Quantitative Equity Ratings

Morningstar's quantitative equity ratings consist of:
(i) Quantitative Fair Value Estimate
(ii) Quantitative Star Rating
(iii) Quantitative Uncertainty
(iv) Quantitative Economic Moat
(v) Quantitative Financial Health
(collectively the "Quantitative Ratings").

The Quantitative Ratings are calculated daily and derived from the analyst-driven ratings of a company's peers as determined by statistical algorithms. Morningstar, Inc. (""Morningstar," "we," "our") calculates Quantitative Ratings for companies whether it already provides analyst ratings and qualitative coverage. In some cases, the Quantitative Ratings may differ from the analyst ratings because a company's analyst-driven ratings can significantly differ from other companies in its peer group.

Quantitative Fair Value Estimate: Intended to represent Morningstar's estimate of the per share dollar amount that a company's equity is worth today. Morningstar calculates the quantitative fair value estimate using a statistical model derived from the fair value estimate Morningstar's equity analysts assign to companies. Please go to https://shareholders.morningstar.com for information about fair value estimates Morningstar's equity analysts assign to companies.

Quantitative Economic Moat: Intended to describe the strength of a firm's competitive position. It is calculated using an algorithm designed to predict the Economic Moat rating a Morningstar analyst would assign to the stock. The rating is expressed as Narrow, Wide, or None.

- Narrow: assigned when the probability of a stock receiving a "Wide Moat" rating by an analyst is greater than 70% but less than 99%.
- Wide: assigned when the probability of a stock receiving a "Wide Moat" rating by an analyst is greater than 99%.
- None: assigned when the probability of an analyst receiving a "Wide Moat" rating by an analyst is less than 70%.

Quantitative Star Rating: Intended to be the summary rating based on the combination of our Quantitative Fair Value Estimate, current market price, and the Quantitative Uncertainty Rating. The rating is expressed as 1-Star, 2-Star, 3-Star, 4-Star, and 5-Star.

★: the stock is overvalued with a reasonable margin of safety.
Log (Quant FVE/Price)<–1*Quantitative Uncertainty

★★: the stock is somewhat overvalued.
Log (Quant FVE/Price) between (–1*Quantitative Uncertainty, –0.5*Quantitative Uncertainty)

★★★: the stock is approximately fairly valued.
Log (Quant FVE/Price) between (–0.5*Quantitative Uncertainty, 0.5*Quantitative Uncertainty)

★★★★: the stock is somewhat undervalued.
Log (Quant FVE/Price) between (0.5*Quantitative Uncertainty, 1*Quantitative Uncertainty)

★★★★★: the stock is undervalued with a reasonable margin of safety. Log (Quant FVE/Price) >1*Quantitative Uncertainty

Quantitative Uncertainty: Intended to represent Morningstar's level of uncertainty about the accuracy of the quantitative fair value estimate. Generally, the lower the quantitative Uncertainty, the narrower the potential range of outcomes for that particular company. The rating is expressed as Low, Medium, High, Very High, and Extreme.

- Low: the interquartile range for possible fair values is less than 10%.
- Medium: the interquartile range for possible fair values is less than 15% but greater than 10%.
- High: the interquartile range for possible fair values is less than 35% but greater than 15%.
- Very High: the interquartile range for possible fair values is less than 80% but greater than 35%.
- Extreme: the interquartile range for possible fair values is greater than 80%.

Quantitative Financial Health: Intended to reflect the probability that a firm will face financial distress in the near future. The calculation uses a predictive model designed to anticipate when a company may default on its financial obligations. The rating is expressed as Weak, Moderate, and Strong.

- Weak: assigned when Quantitative Financial Health <0.2
- Moderate: assigned when Quantitative Financial Health is between 0.2 and 0.7
- Strong: assigned when Quantitative Financial Health >0.7

Research Methodology for Valuing Companies

Other Definitions

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

Quantitative Valuation: Using the below terms, intended to denote the relationship between the security's Last Price and Morningstar's quantitative fair value estimate for that security.

- Undervalued: Last Price is below Morningstar's quantitative fair value estimate.
- Fairly Valued: Last Price is in line with Morningstar's quantitative fair value estimate.
- Overvalued: Last Price is above Morningstar's quantitative fair value estimate.

This Report has not been made available to the issuer of the security prior to publication.

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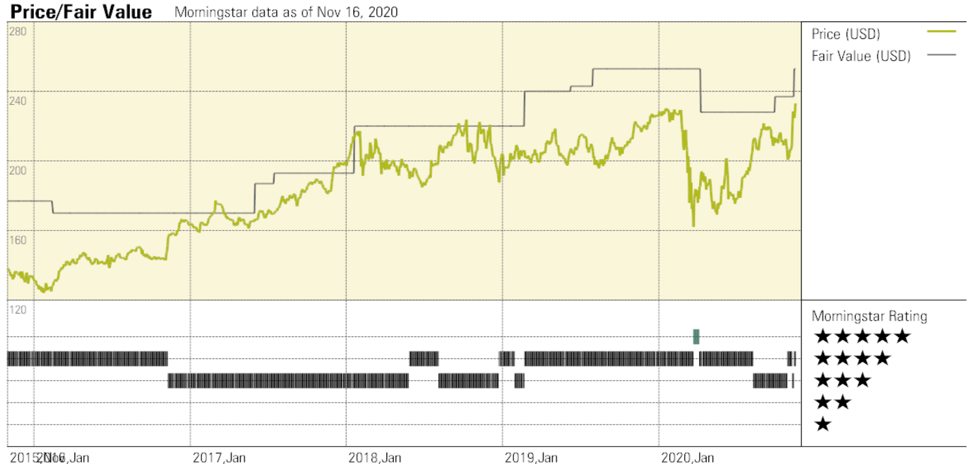
A change in the fundamental factors underlying the quantitative equity ratings can mean that the valuation is subsequently no longer accurate.

For more information about Morningstar's quantitative methodology, please visit http://global.morningstar.com/equitydisclosures.

Berkshire Hathaway Inc BRK.B (XNYS)

Morningstar Rating	Last Price	Fair Value Estimate	Price/Fair Value	Trailing Dividend Yield %	Forward Dividend Yield %	Market Cap (Bil)	Industry	Stewardship
★★★★	233.10 USD	253.00 USD	0.92	—	0.00	546.48	Insurance - Diversified	Exemplary
16 Nov 2020 22:23, UTC	16 Nov 2020	12 Nov 2020 20:17, UTC		16 Nov 2020	16 Nov 2020	16 Nov 2020		

Price/Fair Value Morningstar data as of Nov 16, 2020



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