

# What's the Best Way to Value Berkshire Hathaway?

Numerous approaches exist for determining the fair value of Berkshire Hathaway's shares. February 19, 2013

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thaway	NYSE: BRK.A	****
Wide	Moat Trend:	Negative
\$246.3	billion (USD)	
\$175,000	Market Price	\$149,688
86%	Uncertainty:	Medium
2011A	2012E	2013E
\$6,215	\$8,130	\$8,603
24.1x	18.4x	17.4x
1.5x	1.3x	1.2x
	\$246.3 \$175,000 86% 2011A \$6,215 24.1x	Wide Moat Trend: \$246.3 billion (USD) \$175,000 Market Price Uncertainty: 2011A 2012E \$6,215 \$8,130 24.1x 18.4x

Bershire Hathaway			NYSE: BRK.B	****	
	Moat:	Wide	Moat Trend:	Negative	
	Mkt Cap:	\$233.3	billion (USD)		
	Fair Value:	\$117	Market Price	\$99.27	
	P/FVE:	85%	Uncertainty:	Medium	
		2011A	2012E	2013E	
	EPS	\$4.14	\$5.42	\$5.74	
	P/E	24.1x	18.4x	17.4x	
	P/B	1.5x	1.3x	1.2x	

#### **EXECUTIVE SUMMARY**

Given its complexity, as well as the size and diversity of its businesses, valuing **Berkshire Hathaway (BRK.A BRK.B)** is unquestionably a challenge. The most commonly cited methods for valuing the company's shares include the use of an earnings based multiple, a book value based multiple, a two-column approach, a float based methodology, and, finally, a discounted cash flow valuation. In some cases, