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## **Berkshire Hathaway Inc** BRK.B (NYSE) | ★★★★

Last Price Fair Value Consider Buy Consider Sell Uncertainty Economic Moat™ Moat Trend™ Stewardship **Industry Group** 141 99 usp 170.00 USD 119 NN usp 229 50 USD Medium Wide Stable Exemplary Insurance

## Interest in Technology Stocks Apple and Yahoo Overshadows Berkshire's Recent Investment Activity

See Page 2 for the full Analyst Note from 16 May 2016

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

Research as of 16 May 2016 Estimates as of 12 Feb 2016 Pricing data through 01 Jun 2016 Rating updated as of 01 Jun 2016

Currency amounts expressed with "\$" are in U.S. dollars (USD) unless otherwise denoted.

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#### **Investment Thesis** 21 Sep 2015

While we remain impressed with the fact that Berkshire Hathaway was able to grow its book value per share at a double-digit rate annually during 2010-14, we continue to believe that given the current size of its operations that the firm will struggle to generate similar levels of growth longer term. We also think that greater transparency around the firm's planning for the day when Warren Buffett no longer runs the show (with Buffett having turned 85 this past year and Charlie Munger turning 92 at the start of 2016) would go a long way toward easing investor concerns.

Although we fully expect Berkshire to continue to put money to work in value-creating projects in the near to medium term, much as it has with its investments in Kraft Heinz and Precision Castparts this year, we think the huge sums of excess cash it generates on an ongoing basis will ultimately limit its ability to produce outsized returns. On top of that, Buffett and Munger have traditionally had the luxury of sitting on a lot of cash until the right deals come along (much as they did with Kraft Heinz and Precision Castparts), and we're not so certain that that will be the case longer term. Absent the ability to invest Berkshire's excess cash in value-creating deals on an ongoing basis, we believe future managers of the firm will have to commit to paying a dividend to shareholders.

As for the company's succession planning, it continues to look like Buffett's three main roles--chairman, CEO, and investment manager--will be split after his retirement. Our long-standing view has been that Buffett's son, Howard Buffett, will serve as nonexecutive chairman and that Ajit Jain, head of Berkshire Hathaway Reinsurance Group, will end up being offered the CEO role. Meanwhile, we continue to be impressed by the work that Warren Buffett's two lieutenants--Ted Weschler and Todd Combs--have done on the investment side, with both of them being far more involved in the investment process overall than we were expecting them to be at this point in their tenure.

Market Cap (USD Mil)	349,911
52-Week High (USD)	148.03
52-Week Low (USD)	123.55
52-Week Total Return %	-1.0
YTD Total Return %	7.5
Last Fiscal Year End	31 Dec 2014
5-Yr Forward Revenue CAGR %	5.6
5-Yr Forward EPS CAGR %	7.1

Vital Statistics

Price/Fair Value

Valuation Summary and Forecasts										
Fiscal Year	: 2013	2014	2015(E)	2016(E)						
Price/Earnings	0.01	0.01	_	0.01						
Price/Book	0.00	0.00	_	0.00						
Price/Tangible Book	0.00	0.00	_	0.00						
Price/Earned Premium	10.04	7.85	_	7.98						
Dividend Yield %	_	_	_							

Financial Summary and Forecasts (USD Mil)										
Fisc	al Year: 2013	2014	2015(E)	2016(E)						
Earned Premium	36,684	41,253	40,938	43,853						
Earned Premium YoY %	6.2	12.5	-0.8	7.1						
Investment Income	4,934	5,026	4,633	5,102						
Investment Income YoY %	8.9	1.9	-7.8	10.1						
Net Income	7,766	8,761	6,767	6,774						
Net Income YoY %	60.2	12.8	-22.8	0.1						
Diluted EPS, adjusted	NM	NM	NM	NM						
Diluted EPS YoY %, adjuste	ed 32.0	2.0	-9.8	21.5						
Dividends Per Share	_	_	_	_						

Source for forecasts in the data tables above: Morningstar Estimates

Analyst Note: Financial Statements reflect Insurance segment information only, EPS reflects consolidated operations.

#### **Profile**

Berkshire Hathaway is a holding company with a wide array of subsidiaries engaged in a number of diverse activities. The firm's core business segment is insurance, run primarily through Geico, General Re, Berkshire Hathaway Reinsurance Group, and Berkshire Hathaway Primary Group. The company's second-largest segment includes Burlington Northern Santa Fe (railroad) and Berkshire Hathaway Energy (utilities and energy distributors). The rest of Berkshire's operations consist of finance, manufacturing, service and retailing firms.



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While all of the talk the last time we looked at Berkshire Hathaway's end of guarter holdings was the firm's purchase of Energy sector stocks during the fourth quarter of last year and early part of this year, the big story following the release of the company's first-quarter 13-F filing this week revolves around its dabbling in Technology stocks. Even before the filing came out, news had surfaced over the weekend that CEO Warren Buffett had joined forces with Dan Gilbert, the founder of Quicken Loans, in a second round of bidding for some of the assets of Yahoo!, the struggling technology and media firm business. We're not sure what to think of this move, as Buffett has generally eschewed auctions, especially of businesses that need a lot of fixing up (as it is something he's never really had the stomach for and doesn't necessarily need to go down that road anymore). From what we can tell (and it looks like Buffett confirmed it this morning), Berkshire is merely positioning itself to provide financial backing for any deal that gets done.

Looking more closely at the first-quarter purchases, the most notable transaction, besides the firm's pickup of 14.1 million additional shares of Phillips 66 during the quarter (which we noted back in February), was Berkshire's acquisition of 9.8 million shares of Apple during the period. This looks to be more of a Todd Combs or Ted Weschler purchase, but valued at nearly a billion dollars we cannot imagine Buffett not being aware of the purchase. Berkshire also slightly increased its stakes in John Deere, IBM, Bank of New York Mellon, Visa, and Charter Communications. On the sales front, Berkshire eliminated its holdings in AT&T, and sold off shares of Wabco, MasterCard, and Wal-Mart. The elimination of Precision Castparts from the holdings were due to Berkshire's acquisition in full of that company, whereas the reduction of nearly its entire stake in Procter & Gamble was tied to its purchase of Duracell.

Even with these transactions, as well as the unrealized gains/losses, that occurred during the first quarter of 2016, the makeup of Berkshire's top 5 stock holdings--Kraft Heinz (19.9%), Wells Fargo (18.0%), Coca-Cola (14.4%), IBM (9.6%) and American Express (7.2%)--remained basically the same. With the top 5 stock holdings in Berkshire's equity portfolio accounting for close to 70% of the overall portfolio (and the top 10 holdings making up 84%), the insurer's equity portfolio (which had 47 total stock holdings at the end of March) remains fairly concentrated, adding to the performance woes when any of the insurer's top stock holdings are underperforming.

#### Valuation, Growth and Profitability 12 Feb 2016

We've lowered our fair value estimate for Berkshire Hathaway's Class B shares to \$170 per share from \$177 to reflect updated assumptions about growth and profitability for the firm's different operating segments, as well as the performance of its investment portfolio. Our new fair value estimate is equivalent to 1.7 times Berkshire's reported book value per share of \$101 at the end of the third quarter of 2015. Based on our estimates for book value per share at the end of 2015 and 2016, our new fair value estimate is equivalent to 1.6 and 1.5 times book, respectively.

We use a sum-of-the-parts methodology to arrive at our fair value estimate for Berkshire, valuing the different pieces of the firm separately and combining them to arrive at an estimate for the whole company. We believe Berkshire's insurance operations are worth \$55 per Class B share, down 1% from our previous valuation, with improved expectations for underwriting results being offset by weaker near-term investment portfolio performance. We value Berkshire's investments in Kraft Heinz and Precision Castparts separately from the company's insurance operations, believing that they are worth \$10 and \$12 per Class B share, respectively.

As for Berkshire's noninsurance operations, our estimate for BNSF has declined 13% to \$34 per Class B share because



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of a reduction in our near-to-medium-term assumptions for volumes and pricing. While we did increase our fair value estimate for Berkshire Hathaway Energy to \$16 per Class B share (from \$15 previously), we also lowered our valuation for the company's manufacturing, service and retail operations (exclusive of Precision Castparts) by 2% to \$38 per Class B share. We continue to include the impact of bolt-on acquisitions in our valuation of this segment. As for the company's finance and financial products division, we've lowered our estimate of its fair value to \$5 per Class B share.

#### **Scenario Analysis**

Given the potential for volatility in profitability and cash flows as market conditions and economic conditions change, offset somewhat by the greater degree of certainty we have forecasting the results from Berkshire's operations, we have assigned a medium uncertainty rating to the firm. Our scenario analysis assumes a base-case fair value estimate of \$170 per Class B share, a bull case of \$230 per share, and a bear case projection of \$119 per share. The key factors affecting our scenario analysis include the firm's ability to continue growing its book value per share at a

high-single-digit rate, which is dependent somewhat on its ability to allocate its excess capital into acquisitions and investments that add value in the near to medium term

In our upside case, which results in a fair value estimate of \$230 per Class B share, we assume Berkshire's insurance segment performs more strongly than we are projecting in our base case, with premium growth and underwriting profits exceeding our expectations during our five-year forecast. It assumes Geico rebounds from its current woes and continues to take meaningful amounts of share from competitors, BHPG ramps up quickly to become a significant player in the commercial specialty insurance market, and improvements in the firm's reinsurance business materialize much guicker than we are expecting. This scenario also assumes a sustained improvement in both the U.S. and global economies, with Berkshire's two main noninsurance segments--manufacturing, service, and retailing and railroad, utilities, and energy--not only holding on to revenue and profitability gains made since the 2008-09 financial crisis, but continuing to pick up pace during the next several years. This scenario also assumes Berkshire puts more money to work in acquisitions than we are forecasting in our base case

Our downside case leads to a fair value estimate of \$119 per Class B share. This scenario assumes Berkshire's insurance segment does not perform as well as we are projecting in our base case, with Geico struggling in a more competitive environment for auto insurance, BHPG taking longer to gain traction with commercial clients, and improvements in the firm's reinsurance business taking far longer to materialize. It also assumes growth at Berkshire's manufacturing, service, and retailing operations stalls after producing several years of solid revenue growth and profitability, with concerns over global economic growth torpedoing the firm's more economically sensitive operations, and fewer acquisition opportunities arising for



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the division to put money to work in. Our downside cases also assumes a far less prosperous outlook for Berkshire's railroad, utilities, and energy division, with a less robust recovery in the U.S. economy and significantly higher fuel costs affecting the results for these businesses.

#### **Economic Moat**

Berkshire's wide economic moat is more than just a sum of its parts. That said, the parts that make up the whole are fairly moaty in their own regard. The company's insurance operations--Geico, General Re, Berkshire Hathaway Reinsurance Group, and Berkshire Hathaway Primary Group--continue to be important contributors to the overall business. Not only do the insurance operations (sans their investments in Kraft-Heinz and Precision Castparts) account for 25% of Berkshire's pretax earnings (and more than 30% of our estimate of the company's fair value), but they also generate low-cost float--the temporary cash holdings that arise from premiums being collected in advance of future claims, which is a major source of funding for investments. 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 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 many 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 the losses in this business tend to be large in nature and may not be realized for years after a policy is written. Insurers can develop sustainable cost advantages, though, by either focusing on less commodified areas of the market or by developing efficient and/or scalable distribution platforms. What they cannot do is gain a sustainable competitive advantage through investing (even when those 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.

Geico has made strides with its direct-selling operations, moving from a position as the fourth-largest private auto insurer in the U.S. a decade ago (with 5.5% market share) to the second-largest underwriter at the end of 2014 (with a 10.8% share). Much like its closest competitor. Progressive, 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. This has been reflected in Geico's expense ratio, which over the past five years has averaged around 18%, leaving it 700 basis points below the industry average and around 300 basis points better than Progressive. Geico has, however, trailed its closest peer on an underwriting basis, with both firms generating combined ratios of around 94% on average the last five years. Given the similarity in their operations, as well as the level and consistency of their profitability, we think Geico, much like Progressive, has a narrow economic moat.

With regards to Berkshire's two reinsurance arms--General



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Re and BHRG--we do not believe they have economic moats. For a premium, reinsurers will assume all or part of an insurance or reinsurance policy written by another insurer. While any insurance company can technically write reinsurance, a handful of larger companies--Munich Re, Swiss Re. Hannover Re. Llovd's, and Berkshire Hathaway--hold sway over the lion's share of the global reinsurance market. 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. More importantly, losses in the reinsurance market are lumpy and may not be realized for years after a policy is written, magnifying the importance of disciplined and accurate underwriting skills. While Berkshire's reinsurance arms are unique, in that they have the luxury of walking away from business when an appropriate premium cannot be obtained--something their peers cannot always do--their underwriting profitability has been less consistent and much narrower than Berkshire's other insurance businesses. The company sticks with reinsurance, though, because it generates greater amounts of float that can be invested for longer periods of time than short-tail lines like auto insurance. While our standard view on reinsurance is that firms operating in this segment cannot carve out economic moats, we think Berkshire's reinsurance arms have come closer than most.

We believe BHPG, which has been Berkshire's most profitable insurance business the past 10 years, benefits from a narrow economic moat around its operations. What is all the more remarkable about this is the fact that BHPG is a conglomeration of multiple insurance operations—including National Indemnity's primary group, Medical Protective Company, U.S. Investment Corporation, and Applied Underwriters—that offer coverage as varied as workers'

compensation and commercial auto and property coverage. It is also where the company's latest new venture--Berkshire Hathaway Specialty Insurance--resides. Formed in June 2013, this new business is focused on U.S. excess and surplus lines, looking to take advantage of the growing demand for tailored insurance. We view this as a net positive for Berkshire's insurance operations overall, as we've long believed that insurers that are able to focus on the least commodified areas of the insurance market, such as excess and surplus lines, are much more likely to generate consistent underwriting profitability.

Of the more than 70 noninsurance businesses that make up Berkshire's remaining subsidiaries, Burlington Northern Santa Fe and Berkshire Hathaway Energy are the next two largest contributors to the firm's profitability and overall value, generating more than a third of pretax earnings and accounting for 29% of our fair value estimate for the firm. The most interesting thing about these two particular businesses is that neither of them was a major contributor to Berkshire's pretax earnings 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 his other acquisitions over the years, which have tended to require less ongoing capital investment and have had little to no debt. By definition, these higher-capital businesses will have lower returns than the asset-light businesses Berkshire has tended to acquire in the past. That said, having a lot of high-return, low- or no-capital businesses, means that Buffett still needs to reinvest the company's excess cash flows into businesses that not only offer decent rates of return but can absorb the substantial amounts of capital the firm generates on an ongoing basis.

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



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fleets of motive power and rolling stock. We believe the North American Class I railroads benefit from colossal barriers to entry because of 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. That said, customers have few choices and 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 railroad 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 over the long run, 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 up to 89.8%), 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 the next-largest contributor to pretax earnings, as well as our overall estimate of the value of the firm, they comprise a wide array of businesses operating in more than a handful of different industries. Unlike BNSF and BHE, both of which file annual and quarterly reports with the SEC, there is little financial information available on the firms operating in this segment. Given Buffett's penchant for acquiring companies that have consistent earnings power, generate above-average returns on capital, have little debt, and are run by solid management teams, we believe these businesses are collectively endowed with a narrow economic moat. The same could also be said for Berkshire's finance and financial products segment, which includes Clayton Homes (manufactured housing and finance), CORT Business Services (furniture rental), Marmon (rail car and other transportation equipment manufacturing, repair and leasing), and XTRA (over-the-road trailer leasing). While the recession (and collapse of the housing market) that followed the 2008-09 financial crisis affected many of these businesses, we feel that they have all benefited from being under the Berkshire umbrella, which allowed them to recover on their own terms.

With Buffett running Berkshire on a decentralized basis, the managers of its operating subsidiaries are empowered to make their own business decisions. In most cases, the managers running Berkshire's subsidiaries are the same individuals who originally sold their firms to Buffett, leaving them with a vested interest in the businesses they are running. 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 firms within Berkshire 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



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Berkshire's manufacturing, service, and retailing operations, as well as its finance and financial products division, 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.

#### **Moat Trend**

We believe Berkshire Hathaway's moat trend is stable. Much like its economic moat, which is derived from the competitive advantages ascribed to its different operating subsidiaries, the firm's moat trend is influenced by changes in the competitive dynamics for each of its main operating segments. With insurance having one of the largest influences on the firm's pretax profits (as well as our fair value estimate), changes in the moat trends for its various insurance operations will have a bigger influence on the company's moat trend rating. That said, the insurance industry is very mature, its basic structure is long defined, and it is not generally affected by technological changes. As a result, competitive positions tend to be stable. In determining trends, we find it important to ignore the noise created by the volatility that can exist in near-term results, and focus more on long-term trends. Insurance moat trends are typically driven by changes in a company's cost structure, and moats predicated on focused scale or sticky customers can strengthen or weaken over time, based on an insurer's strategy or industry dynamics.

With regards to Geico, while we believe that the shift from the agent channel to the direct response channel will continue as consumers become more aware of the cost savings afforded by the direct channel, we also feel that this trend has contributed to the ongoing standardization and commodification of auto insurance products. Although we believe that scale advantages can be reinforcing as an insurer's business grows, we think that Geico, much like Progressive, has reached a point of maturity, and expect many of the positive strides it has made over the past decade

to moderate over time. As such, we assign a stable moat trend to Geico (much as we do with Progressive). As for Berkshire's reinsurance operations, we believe the moat trend is stable for both General Re and BHRG even though the industry itself is currently flush with capital and regulatory oversight is increasing. We don't think the competitive environment will be dramatically altered in the near to medium term, and are comforted by the knowledge that the managers of Berkshire's reinsurance operations have the luxury of not underwriting policies when the pricing environment is as unfavorable as it is right now. We also assign a stable moat trend to BHPG, which has been Berkshire's most consistently profitable insurance business the past 10 years, believing that the commitment to underwriting discipline exemplified by these operations will continue in the near to medium term.

Looking more closely at Berkshire's railroad, utilities, and energy segment, we consider BNSF's moat trend to be stable, much as we do the six publicly traded Class I railroads we cover. While we expect the large North American railroad operators to continue improving their operations, much as they have the past decade, we think these cost advantage enhancements are now routine practices for the industry and not a change in competitive dynamics; hence, the stable moat trend rating. We expect operating measures for the major Class I railroads to converge during the next decade, with all rails delivering margins slightly below what Canadian National, the highest-margin railroad in the industry, has achieved. With regards to BHE, we have assigned a stable moat trend to the firm's consolidated operations. We do not expect the regulatory structure for the subsidiary's regulated utilities to change significantly in the near term, believing regulators will continue to uphold the implicit contract that allows utilities to earn at least their cost of capital on average in the long run. The same holds for BHE's pipelines unit, where the current policy of approving only those projects that demonstrate an economic



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need provide the firm some protection from competitors. We also do not expect any meaningful shifts in natural gas supply or demand fundamentals in the near term that would erode the geographical competitive advantages of the pipelines.

While Berkshire's remaining operating segments--manufacturing, service and retailing (which includes a wide variety of firms from McLane to Dairy Queen) and finance and financial products (which operates in manufactured housing and transportation equipment and furniture leasing)--account for about 30% of pretax earnings and one fifth of our fair value estimate for the firm, we have the same problem assessing their moat trends as we do their economic moats. That said, many of these firms continue to be run by the same managers who sold their firms to Berkshire, leaving them with a vested interest in the businesses that they are running. Barring a truly disruptive event in their industries, these firms are likely 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 firms within these categories whose competitive advantages diminish, it's just that the moat trend for the group as a whole is likely to remain fairly stable even as a few firms along the way succumb to changing competitive dynamics within their industries.

Overall, we expect Berkshire's moat trend overall to remain fairly stable, even as it faces two big long-term hurdles: the company's ability to expand the business and its planning for the day when Warren Buffett no longer runs the show. Although acquisitions and shrewd capital allocation have nearly tripled Berkshire's book value per share during the past decade, we think it will be difficult for the firm to replicate that kind of performance longer term, even with Buffett at the helm. That's not to say that the firm can't continue to put money to work in value-creating projects, much as it has in the past--it's just that the large sums of

excess cash the company continues to generate is likely to impede its ability to produce outsized returns. That said, with a much lower cost of capital than most firms, the hurdle rate for generating excess returns is somewhat lower, increasing the likelihood that Berkshire will continue to earn more than its cost of capital for an extended period of time. While a big concern for investors is whether Buffett's successors will be able to extract the same advantages from Berkshire's operations that he has over the years, we think they may not need to do anything that heroic as long as they continue to earn more than the firm's cost of capital with the businesses that make up the whole of the firm.



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## Bulls Say/Bears Say

#### **Bulls Say**

- ▶ Book value per share, which is the best proxy for measuring changes in Berkshire's intrinsic value, increased at a 19.4% CAGR during 1965-2014, compared with a 9.9% total return for the S&P 500 TR Index.
- Berkshire's long-term record of expanding its book value per share has been fairly consistent, with the company reporting annual declines in just two calendar years during the last fifty: 2001 and 2008.
- At the end of the third quarter of 2015, Berkshire had \$86.2 billion in float from its insurance operations. The cost of float has been negative for much of the last decade.

#### **Bears Say**

- Given the current size and scale of its operations, the biggest hurdle facing Berkshire will be the need to consistently find deals that not only add value but are large enough to be meaningful.
- ► The other big issue facing the firm is the longevity of chairman and CEO Warren Buffett, who turned 85 last year, and managing partner Charlie Munger, who is 92.
- ► Berkshire's insurance operations face competitive and highly cyclical markets that occasionally produce large losses. It also has highly uncertain liabilities on its books that could cost more than the firm has stated and/or reserved.



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Business Risk Summary(USD Mil)	
Size (Assets in USD Mil)	219,166
Economic Moat Rating	Wide
Equity Uncertainty Rating (Uncertainty of Equity Residual)	Medium
Management Grade	
Underwriting Profitability % (7-Yr Average Modified Combined Ratio)	
Volatility of Underwriting Profitability % (7-Yr Range of Modified Combined Ratio)	
Overall Level of Underwriting Risk	
Business Risk Score	
Financial Risk Summary	
Reserves/Capital	1.0
Earned Premium/Capital	0.5
Debt/Capital	0.1
Investment Portfolio Loss Rate % - Sensitivity Analysis	_
Capital Reduction % - Sensitivity Analysis	
Financial Risk Score	
Debt Cushion Summary	
Adjusted Balance Sheet Surplus	96,196
Total Profitability Available for Debt Service	27,323
Total Projected Surplus	123,520
Debt Balance	7,625
Total Debt Service	10,323
Debt Cushion	12.0

#### **Financial Health**

Berkshire's strong balance sheet and liquidity are among its most enduring competitive advantages. The company's insurance operations are well capitalized and highly liquid, carrying greater levels of equity and cash relative to other insurers, which we believe should offset potential losses. Berkshire generates large amounts of free cash flow from its operations and maintains significant levels of cash on its balance sheet, which amounted to \$66.3 billion at the end of the third quarter of 2015. That said, a fair amount of that capital has already been spoken for by Berkshire's operations, acquisitions and investments. During the last several years, Buffett has been fairly explicit about his desire to keep around \$20 billion in cash on hand as a backstop for the insurance business, and had committed \$22.4 billion to the Precision Castparts deal. We also believe that the rest of the firm's operations are likely to require at least 2% of annual revenue on hand as operating cash.Berkshire generally seeks to run its operating companies and make ongoing investments without an overreliance on debt. In instances when it is necessary to issue debt, Berkshire strives to do it on a long-term, fixed-rate basis. While consolidated debt levels have increased significantly over the past decade, much of it is tied to BHE and BNSF, and is not explicitly guaranteed by Berkshire. That said, substantially all of these two subsidiaries' assets can be pledged or encumbered to support or otherwise secure the debt on their books. Buffett has, however, recently noted that Berkshire plans to borrow about \$10 billion to fund the Precision Castparts acquisition (which should be applied to the parent company's books much like the debt used to complete the BNSF acquisition was in 2010), with the remainder of the purchase price coming from its cash on hand.

#### **Enterprise Risk**

Berkshire is exposed to large potential losses through its insurance operations. While the company believes its



**Last Price** Fair Value **Consider Buy** Consider Sell Uncertainty Economic Moat™ Moat Trend™ Stewardship **Industry Group** 141.99 USD Wide 170.00 USD 119.00 usp 229.50 usp Medium Stable Exemplary Insurance

> supercatastrophe underwriting can generate long-term results, the volatility of this particular line of business, which has 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 some 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 exposed to foreign currency, equity price, and credit default risk as well through its various investments and operating companies. Its derivative contracts, in particular, can affect the company's earnings and capital position, especially during volatile markets, given that they are recorded at fair value (and are, therefore, updated periodically to reflect changes in the value of these contracts). Berkshire is also dependent on two key employees, Warren Buffett and Charlie Munger, for almost all of its investment and capital-allocation decisions. With Buffett having turned 85 in August 2015 and Munger turning 92 at the beginning of 2016, 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.

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Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
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## Management & Ownership

Management Activity				
Name	Position	Shares Held	Report Date*	InsiderActivity
WARREN E. BUFFETT	Director	164,885	25 Jan 2016	_
RONALD L. OLSON	Director	2,435	11 Mar 2016	10
THOMAS S. MURPHY	Director	1,489	31 Dec 2014	_
MS. MERYL B. WITMER	Director	1,000	04 Jan 2016	_
MR. CHARLES T. MUNGER	R Director	750	12 Sep 2014	_
MS. SUSAN L. DECKER	Director	125	05 May 2007	_
STEPHEN B BURKE	Director	5	29 Dec 2009	_

<sup>\*</sup>Represents the date on which the owner's name, position, and common shares held were reported by the holder or issuer.

Fund Ownership				
Top Owners	% of Shares Held	% of Fund Assets	Change (k)	Portfolio Date
Vanguard Total Stock Mkt Idx	_	1.23	292	30 Apr 2016
Vanguard 500 Index Fund	_	1.41	83	30 Apr 2016
Vanguard Institutional Index Fund	_	1.43	41	30 Apr 2016
SPDR® S&P 500 ETF	_	1.44	-91	31 May 2016
SPDR® S&P 500® ETF Trust	_	1.45	_	31 Mar 2016
Concentrated Holders				
Oppenheimer Financials Sect Revenue ETF	1.25	13.49	0	31 May 2016
Voya Corporate Leaders Trust Fund	50.66	11.21	-68	31 Mar 2016
Financial Services SelectSector SPDR® Fd	0.64	10.83	_	31 May 2016
BlackRock Exchange Portfolio	7.74	10.76	_	30 Apr 2016
Integras Balance	0.92	10.23	-5	30 Apr 2016
Institutional Transactions				
Top 5 Buyers	% of Shares Held	% of Fund Assets	Shares Bought/ Sold (k)	Portfolio Date
BlackRock Investment Management (UK) Ltd.	_	0.68	5,648	31 Mar 2016
BlackRock Fund Advisors	_	1.09	4,888	31 Mar 2016
Vanguard Group Inc	_	0.94	3,907	31 Mar 2016
Managed Account Advisors LLC	_	0.23	1,627	31 Mar 2016
NORGES BANK	_	0.48	1,616	31 Dec 2015
Top 5 Sellers				
Top 5 Sellers  Cascade Investment Llc	_	_	-9.511	01 Apr 2015
·	_ _	— 57.27	-9,511 -5,000	01 Apr 2015 31 Mar 2016
Cascade Investment Llc	_ _ _	— 57.27 0.42		
Cascade Investment Llc Gates Bill & Melinda Foundation	_ _ _ _		-5,000	31 Mar 2016
Cascade Investment Llc Gates Bill & Melinda Foundation Capital Research Global Investors	_ _ _ _ _	0.42	-5,000 -3,545	31 Mar 2016 31 Mar 2016

#### Management 21 Sep 2015

Warren Buffett has been chairman and CEO of Berkshire Hathaway since 1970. Charlie Munger has served as 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 33.9% voting stake and a 19.6% economic interest in the firm. 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 at a compound annual rate of 19.4% from 1965 to 2014, compared with a 9.9% total return for the S&P 500 TR Index. While the 8.3% increase in Berkshire's book value during 2014 fell short of the 13.7% increase in the benchmark index, it marked only the 11th time in the past 50 years that this has happened. Unfortunately, five of those instances took place during the last six years, lending weight to our argument that investors should expect lower returns on book value as the firm continues to grow in size. That said, book value per share did increase at an 11.6% CAGR during 2010-14. Weakness in the equity markets since the start of the year, as well as in some of Berkshire's operating businesses, will likely keep book value per share growth in the 5%-7% range during 2016, but we expect that to rebound back to a high-single-digit range after this year.

Given Buffett's impressive long-term track record, it is important that much of what he has built over the years remains intact once he is gone. Succession was not formally addressed by Berkshire until 2005, when the company noted that Buffett's three main jobs--chairman, chief executive, and chief investment officer--would be handled by one



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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 and Ted Weschler expected to be the only outside hires to work with Berkshire's investment portfolio, questions linger over who will be the firm's next CEO.

At this point, we believe that Ajit Jain, who heads Berkshire Hathaway Reinsurance Group, is the board of directors' first choice to run the company once Buffett steps down. Not only does Jain understand risk better than anyone else at Berkshire, but Buffett has admitted on countless occasions that Jain has "probably made a lot more money" for the firm than Buffett has over the years. 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 decisions and risk assessments that need to be made along the way, then we could not think of a better candidate than Jain. The problem is that Jain has been on the record several times saying that he does not want the job--which is why plenty of speculation remains about who will ultimately fill the CFO role

In a hint that this could be a two man race, Munger wrote in last year's letter to shareholders that both Jain and Greg Abel, president and CEO of Berkshire Hathaway Energy, are "proven performers," and that in "some important ways, each is a better business executive than Buffett." Munger went on to note that he does not believe that Abel would

ever leave "Berkshire, no matter what someone else offered," and that he does not "desire much change in the Berkshire system." Given his extensive experience with acquisitions, having been involved in most of the deals that have taken place at BHE the last two decades, as well as making large capital investments on a regular basis, we view Abel as a viable candidate for the role.

Regardless of who takes the helm once Buffett has stepped down, we think the next chief executive is going to feel far more pressure from shareholders and analysts than Buffett has ever been subjected to, especially with regards to capital-allocation decisions and the firm's lack of a dividend. As such, the more important long-term question for investors is whether the individual who succeeds him can replace the significant advantages that have come with having an investor of Buffett's caliber, with the knowledge and connections he has acquired over the years, running the show.



Last Price Fair Value Consider Buy Consider Sell Uncertainty Economic Moat™ Moat Trend™ Stewardship **Industry Group** 141 99 usp 170.00 USD 119.00 usp 229.50 usp Medium Wide Stable Exemplary Insurance

## **Analyst Notes**

#### Diversification Helped Berkshire Out in First Quarter; Book Value per Class A Share Rose to \$157,369 07 May 2016

Wide-moat rated Berkshire Hathaway released results for the first quarter of 2016 that were basically in line with our expectations, with weaker results from BNSF being largely offset by better results from insurance and finance and financial products, as well as the addition of Precision Castparts to overall results. We do not expect to change our \$255,000 (\$170) per Class A (Class B) share fair value estimate.

First-quarter revenue increased 7.7% year over year to \$52.4 billion, with the biggest contributions coming from Berkshire's insurance operations (where earned premiums rose 16.6% year over year), followed by its manufacturing, sales and retail operations (which benefited from the closure of the Precision Castparts acquisition) and finance and financial products (which posted 11.1% revenue growth year over year). Excluding the benefits from the Precision Castparts acquisition, first-quarter revenue increased 2.8%. On the profitability front, pretax earnings declined 15.6% year over year to \$6.5 billion, and would have been much lower had the Precision Castparts acquisition been excluded from quarterly results. That said, the firm did see about half as much of a contribution from investments and derivatives during the first guarter, which when eliminated from consideration, left pretax earnings down just 8.4% year over year.

Book value per Class A equivalent share was \$157,369 at the end of the first quarter--up 7.1% year over year and 1.2% when compared with the fourth quarter of 2015. This was slightly lower than our forecast, which had book value per share increasing to \$157,834. The company closed out the first quarter of 2016 with \$58.3 billion in cash on its books, down from \$71.7 billion at the end of last year, with much of the difference due to cash that was laid out for the

Precision Castparts deal (which closed at the end of January). Berkshire did not buy back any shares during the first quarter of 2016.

Looking more closely at Berkshire's insurance operations, three of the firm's four insurance segments--Geico, Berkshire Hathaway Reinsurance Group (BHRG) and Berkshire Hathaway Primary Group (BHPG)--posted earned premium growth during the first quarter. And from an underwriting perspective, everyone but BHRG posted positive results during the period, with combined ratios ranging from a high of 91.6% at BHPG to a low of 103.5% at BHRG. On a combined basis, Berkshire's insurance operations generated and operating profit, although its firmwide combined ratio of 96.9% during the first quarter was a bit if a let down from the 95.4% level that was posted during the fourth quarter of 2015 and the 92.2% ratio put up during the period year's period.

Geico's first-guarter earned premium growth of 12.3% was stronger than last year's 10.3% and the fourth-quarter's 11.2%, reflective of voluntary auto policy-in-force growth of 4.3% and increased premiums per auto policy of 7.2% during the past twelve months. The lumpy recovery in Geico's combined ratio continued during the first quarter, with the 95.6% level reported during the period a marked improvement over the 100.2% level seen during the fourth quarter of 2015, and a better showing than the 97.0% result put up during the prior year's period. As we noted last time around, it has paid to be a bit cautious on Geico's recovery, as a slowly improving U.S. economy, fueled by lower gas prices, has left more drivers on the road and increased the potential for accidents. On top of that, the problem of distracted drivers using smartphones to talk, text or even watch videos while driving is not going away any time soon, so we continue to expect to see a fair amount of lumpiness in Geico's return to a more normalized level of profitability, which has historically been around 93.7%.



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## **Analyst Notes**

What is important to note, though, is the fact that the company's loss ratio (which has generally averaged around 75.9%) improved to 79.7% from 83.9% in the fourth guarter and 80.1% in the first quarter of last year. This in the face of increased storm losses during the first quarter, which actually increased in April of this year and are likely to keep claims higher in the near term. While claims frequencies for property damage and collision coverages decreased in the 4%-5% year over year, and were relatively unchanged for bodily injury coverage, during the first quarter, average claims severities were higher for both physical damage and collision coverages (in the 3%-5% range) and bodily injury coverage (up 6%-8%). Underwriting expenses continue to track down, though, as the ever increasing size and scale of Geico's business allowed it to keep its first-quarter expense rate below 16.0%.

As for General Re, the reinsurer returned to the negative earned premiums trend that had been in place for most of last year, reporting a 7.2% quarterly decline in earned premiums, with both its property/casualty and life/health operations reporting less business year over year. Both General Re and BHRG continue to constrain the volume of reinsurance that they are underwriting, given the excess capacity that exists in the reinsurance market and the fact that neither firm feels that the pricing in the marketplace is attractive enough to profitably underwrite additional business. While we continue to hfave earned premium growth in negative territory for both firms over the next five years, we've always been quick to point out that there could be some lumpiness in reported results, as both firms have shown a knack for finding profitable business, even in times like we're facing right now where reinsurance pricing is unattractive.

This was the case during the first quarter for BHRG, which posted a 23.0% increase in property/casualty earned

premiums (primarily attributable to the quota-share contract they have in place with Insurance Australia Group), and also picked up \$580 million in new business by underwriting additional retroactive reinsurance contracts during the period. That said, the firm posted an underwriting loss during the period, primarily due to losses recorded on past retroactive reinsurance contracts, as well as the impact of historically low interest rates and a more volatile equity market on the life/health business. We continue to believe that General Re and BHRG are also competitively advantaged from their positions within Berkshire's overall business empire, having the luxury of walking away from reinsurance underwriting when an appropriate premium cannot be obtained, which is something that cannot be said for their peers.

Even with this headwind, Berkshire's insurance float increased during the first quarter of 2016 to \$89.0 billion, up 1.5% from \$87.7 billion at the end of 2015. We expect further gains in float to be much harder to come by as we move forward, though, with Berkshire limiting the amount of reinsurance business it underwrites (noting that much of the growth in the firm's float over the past decade coming from its two reinsurance arms). We continue to believe that Geico will be an important contributor to earned premium growth, as well as to the growth of float, with underwriting profitability likely to improve in the coming guarters. BHPG should also continue to be an important contributor, especially considering the growth potential that exists for the newly formed Berkshire Hathaway Specialty Insurance unit. Given these conditions, earned premium growth is likely to resemble a barbell longer term, with Geico and BHPG on the outer ends and the reinsurance arms barely noticeable in the middle.

Berkshire's non-insurance operations typically offer a more diversified stream of revenue and pre-tax earnings for the firm, helping to offset weakness in any one area, but 2016



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looks to be another challenging year for the firm. We already had a sense of how bad things likely were for BNSF late last week, when Berkshire released preliminary first-quarter after-tax earnings that had the railroad, utilities and energy segment down 16.4% year over year. We had expected BNSF to report a poor quarter, having already seen weak results from CSX, Union Pacific and Norfolk Southern in the face of declining coal volumes—with CSX seeing a 30% drop in coal volumes, Union Pacific reporting a 34% decline, and Norfolk Southern posting a 23% drop. BNSF's coal shipments, which accounted for one fifth of its freight volumes and revenue last year, declined 33% on a volume basis, with freight revenues declining 39%. Total revenue for BNSF declined 14.9% year over year, with pre-tax earnings falling 24.8% as a result. We don't expect things to improve much in the near term.

Normally a beacon of stability, Berkshire Hathaway Energy (BHE) reported a 4.9% decline in first-quarter revenue, primarily due to lower regulated electric and natural gas revenues at MidAmerican, NV Energy, Northern Powergrid and the company's natural gas pipeline operations (much of which can be tied to lower input costs). While pre-tax earnings were down 4.5% on a firmwide basis, BHE's pretax profit margin remained flat at 13.8% of revenue. Going forward, we continue to believe the firm's U.S. regulated utilities--PacifiCorp, MidAmerican Energy, and NV Energy-will receive constructive rate case outcomes and earn somewhere close to their current allowable returns on equity in the near to medium term. This would put annual revenue growth in the 2%-3% range over the next five years. For Northern Powergrid, we've incorporated the U.K.'s most recent price review into our model, assuming the division generates mid-single-digit revenue growth going forward. As for BHE's pipeline and renewables businesses, we see revenue growing at a low- to mid-single-digit rate through 2020.

On a consolidated basis, we expect BHE's overall EBITDA to grow 5.2% on average during 2016-20, with EBITDA margins of around 40%. Our assumptions about revenue and profitability for the subsidiary's regulated utilities put our value for these operations at around 5.4 times our 2016 EBITDA estimate, which is basically in line with our valuations for similar high-quality utilities with favorable regulatory structures and above-average growth opportunities. Our valuation also implies that BHE's pipeline group is worth 10 times EBITDA (on an EV-to-EBITDA basis), in line with peer multiples and indicative of the higher earned returns that the pipelines are able to realize on average compared with returns for the regulated utilities.

With regards to Berkshire's manufacturing, service and retail operations, the group overall recorded a 12.9% increase in first-quarter revenues, aided by the inclusion of Precision Castparts in the group's results. Excluding the contribution from Precision Castparts, first-quarter revenue was up just 3.3%. Mixed sales performance across the spectrum of companies--McLane (up 1.4%), Manufacturing (up 19.1% but down 8.0% when excluding the contribution from Precision Castparts), and Service and Retailing (up 30.3% as the segment benefits from both organic growth and the inclusion of the Van Tuyl and Detlev Louis Motorad acquisitions in quarterly results this past year)--contributed to the group's top-line growth during the period. Pre-tax earnings increased 6.9% year over year. We continue to expect Berkshire's manufacturing, service and retail division to see a meaningful lift in operating results this year from the inclusion of Precision Castparts (and to a lesser extent Duracell) in overall results.

Results for Berkshire's finance and financial products division--which includes Clayton Homes (manufactured housing and finance), CORT Business Services (furniture rental), Marmon (rail car and other transportation equipment manufacturing, repair and leasing) and XTRA (over-the-road



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## **Analyst Notes**

trailer leasing)--were also up year over year, with first-quarter revenue increasing 11.1% and pre-tax earnings expanding 7.7%. While pre-tax margins dropped down to 27.7% (from 32.1% in the fourth quarter of 2015 and 28.6% in the prior year's period), due primarily to decreased earnings from investment securities and the company's investment in Berkadia, we expect things to normalize some over the remainder of the year. We continue to expect revenue to grow at a mid-to-high-single-digit rate during the remainder of our five-year forecast, with pre-tax margins likely to remain below 30%, given the potential that exists for nearer-term weakness in each of the businesses that are represented in this segment.

As we noted above, book value per Class A equivalent share at the end of the first quarter was \$157,369. The company also closed out the period with \$58.3 billion in cash on its books. With CEO Warren Buffett liking to keep around \$20 billion on hand as a backstop for the insurance business, and the firm's non-insurance operations generally needing between \$3 billion and \$5 billion in operating cash on hand, Berkshire looks to have an excess cash balance of more than \$30 billion. We view this as dry powder for future acquisitions or share repurchases. While Berkshire did not buy back any shares during the first quarter of 2016, Buffett did confirm to us during the annual meeting that he would aggressively buy back stock if its dipped down below 1.2 times book value, even if the firm had not yet reported its end of quarter book value per share to shareholders. Based on end of first-quarter book value per share, Buffett should be willing to buy back stock at prices below \$188,843 (\$125.90) per Class A (B) share, which is about 14% below current trading levels.

Jain Assumes Greater Oversight of Berkshire's Reinsurance Arms, Altering Succession Debate 12 Apr 2016

While we were surprised to see wide-moat Berkshire Hathaway move to consolidate the reporting structure for

its two reinsurance arms, General Re and Berkshire Hathaway Reinsurance Group, having run them separately for much of the past two decades, it does make sense on a few levels. With reinsurance expected to continue facing a difficult pricing environment, it makes sense to consolidate Berkshire's efforts under one leader--especially if that leader is Ajit Jain. The retirement of General Re CEO Tad Montross at the end of this year has opened the door for Berkshire to do just that, with Jain expected to take responsibility for all of Berkshire's reinsurance efforts once Montross steps down.

While we've long noted that General Re and BHRG have the luxury of walking away from business when pricing is bad (without making cuts to their operations), we've also noted that there are limits to how long that might be the case. With the company seeing reinsurance as probably unattractive for another decade, it makes sense to have Jain oversee Berkshire's entire operation, especially if there are duplicate efforts that can be streamlined. That's not to say that we expect to see major cuts in these operations, but with Jain overseeing both General Re and BHRG, the firm should be able to continue focusing on profitability over growth, which is what an insurer should be doing in a poor pricing environment.

With Jain's responsibilities expanding beyond BHRG to include General Re and Berkshire's foray into specialty insurance, we're not sure what to think about his availability as Berkshire's next CEO. As insurance is still such a complex and integral part of Berkshire's operations, we think it makes more sense for Jain to stay put and for Greg Abel, who has had more experience with mergers and acquisitions and operations during his time running Berkshire Hathaway Energy, to fill the CEO role once Warren Buffett leaves the scene.

Montross has been chairman and CEO of General Re since



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April 2008. He took over from Joseph Brandon, who resigned under a cloud of suspicion following the prosecution of one former AIG executive and four former General Re executives, including Ronald Ferguson, whom Brandon had succeeded. The prosecuted executives had participated in a transaction that allowed AIG to fraudulently boost its reserve coverage in 2000-01. Much like David Sokol, who also resigned under a cloud of suspicion in 2011 (after it was discovered that he had purchased shares of Lubrizol prior to recommending the specialty chemical company to Buffett as a potential acquisition target for Berkshire), Brandon had been viewed as a potential successor to Buffett before General Re was caught up in the fraud and conspiracy charges leveled by federal prosecutors.

While his ascension to the top job may be viewed by some as a battlefield promotion, Montross has been with General Re since the late 1970s, starting as a casualty facultative underwriter. He went on to hold numerous positions, both in the United States and internationally, before being promoted to chief underwriter for General Re's treaty reinsurance business in 1992. By 2001, he had become a member of the company's executive committee and was elevated to the job of president and chief underwriting officer, working closely with Brandon to rapidly correct the serious underwriting issues that cost Berkshire operating income and raised the cost associated with its float. Montross' knowledge of the business, as well as his success at getting General Re back to its roots of conservative and disciplined underwriting, made him the natural candidate to step in when Brandon was asked to leave in 2008.

Although Montross is only 60, we hadn't considered him to be a frontrunner to replace Buffett as the head of Berkshire Hathaway. That's not to say that he doesn't have the qualifications; it's just that we believe the whole affair with AIG left a bad taste in Buffett's mouth, and naming Montross as his successor would drag up all of the old headlines and

suspicion tied to that transition in leadership at General Re. By the time the AIG scandal reached its pinnacle, with the jury returning convictions in February 2008, Buffett had already earned a reputation as being tough when it came to manager integrity, noting the following before a House subcommittee that was looking into the wrongdoings at Salomon Brothers in 1991: "Lose money for the firm and I will be understanding. Lose a shred of reputation for the firm and I will be ruthless."

Unfortunately, he went out of his way to publicly praise both Brandon and Montross in Berkshire's 2007 annual letter to shareholders, which was released at the end of February 2008, noting that "thanks to Joe Brandon, General Re's CEO, and his partner, Tad Montross, the luster of the company has been restored." Less than two months later, with Berkshire under pressure from federal prosecutors, who could have pursued General Re for corporate criminal liability (which would have damaged the reinsurer's reputation even further), Brandon resigned as chairman and CEO. While the convictions were ultimately overturned on appeal, it was too late for Brandon. Despite being a great manager who had returned Berkshire to its roots of conservative and disciplined underwriting, he had to fall on his own sword. While we believe that Montross is a great manager in his own regard, we think that everything that has gone on at General Re during the past 15 years potentially relegated him to second-tier status.

It also didn't help that one of his main competitors for the top job was Jain, who has headed BHRG since it was first formed under the umbrella of National Indemnity Company in the mid-1980s and received bountiful amounts of praise from both Buffett and Charlie Munger over the years. We often wonder if Buffett and Munger don't do this intentionally, just to see how each of the managers they highlight performs under the microscope that is put on them after being publicly praised by the duo. Jain is an old hand



Last Price Fair Value Consider Buy Consider Sell Uncertainty Economic Moat™ Moat Trend™ Stewardship **Industry Group** 141 99 usp 170.00 USD 119.00 usp 229.50 usp Medium Wide Stable Exemplary Insurance

# Analyst Notes

at this, having been trotted out for praise for much of the past two decades, and for good reason. From a standing start in 1985, he has created an insurance business with \$42.5 billion in float that has generated \$79.4 billion in earned premiums and a combined ratio of 93.6% on average during the past decade. This is fairly impressive for any insurance business, let alone a reinsurer. As Buffett so eloquently put it, Jain has succeeded where others may not have because he has "the intelligence to properly rate most risks, the realism to forget about those he can't evaluate, the courage to write huge policies when the premium is appropriate, and the discipline to reject even the smallest risk when the premium is inadequate."

If Berkshire's next CEO is expected to do nothing more than act as a caretaker for the business, tending to the needs of the managers who run all of the different subsidiaries, overseeing the actions of the investment managers who handle the company's investment portfolio, and dealing with the capital-allocation decisions and critical risk assessments that need to be made in any given year, then we could not think of a better candidate within Berkshire than Jain. Not only does he understand risk (across a wide range of industries) better than just about anyone else at Berkshire, but Buffett has admitted on countless occasions that Jain has "probably made a lot more money" for the firm than Buffett has over the nearly three decades that he has been with Berkshire.

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--attributes that have kept him in good stead with Buffett over the years. The only problem with Jain is that he has been on the record several times saying that he does not want the top job, one of the main reasons there continues to be speculation about other potential candidates for the CEO role at Berkshire. Another

is his involvement with Berkshire Hathaway Specialty Insurance, which he spearheaded and is now overseeing (given the lack of more lucrative opportunities on the reinsurance side of the business). While we firmly believe that Jain's name is the first name on the list of candidates that Berkshire's board of directors has in front of them to replace Buffett (once that becomes a necessity), we think the odds of him taking the top job are 50/50.

The case against Jain is that he is a very private person who would feel uncomfortable under the spotlight that would come not just with running Berkshire but in following in the footsteps of the Oracle of Omaha. While he is generally regarded to be "smart, good-natured, and guick at cutting to the essence of complicated business matters," he has forgone the "usual raft of consultants, modelers and lawyers that are involved in insurance transactions" and has not been involved in any merger and acquisition activity outside of the bolt-on deals done to build up Berkshire's insurance operations. At 64, Jain is also older than either BHE's Abel (53) and BNSF's Matt Rose (57), which some believe may be an impediment to his getting the top job, especially given Buffett's more recent comments that the company's next "CEO should be relatively young, so that he or she can have a long run in the job." We're not all that convinced by the latter arguments, but do agree that the spotlight that will come with the top job at Berkshire may be enough to keep Jain from taking it.

#### Berkshire Posts Mixed Q4 and Full-Year Profits; Book Value Increases to \$155,501 per Share 27 Feb 2016

There was little in wide-moat-rated Berkshire Hathaway's fourth-quarter and full-year results, which were relatively mixed, that would alter our long-term view of the firm. We do not expect to make any changes to our \$255,000 (\$170) per Class A (B) share fair value estimate, nor to our moat rating. Fourth-quarter pretax operating earnings increased 26.4% when compared with the prior-year period, as investment and derivative gains/losses increased from \$1.1



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141.99 USD	170.00 USD	119.00 USD	229.50 USD	Medium	Wide	Stable	Exemplary	Insurance

## **Analyst Notes**

billion in the fourth quarter of 2014 to \$2.1 billion in the current-year period. This contributed to a 24.3% increase in pretax operating earnings for the full year. Excluding the impact of the investment and derivative gains/losses (as well as other eliminations and adjustments), the company's pretax operating earnings increased 3.3% during the fourth quarter, with the same measure up 2.8% for the full year.

We remain impressed with Berkshire's ability to continue increasing its book value per Class A equivalent share-which rose 6.4% year over year to \$155,501--even when faced with difficulties. In fact, the firm's end-of-year book value per share was higher than our expectations of \$154,105, with much of the difference attributed to changes in Berkshire's equity investment portfolio during the fourth quarter. The company closed out 2015 with \$61.8 billion in cash on its books, down from \$66.3 billion at the end of September, but up from \$58.0 billion at the end of 2014. With the company spending \$22.4 billion on the Precision Castparts deal at the end of January, and committing another billion dollars to stock purchases (such as Phillips 66) since the start of the year, Berkshire should have more than \$15 billion in dry powder that can be allocated to deals or share repurchases in the near term. CEO Warren Buffett likes to keep at least \$20 billion in cash on hand as a backstop for the insurance business, so that capital must be excluded from any cash deemed usable for investments or buybacks.

Fourth-quarter revenue increased 7.4% to \$51.8 billion, which left full-year revenue growth at 8.3% (with full-year revenue at \$210.8 billion). This was slightly below our forecast of \$209.6 billion for all of 2015. Excluding the impact of investments, derivatives, and eliminations, fourth-quarter and full-year revenue increased 5.0% and 5.3%, respectively. As we noted above, fourth-quarter and full-year pretax operating earnings increased 26.4% and 24.3%, respectively, when compared with the prior-year period, but

were up just 3.3% and 2.8%, respectively, when excluding the impact of investments, derivatives, and eliminations. Reported net earnings per Class A equivalent share were \$3,333 during the fourth quarter, which represented a 31.8% increase year over year. Full-year earnings were \$14,656 per Class A equivalent share, which represented an increase of 21.2% when compared with 2014. Excluding the impact of investments, derivatives, and eliminations, fourth-quarter and full-year earnings per Class A equivalent share increased 17.9% and 4.9%, respectively.

Looking more closely at Berkshire's insurance operations, all of the firm's four insurance segments--Geico, General Re, Berkshire Hathaway Reinsurance Group, and Berkshire Hathaway Primary Group--posted earned premium growth during the fourth quarter, but only Geico and BHPG had positive growth for the full year. From an underwriting profitability perspective, all insurance segments but Geico posted positive results during the fourth quarter, but all four insurance segments posted positive results for the full year, with combined ratios ranging from a high of 84.7% at BHPG to a low of 98.0% at Geico (which has struggled with an elevated loss ratio for much of the year). On a combined basis, Berkshire's insurance operations were once again profitable on an underwriting perspective during 2015, but its firmwide combined ratio of 95.2% was a letdown after the 93.5% level posted during 2014 (with both Geico and General Re contributing to the underperformance).

Geico's earned premium growth of 11.2% was on par with what we saw from the firm during the third quarter, and not necessarily a sign of a firm that is paring back underwriting to get its loss ratio under control. After seeing a marked improvement in its loss ratio during the third quarter (with the auto insurer's loss ratio of 80.5% reflecting a 310-basis-point improvement over the second quarter of 2015, which was one of the highest quarterly loss ratios we can remember seeing from the firm), Geico slipped again in the



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## **Analyst Notes**

fourth quarter, with its loss ratio expanding to 83.9%. With claim expenses remaining high relative to historical levels, owing to an increase in claim frequencies and severity in several of its major coverages, we had hoped that a tightening of underwriting standards, as well as selective price increases, would have started to have an impact. That said, it has paid to be a bit cautious on the recovery at Geico, as a slowly improving U.S. economy, fueled by lower gas prices, has left more drivers on the road and increased the potential for accidents. On top of that, the problem of distracted drivers using smartphones to talk, text, or even watch videos while driving is not going away anytime soon, so we had anticipated a fair amount of lumpiness in Geico's return to a more normalized level of profitability when we adjusted our overall value for Berkshire earlier this month.

As for General Re, the reinsurer reported a rare quarter of earned premium growth, driven by its life/health product lines, but we don't expect this to turn into a longer-term trend. Both General Re and BHRG (which also posted a rare quarter of earned premium growth on the property/casualty side of things) continue to constrain the volume of reinsurance that they are underwriting, given the excess capacity that exists in the reinsurance market and the fact that neither firm feels that the pricing in the marketplace is attractive enough to profitably underwrite additional business. While we project earned premium growth in negative territory for both firms over the next five years, we've always been quick to point out that there could be some lumpiness in reported results, as both firms have shown a knack for finding profitable business, even in times like those we're facing right now, where reinsurance pricing is unattractive. General Re and BHRG are also competitively advantaged from their positions within Berkshire's overall business empire, having the luxury of walking away from reinsurance underwriting when an appropriate premium cannot be obtained, which is something that cannot be said for their peers.

Even with this headwind, Berkshire's insurance float increased during 2015 to \$87.7 billion, up 4.5% from \$83.9 billion at the end of 2014. We expect further gains in float to be much harder to come by as we move forward, with Berkshire limiting the amount of reinsurance business it underwrites (although much of the growth in the firm's float over the past decade came from its two reinsurance arms). We still believe that Geico will be an important contributor to earned premium growth, as well as to the growth of float, with underwriting profitability likely to improve in the coming quarters. BHPG should also remain an important contributor, especially considering the growth potential that exists for the newly formed Berkshire Hathaway Specialty Insurance unit. In fact, we expect that much of the additional \$1 billion in earned premiums that BHPG underwrote during 2015 came from BHSI, even though Berkshire noted that National Indemnity's primary group, Berkshire Hathaway Homestate Companies, and GUARD were contributors. We still expect BHPG to be underwriting \$2 billion-\$3 billion in earned premiums annually by the end of our five-year forecast period. Even so, we still project more meager results from the company's insurance operations overall during the next couple of years, as we expect results to be far less robust in its two reinsurance arms.

Berkshire's noninsurance operations typically offer a more diversified stream of revenue and pretax earnings for the firm, helping to offset weakness in any one area, but 2015 was a challenging year for the firm. Having recently lowered our near- to medium-term expectations for BNSF, given what we're seeing in the railroad industry overall, we were not too surprised by the results we saw during the fourth quarter and the full year. Revenue declined 12.6% during the fourth quarter, with the firm seeing a marked decline in demand for shipments of coal and industrial-product categories (read: crude oil). Management went so far as to note that if these conditions persist (which we believe they will), then



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## **Analyst Notes**

volumes, revenue, and earnings in 2016 may be lower than in 2015 (which is our current forecast). While full-year revenue was down 5.5% during 2015, BNSF posted a 9.8% increase in pretax earnings, much of which was due to the benefits of lower fuel costs and the lag time in fuel surcharges. The one bit of good news for BNSF is that a a repeat of last year's difficult first quarter is unlikely, as most of the adverse weather that we've seen so far during 2016 has been east of the company's main territory.

Berkshire has made up for some of the weakness at BNSF this past year with stronger results from Berkshire Hathaway Energy, which increased revenue by 3.5% during 2015, with pretax earnings increasing 5.2% as a result. We still believe that BHE's U.S. regulated utilities--PacifiCorp, MidAmerican Energy, and NV Energy--will receive constructive rate-case outcomes and will earn somewhere close to their current allowable returns on equity in the near to medium term. This would put annual revenue growth in the 2%-3% range over the next five years. For Northern Powergrid, we've incorporated the U.K.'s most recent price review into our model, assuming the division generates midsingle-digit revenue growth going forward. As for BHE's pipeline and renewables businesses, we see revenue growing at a low- to mid-single-digit rate through 2019. On a consolidated basis, we expect annual EBITDA growth of 6.5% for BHE through 2019, with EBITDA margins at around 40%. Our assumptions about revenue and profitability for the subsidiary's regulated utilities put our value for these operations at 5.4 times our 2016 EBITDA estimate, which is basically in line with our valuations for similar high-quality utilities with favorable regulatory structures and aboveaverage growth opportunities. Our valuation also implies that BHE's pipeline group is worth 10 times EBITDA (on an EV/EBITDA basis), in line with peer multiples and indicative of the higher earned returns that the pipelines can realize on average, compared with returns for the regulated utilities.

With regards to Berkshire's manufacturing, service, and retail operations, the group overall recorded a 7.9% increase in fourth-quarter revenue, which translated into 10.4% topline growth for the year as a whole. Mixed sales performance across the spectrum of companies--McLane (up 3.4% during 2015), manufacturing (down 1.7%), and service and retailing (up 64.4% as the segment benefits from both organic growth and the inclusion of the Van Tuyl and Detlev Louis Motorad acquisitions in quarterly results this past year)--contributed to the group's top-line growth. This had a positive impact on fourth-quarter and full-year pretax earnings, which were up 3.3% and 4.8%, respectively. While we expect reported operating results to see a significant lift from the inclusion of Precision Castparts (and, to a lesser extent, Duracell) during 2016, we think that the core businesses should still be able to generate revenue growth in the mid-range of our mid- to high-single-digit topline growth targets, with operating margins (excluding Precision Castparts and Duracell) remaining around 7.0% over the course of our five-year forecast period.

Results for Berkshire's finance and financial products division--which includes Clayton Homes (manufactured housing and finance), CORT Business Services (furniture rental), Marmon (rail car and other transportation equipment manufacturing, repair, and leasing) and XTRA (over-the-road trailer leasing)--were also up year over year, with full-year revenue increasing 6.7% and pretax earnings expanding 13.4% during 2015. Pretax operating margins hit 30.0% on a full-year basis (which is a record level for the group) as profitability improved in all three divisions--manufacturing housing and finance, transportation equipment leasing, and other leasing and financing activities. We still expect revenue to increase by 5% per year on average during the remainder of our five-year forecast, with pretax margins declining below current levels, owing primarily to the potential for near-term weakness in each of the businesses



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## **Analyst Notes**

represented in this segment.

As we noted above, book value per Class A equivalent share at the end of the fourth quarter of 2015 was \$155,501--up 6.4% year over year (and 2.9% sequentially). The company also closed out the period with \$61.8 billion in cash on its books. With Buffett liking to keep around \$20 billion on hand as a backstop for the insurance business, and Berkshire committing \$22.4 billion as part of the Precision Castparts deal, as well as spending another billion on stocks since the start of the year, we believe that the firm has an excess cash balance of more than \$15 billion. We view this as dry powder for future acquisitions or share repurchases. While Berkshire did not buy back any shares during 2015 (or over the past three years, for that matter), we were surprised to not see any activity in the early part of 2016, as the company's share prices did dip below its 1.2 times book value threshold during both January and February (based on its book value per share at the end of 2015). It could be that the shares did not fall far enough below that particular threshold, and that, had they come closer to passing the buyback threshold (established by the firm's book value at the end of the third quarter), we might have seen the firm come out and announce that it was buying back stock. That said, the new threshold for share repurchases stands at \$186,601 (\$124.40) per Class A (B) share, which is less than 6% away from current trading levels.

# Larger Phillips 66 Stake, New Investment in Kinder Morgan Increase Berkshire's Energy Exposure 17 Feb 2016

While wide-moat Berkshire Hathaway's fourth-quarter 13-F filing offered some insight into the changes made to the insurer's common stock holdings during the period, these actions were overshadowed a bit by the company's purchase of an additional \$1 billion worth of narrow-moatrated Phillips 66's shares since the start of 2016. This lifts the insurer's stake to 74.5 million shares, accounting for more than 14% of the downstream energy company's \$40

billion market capitalization. Berkshire also closed its \$32.4 billion acquisition of Precision Castparts at the end of January. We expect the aerospace and industrial firm's operations to be rolled into Berkshire's manufacturing, service, and retail operations when the company reports first-quarter earnings at the end of April.

In the fourth quarter, Berkshire picked up 26.5 million shares of Kinder Morgan, which had the effect of driving the latter company's shares up 10% on Feb. 17. If only the stake had accounted for more than 0.5% of the insurer's equity holdings, as the portfolio could use as much of a positive lift as it can get, given the poor performance we've seen during the past year. Berkshire also increased its stake in Wells Fargo by 2% in the fourth quarter, with the bank maintaining its position as the company's largest holding, accounting for 19.8% of equity holdings at the end of December.

Berkshire increased its stake in Deere by more than a third during the period, making it the insurer's 14th-largest equity position (accounting for 1.3% of the total equity portfolio), and made a small addition to its stake in Axalta Coating Systems. Berkshire eliminated its holdings in Chicago Bridge & Iron and sold down slightly more than a fifth of its stake in AT&T (received as part of that firm's purchase of DirecTV, which closed near the end of July 2015). Berkshire also reduced its stake in Wabco Holdings by 6%.

Even with these transactions, as well as the unrealized gains and losses that occurred during the fourth quarter, the makeup of Berkshire's top five stock holdings--Wells Fargo (19.8%), Kraft Heinz (18.0%), Coca-Cola (13.0%), IBM (8.5%), and American Express (8.0%)--remained the same. With the top five holdings in Berkshire's equity portfolio accounting for just over two thirds of the overall portfolio and the top 10 holdings making up 81.6%, the insurer's equity portfolio (which had 48 total stock holdings at the



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## **Analyst Notes**

end of December) remains fairly concentrated, adding to the performance woes when those top holdings are underperforming.

Lowering Berkshire Hathaway's Fair Value Estimate to \$255,000 (\$170) per Class A (Class B) Share 12 Feb 2016 We've lowered our fair value estimate for Berkshire Hathaway's Class A (Class B) shares to \$255,000 (\$170) per share from \$265,000 (\$177) to reflect updated assumptions about growth and profitability for the firm's different operating segments, as well as for the performance of its investment portfolio. Our new fair value estimate is equivalent to 1.7 times Berkshire's reported book value per Class A (Class B) share of \$151,083 (\$101) at the end of the third quarter of 2015. Based on our estimates for book value per share at the end of 2015 and 2016, our new fair value estimate is equivalent to 1.6 and 1.5 times book, respectively.

We use a sum-of-the-parts methodology to value Berkshire. We believe the company's insurance operations are worth \$82,200 (\$55) per Class A (Class B) share, down 1% from our previous valuation, with improved expectations for underwriting results being offset by weaker near-term investment portfolio performance. We value Berkshire's investments in Kraft Heinz and Precision Castparts separately from the company's insurance operations, believing that they are worth \$14,600 (\$10) and \$18,600 (\$12) per Class A (Class B) share, respectively. Our fair value estimate for Precision Castparts declined around 10% since our last update because of ongoing weakness in the oil and gas market, as well as lowered expectations for their aerospace business.

Our estimate for BNSF declined 13% as well to \$51,000 (\$34) per Class A (Class B) share because of a reduction in our near-to-medium term assumptions for railcar volumes and pricing. We also lowered our fair value estimate for Berkshire's manufacturing, service, and retailing operations

2% to \$56,600 (\$38) per Class A (Class B) share, while raising our estimate for the company's energy operations 7% to \$23, 700 (\$10). Our estimate for the firm's finance and financial products division also decreased slightly to \$8,200 (\$5) per Class A (Class B) share.

Looking more closely at Berkshire's insurance operations, we've updated our forecasts for each of the firm's four subsidiaries--Geico, General Re, Berkshire Hathaway Reinsurance Group, or BHRG, and Berkshire Hathaway Primary Group, or BHPG. With regards to Geico, the firm's earned premiums and underwriting profits have traditionally been more consistent because auto insurance is a frequency-driven business. That said, the company has been on a tear the past several years, generating double-digit levels of earned premium growth. Unfortunately, the firm may have gotten a bit too aggressive with growth to the point where it was having an impact on the profitability of the growth it was underwriting.

Coming into third-quarter 2015, Geico's loss ratio stood at 83.6%--its highest level since 2000 and well above its average loss ratio of 75.8% over the past decade. The auto insurer's loss ratio of 80.5% during the third quarter was still 230 basis points higher than the year-ago quarter, but did reflect a 310-basis-point sequential improvement--a sign to us that underwriting standards are tightening up and the pricing actions the firm has taken have yet to affect written and earned premium growth (which were up 12% and 11%, respectively, on a year-over-year basis during the third quarter). This has forced us to rethink the length of time it would take for Geico to get back to a more normalized loss ratio, which improved our outlook and valuation for the auto insurer. That said, a slowly improving U.S. economy, fueled by lower gas prices, will still leave more drivers on the road and increase the potential for accidents. The problem of distracted drivers using smartphones to talk, text, or even watch videos while driving is also not going



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## **Analyst Notes**

away any time soon, so there could be still be a fair amount of lumpiness in Geico's return to a more normalized level of profitability.

As for Berkshire's reinsurance operations, we're still not expecting much in the way of growth from either General Re or BHRG in the near to medium term. Reinsurance pricing, after peaking in the fourth quarter of 2012 (because of the \$75 billion of losses that were brought on by Hurricane Sandy), has been on a multiyear decline ever since. The ongoing decline in reinsurance rates has been the result of low global catastrophe losses, persistent reserve releases, and a continued inflow of alternative reinsurance capital into the market. While some in the industry think pricing has started to stabilize, Warren Buffett believes the reinsurance market could continue to be an unattractive business for Berkshire over the next decade. Fortunately for General Re and BHRG, they (unlike many of their peers in the business) have the luxury of walking away from reinsurance underwriting when an appropriate premium cannot be obtained, with both firms showing no real inclination to pursue growth in the current pricing environment.

That's not to say that either company won't do business, though, as they've both had a knack for finding unusual opportunities that bring in a fair amount of float and provide Berkshire with adequate returns for the risks it is covering; it's just that these opportunities will be few and far between. In this type of operating environment, reinsurers that have more diverse insurance portfolios and serve multiple distribution channels are more likely to offset the negatives in the market, and should be able to target profitable opportunities as they arise. We think that both General Re and BHRG fall into this category. Unfortunately, Berkshire's reinsurance operations are also dealing with a number of run-off contracts in the near term, so we see the ability of the two firms to generate float being somewhat

limited the next few years. With about three quarters of Berkshire's overall float coming from its two reinsurance arms--General Re (25%) and BHRG (49%)--we believe that further increases in the overall level of the company's insurance float (which stood at \$86.2 billion at the end of the third quarter) will be more difficult to come by.

We think a far more telling signal of the level of weakness that Berkshire expects from its reinsurance operations is the fact that Ajit Jain, who has been primarily responsible for BHRG the past three decades, has turned most of his attention to Berkshire's latest endeavor in insurance underwriting--Berkshire Hathaway Specialty Insurance-which was formed in June 2013 and resides within BHPG. While not quite as homogeneous as Berkshire's three other insurance subsidiaries, being a conglomeration of multiple insurance operations that offers coverage as varied as workers' compensation and commercial auto and property coverage, BHPG has been its fastest-growing, with the best combined ratio and the strongest float growth over the past five-, 10-, and 15-year time frames. Past results for BHPG include both acquired and organic growth, something that we expect to continue in the years ahead, with the division posting double-digit earned premium growth during 2015-19 as a result. We also expect the division's combined ratio to range between 85% and 90% during the next five years, allowing it to maintain its ranking as Berkshire's most profitable insurance subsidiary.

Combining our projections for the future underwriting results of the different insurance operations with a slightly poorer environment for investment returns (given the sell-off in the global equity markets, which we had partially accounted for during our last update) and lower levels of investment income (as interest rates remain lower for longer), we arrive at a fair value estimate of \$82,200 (\$55) per Class A (Class B) share, down 1% from our previous valuation. We continue to value Berkshire's investments in



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Kraft Heinz and Precision Castparts separately from the company's insurance operations, believing that they are worth \$14,600 (\$10) and \$18,600 (\$12) per Class A (Class B) share, respectively. Our fair value estimate for Precision Castparts has declined around 10% since our last update because of the ongoing weakness in the oil and gas market, as well as lowered expectations for their aerospace business.

As for Berkshire's noninsurance operations, the fact that both Burlington Northern Santa Fe, or BNSF, and Berkshire Hathaway Energy, or BHE, file quarterly and annual reports with the SEC, despite being completely enveloped in the insurer's holding company structure, allows us to put together more robust forecasts for their operations. With BSNF, we've lowered our fair value estimate for the railroad to \$51,000 (\$34) per Class A (Class B) share from \$58,300 (\$39) due to a reduction in our near-to-medium term assumptions for railcar volumes and pricing. The 13% decline in BNSF's valuation was, however, below the 16% average (and 17% median) decline in the fair value estimates of the six publicly traded Class I railroads we cover, and more on par with the decline we saw in Union Pacific's valuation as we lowered 2016-17 projections for the industry that took in the latest reported volume trends for the industry, as well as updated expectations from some of the primary industries that use rail to ship their products.

North American coal carloads declined 12% in 2015 and other freight also proved dour as last year came to an end, with total carloads down 13% in the final four weeks of the year (leading to a 6% decline for all of 2015). Given low commodity prices (in particular, natural gas that is sufficiently cheap to make coal relatively unattractive in power generation), lower commodity demand from China, reduced oil and gas investment, lowered projections for the businesses of other rail users, and the U.S. Purchasing Managers Index's steady decline since July (breaching 50

in November and December), we adjusted our volume estimates downward for the next two years. We also expect revenue per carload to decline for most freight in 2016, as fuel surcharges continue to decrease on cheaper fuel prices year over year. We believe firms like BNSF will be able to cover inflation via rate increases, and should be able to manage costs enough in the near term to continue expanding margins. After a few years of improvement, we believe that these margin gains will begin to flatten, putting more impetus on growth--with railcar volumes likely to return to a more modest 1%-2% per year (compared with the low- to mid-single-digit rates we were seeing prior to 2015).

We've increased our valuation for Berkshire's share of Berkshire Hathaway Energy to \$23,700 (\$16) per Class A (Class B) share from \$22,100 (\$15) due to lower input costs and the ongoing acquisitions and better operating performance from its real estate arm--Berkshire Hathaway HomeServices. We expect BHE's U.S. regulated utilities--PacifiCorp, MidAmerican Energy, and NV Energy--to continue to receive constructive rate case outcomes and earn somewhere close to their current allowable returns on equity in the near to medium term. This would put annual revenue growth in the 2%-3% range over the next five years. For Northern Powergrid, we've incorporated the U.K.'s most recent price review into our model, assuming the division generates mid-single-digit revenue growth going forward. As for the firm's pipeline and renewables businesses, we see revenue growing at a low- to mid-single-digit rate through 2019. On a consolidated basis, we expect annual EBITDA growth of 6.5% through 2019, with EBITDA margins at around 40%. Our assumptions about revenue and profitability for BHE's regulated utilities put our value for these operations at 5.4 times our 2016 EBITDA estimate, which is basically in line with our valuations for similar highquality utilities with favorable regulatory structures and above-average growth opportunities. Our valuation also



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## **Analyst Notes**

implies that BHE's pipeline group is worth 10 times EBITDA (on an EV/EBITDA basis), in line with peer multiples and indicative of the higher earned returns that the pipelines are able to realize on average compared with returns for the regulated utilities.

With regards to Berkshire's manufacturing, service and retail operations (exclusive of Precision Castparts), we expect them to slow somewhat in the near term (noting that most of the businesses in this segment are U.S.-centric), but still envision the generating revenue growth in the midrange of our mid- to high-single-digit target during 2015-19. While our long-term projection models past behavior by including bolt-on acquisitions to our future revenue forecasts, should Berkshire's acquisition activity be higher (lower) than we are forecasting it would have a positive (negative) impact on our valuation for the segment. As for profitability, we see operating margins (excluding Precision Castparts) remaining around 7.0% over the course of our five-year forecast, which helped limit the decline in our fair value estimate for the MSR segment, which we reduced to \$56,600 (\$38) per Class A (Class B) share from \$ \$57,800 (\$39). At some point, we will roll Precision Castparts (which we expect Berkshire to add to the manufacturing, service and retail segment for reporting purposes) into our valuation, but as long as we have financial data to work with we'll continue to value it separately, much as we did with Lubrizol during the first couple of years after that firm was acquired in 2011.

As for the company's finance and financial products division, which includes Clayton Homes (manufactured housing and finance), Cort Business Services (furniture rental), Marmon (rail car and other transportation equipment manufacturing, repair, and leasing) and Xtra (over-the-road trailer leasing), we've lowered our estimate of the value of this unit to \$8,200 (\$5) per Class A (Class B) share from \$8,800 (\$6). We continue to expect revenue to grow 5% per year on average

during 2015-19, with pretax margins declining to around 25%, primarily because of near-term weakness in each of the businesses represented in this segment.

Berkshire's book value per Class A equivalent share at the end of the third guarter of 2015 was \$151.083--up 5% year over year (and 1% when compared with the second guarter of 2015). With the equity markets improving in the fourth quarter of last year, the firm likely closed out 2015 with book value per Class A share of around \$154,000 (reflective of a 5.4% year-over-year increase). Weakness in the equity markets since the start of the year, as well as in some of Berkshire's operating businesses, will likely keep book value per share growth in the 5%-7% range during 2016, but we expect that to rebound back to a high-single-digit range after this year. While the company did not buy back any shares during the first nine months of 2015 (and has not bought any since the fourth quarter of 2012), its stock is getting fairly close to the 1.2 times book value threshold that Buffett set out for share repurchases back in the third guarter of 2011. Based on the firm's book value at the end of the third guarter of 2015, Berkshire should be willing to buy back stock at prices up to \$181,300 (\$121) per Class A (Class B) share, implying a floor on the company's common stock that is about 4% below where Berkshire's shares are trading right now. Assuming that the company's book value per share hits our end of 2015 target when the company reports fourth-quarter earnings at the end of February, Berkshire should be willing to buy back stock at prices up to \$184,926 (\$123) per Class A (Class B) share.



Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Industry Group
141.99 USD	170.00 USD	119.00 USD	229.50 USD	Medium	Wide	Stable	Exemplary	Insurance

# Morningstar Analyst Forecasts

Financial Summary and Forecasts							
						Forecast	
	3-Year						5-Year
Growth (% YoY)	Hist. CAGR	2012	2013	2014	2015	2016	Proj. CAGR
Earned Premium	8.8	7.7	6.2	12.5	-0.8	7.1	5.8
Investment Income	1.6	-5.4	8.9	1.9	-7.8	10.1	9.9
Total Revenue	9.5	5.6	13.6	9.4	-3.3	7.8	5.6
Total Expenses	6.6	3.4	2.1	14.9	0.7	7.9	6.0
Diluted EPS, adjusted	24.8	44.4	32.0	2.0	-9.8	21.5	7.1
Operating Income	22.4	17.1	66.6	-5.9	-16.9	7.0	3.9
Net Income	16.0	-13.5	60.2	12.8	-22.8	0.1	0.7
	3-Year						5-Year
Profitability	Hist. Avg	Dec 2012	Dec 2013	Dec 2014	Dec 2015	Dec 2016	Proj. Avg
Loss Ratio %	73.8	73.0	71.8	76.6	76.9	74.9	74.3
Expense Ratio %	19.7	22.3	19.8	17.0	18.0	20.8	20.7
Combined Ratio %	93.5	95.3	91.6	93.5	94.9	95.6	95.0
Profit Margin %	15.6	12.1	17.1	17.6	14.1	13.1	13.4
ROE %	7.9	5.8	8.1	9.8	8.9	9.6	9.1
ROE, Without Goodwill %	9.5	7.1	9.7	11.8	11.2	12.3	11.3
ROA %	3.3	2.5	3.6	3.8	2.9	2.8	2.9
	3-Year						5-Year
Leverage	Hist. Avg	2012	2013	2014	2015	2016	Proj. Avg
Debt/Capital %	8.5	8.9	8.1	8.7	18.4	17.5	15.5
Debt/Equity %	9.3	9.7	8.8	9.5	22.5	21.3	18.5
Equity/Assets %	40.9	44.0	43.7	35.0	30.4	28.5	31.5

Valuation Summary and I	Forecasts			
	2013	2014	2015(E)	2016(E)
	2013	2014	2010(E)	2010(E)
Price/Fair Value	0.83	0.96	_	_
Price/Earnings	0.0	0.0	_	0.0
Price/Book	0.0	0.0	_	0.0
Price/Tangible Book	0.0	0.0	_	0.0
Price/Earned Premium	10.0	7.9	_	8.0
Dividend Yield %	_	_	_	_
Key Valuation Drivers				

Cost of Equity %	9.0
Average Forward ROE %, 5 Yr %	9.1
Average Forward ROE %, 5 Yr, Excluding Goodwill %	11.3
Long-Run Tax Rate %	25.0
Stage 2 Net Income Growth Rate %	9.5
Stage 2 Incremental ROE %	9.5
Perpetuity Year	20

Additional estimates and scenarios a	available for download	at http://select.morningstar.com.

<b>Discounted Cash Flow Valuation</b>	1		
	USD Mil	Firm Value (%)	Per Share Value
Present Value Stage I	_	_	_
Present Value Stage II	_	_	_
Present Value of the Perpetuity	126,295	32.2	76,873.05
Equity Value, Sub-Total	126,295		76,873.05
Other Adjustments	265,896	67.8	161,844.91
Total Equity Value	392,192		255,000.00
Projected Shares Outstanding	2		
Fair Value per Share (USD)	170.00		



**Last Price** Fair Value **Consider Buy** Consider Sell Uncertainty Economic Moat™ Moat Trend™ Stewardship **Industry Group** 141.99 USD 170.00 USD 119.00 USD 229.50 USD Medium Wide Stable Exemplary Insurance

# Morningstar Analyst Forecasts

Income Statement (USD Mil)					orecast
	2012	2013	2014	2015	2016
Earned Premium	34,545	36,684	41,253	40,938	43,853
Investment Income	4,532	4,934	5,026	4,633	5,102
Realized Gain (Loss) on Investments	990	3,881	3,503	2,590	2,948
Fee Income	_	_	_	_	_
Other Revenue	_	_	_	_	_
Total Revenue	40,067	45,499	49,782	48,161	51,903
Loss & Loss Adjustment Expense, or Interest & Dividends Credited to Policyholders	25,227	26,347	31,587	31,483	32,839
Policy Acquisition Costs, or Policyholder Benefits & Claims	7,693	7,248	6,998	7,369	9,099
Administrative Expenses	_	_	_	_	_
Total Expenses	32,920	33,595	38,585	38,852	41,939
Operating Income	7,147	11,904	11,197	9,309	9,964
Interest Expense	251	291	310	286	620
Other Income (Expense)	_	_	_	_	_
Pre-Tax Income	6,896	11,613	10,887	9,023	9,344
Income Tax Expense	2,048	3,847	2,126	2,256	2,570
Income After Taxes	4,848	7,766	8,761	6,767	6,774
Minority Interest	_	_	_	_	_
Preferred Dividends	_	_	_	_	_
Extraordinary Items	_	_	_	_	_
Net Income (Loss)	4,848	7,766	8,761	6,767	6,774
Diluted Shares Outstanding	2	2	2	2	2
Diluted EPS (GAAP)	2,935.88	4,724.96	5,330.84	4,117.74	4,122.09
Diluted EPS, adjusted	8,977.00	11,850.00	12,091.59	10,901.94	13,245.12
Dividends Per Share	_	_	_	_	_



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# Morningstar Analyst Forecasts

Balance Sheet (USD Mil)					
Assets	2012	2013	2014	<u>For</u> 2015	recast 2016
Investment Portfolio	133,973	156,583	159,272	168,283	171,776
Cash & Equivalents	38,286	37,759	30,639	30,639	30,639
Premiums Receivable	7,845	7,474	7,914	7,920	8,379
Deferred Acquisition Costs	-				
Accrued Investment Income	_	_	_	_	_
Prepaid Reinsurance Premiums	_	_	_	_	_
Reinsurance Recoverables	2,925	3,055	3,116	3,042	3,209
Goodwill & Other Intangibles	15,511	15,511	15,547	15,547	15,547
Deferred Tax Assets	_	_	_	_	_
Other Assets	8,598	7,661	12,628	12,537	12,846
Non-Operating Assets	_	_	_	_	_
Total Assets	207,138	228,043	229,116	237,968	242,396
Liabilities					
Loss Reserves, or Policyholders' Account Balances	79,547	81,258	89,685	98,000	106,811
Unearned Premiums, or Future Policy Benefits	10,237	10,770	11,944	11,853	11,947
Accounts Payable	4,876	5,379	5,705	5,815	6,425
Deferred Tax Liabilities	12,417	22,289	24,073	23,823	23,573
Other Liabilities	_	_	_	_	_
Liabilities Sub-Total	107,077	119,696	131,407	139,491	148,755
Debt	8,867	8,730	7,625	16,260	14,667
Non-Operating Liabilities	_	_	_	_	_
Total Liabilities	115,944	128,426	139,032	155,751	163,423
Preferred Stock	_	_	_	_	
Minority Interest	_	_	_	_	
Shareholders' Equity					
Common Stock	4	4	4	4	4
Additional Paid-In Capital	18,615	17,736	17,787	17,787	17,787
Retained Earnings	51,950	48,858	30,295	37,062	43,837
Treasury Stock	_	_	_	_	_
Unrealized Gains (Losses)	20,625	33,019	32,049	17,414	7,396
Other Equity					
Total Shareholders' Equity	91,194	99,617	80,135	72,267	69,023
Total Liabilities and Shareholders' Equity	207,138	228,043	219,166	228,018	232,446



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# Comparable Company Analysis

These companies are chosen by the analyst and the data are shown by nearest calendar year in descending market capitalization order.

Valuation Analysis																
		Price/Ea	Price/Earnings			Price/Book		Price/Tangible Book			Price/Earned Premium			Dividend		
	Price/Fair															
Company/Ticker	Value	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)
American International Group Inc AIG	0.85	10.8	_	11.7	0.7	_	0.6	0.7	_	0.6	2.0	_	1.8	0.9	_	1.0
Allstate Corp ALL USA	1.02	16.1	_	12.5	1.5	_	1.3	1.6	_	1.4	0.8	_	0.8	1.4	_	2.0
Progressive Corp PGR USA	1.15	14.2	15.7	17.1	2.3	2.5	2.4	2.3	2.9	2.7	0.9	0.9	0.9	5.6	2.2	1.6
Average		13.7	15.7	13.8	1.5	2.5	1.4	1.5	2.9	1.6	1.2	0.9	1.2	2.6	2.2	1.5
Berkshire Hathaway Inc BRK.B US	0.84	0.0	_	0.0	0.0	_	0.0	0.0	_	0.0	7.9	_	8.0	_	_	_

Profitability Analysis																	
			ROE %			ROE Without Goodwill %			Return on Assets %			Combined Ratio %			Profit Margin %		
	Last Historical Year																
Company/Ticker	Net Income (Mil)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	
American International Group Inc AIG	7,529 USD	7.3	2.2	8.6	7.4	2.2	8.7	1.7	0.5	2.0	135.6	145.1	136.6	11.7	3.9	14.2	
Allstate Corp ALL USA	2,746 USD	13.3	10.4	10.5	14.2	11.0	11.2	2.5	2.0	2.0	93.8	94.8	95.5	7.8	5.9	5.7	
Progressive Corp PGR USA	1,281 USD	19.5	17.8	15.9	19.5	19.1	18.2	5.1	4.6	3.9	92.3	92.5	93.5	6.6	6.1	5.4	
Average		13.4	10.1	11.7	13.7	10.8	12.7	3.1	2.4	2.6	107.2	110.8	108.5	8.7	5.3	8.4	
Berkshire Hathaway Inc BRK.B US	8,761 USD	9.8	8.9	9.6	11.8	11.2	12.3	3.8	2.9	2.8	93.5	94.9	95.6	17.6	14.1	13.1	

#### Leverage Analysis

		Debt/Cap	ital %		Debt/Equity %			Equity/Assets %			Premium/Equity %			Equity/Investment Portolio %		
	Last Historical Year															
Company/Ticker	Total Debt (Mil)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)
American International Group Inc AIG	31,217 USD	22.6	23.1	23.1	29.2	30.0	30.0	24.5	23.1	22.6	34.9	37.1	36.8	29.9	28.3	27.6
Allstate Corp ALL USA	5,194 USD	20.2	20.0	20.0	25.3	25.0	25.0	19.7	19.0	19.0	140.7	151.8	154.9	25.1	24.5	24.6
Progressive Corp PGR USA	2,165 USD	23.8	27.1	25.9	31.2	37.2	35.0	26.9	24.5	25.2	265.5	273.0	274.7	36.2	34.5	35.5
Average		22.2	23.4	23.0	28.6	30.7	30.0	23.7	22.2	22.3	147.0	154.0	155.5	30.4	29.1	29.2
Berkshire Hathaway Inc BRK.B U	<b>7,625</b> USD	8.7	18.4	17.5	9.5	22.5	21.3	35.0	30.4	28.5	51.5	56.7	63.5	42.2	36.3	34.1



# **Research Methodology for Valuing Companies**

#### Components of Our Methodology

- ► Economic Moat™ Rating
- ► Moat Trend™ Rating
- Moat Valuation
- ► Three-Stage Discounted Cash Flow
- ► Weighted Average Cost of Capital
- ► Fair Value Estimate
- Scenario Analysis
- ▶ Uncertainty Ratings
- Margin of Safety
- Consider Buying/Selling
- ► Stewardship Rating

We believe 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: our assessment of the firm's economic moat. our estimate of the stock's fair value, our uncertainty around that fair value estimate and the current market price. This process ultimately culminates in our single-point star rating. Underlying this rating is a fundamentally focused methodology and a robust, standardized set of procedures and core valuation tools used by Morningstar's equity analysts.

The concept of the Morningstar Economic Moat™
Rating plays a vital role not only in our qualitative
assessment of a firm's investment potential, but
also in our actual calculation of our fair value
estimates. We assign three moat ratings—none,
narrow, or wide—as well as the Morningstar Moat
Trend™ Rating—positive, stable, or negative—to
each company we cover. Companies with a narrow
moat are those we believe are more likely than not
to achieve normalized excess returns on invested
capital over 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. The assumptions that we make about a firm's economic moat play a vital role in determining the length of "economic outperformance" that we assume in the terminal sections of our valuation model. To assess the sustainability of excess profits, analysts perform ongoing assessments of what we call 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.

At the heart of our valuation system is a detailed projection of a company's future cash flows. The first stage of our three-stage discounted cash flow model can last from 5 to 10 years and contains numerous detailed assumptions about various financial and operating items. The second stage of our model where a firm's return on new invested capital (RONIC) and earnings growth rate implicitly fade until the perpetuity year—can last anywhere from one year (for companies with no economic moat) to 10-15 years (for wide-moat companies). In our third stage, we assume the firm's RONIC equals its weighted average cost of capital, and we calculate a continuing value using a standard perpetuity formula. In deciding on the rate at which to discount future cash flows, we use a building block approach,

#### **Morningstar Research Methodology for Valuing Companies**

Economic Moat
Financial Health
Stewardship
Uncertainty
Morningstar Fair Value
Margin of Safety
Morningstar Rating™ For Stocks
★★★★
Market Pricing

Source: Morningstar, Inc.

## Detailed Methodology Documents and Materials\*

- ► Comprehensive Equity Research Methodology
- ▶ Uncertainty Methodology
- Cost of Equity Methodology
- ► Morningstar DCF Valuation Model
- Stewardship Rating Methodology

which takes into account expectations for market real return, inflation, country risk premia, corporate credit spread, and any additional systematic risk.

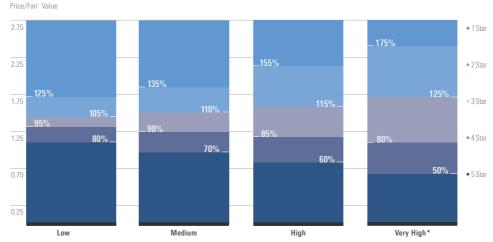
We also employ a number of other tools to augment our valuation process, including scenario analysis, where we assess the likelihood and performance of a business under different economic and firm-specific conditions. Our analysts model three scenarios for each company we cover, stresstesting the model and examining the distribution of resulting fair values.

The Morningstar Uncertainty Rating captures the range of likely potential fair values 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.

Our corporate 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. IM

#### Morningstar Margin of Safety and Star Rating Bands



\* Occasionally a stock's uncertainty will be too high for us to estimate, in which case we label it Extreme.

Source: Morningstar, Inc.

<sup>\*</sup>Please contact a sales representative for more information.



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141.99 USD	170.00 USD	119.00 USD	229.50 USD	Medium	Wide	Stable	Exemplary	Insurance



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**Last Price** Fair Value Consider Buy Consider Sell Uncertainty Economic Moat™ Moat Trend™ Stewardship **Industry Group** 141.99 USD 170.00 USD 119.00 usp 229.50 usp Medium Wide Stable Exemplary Insurance

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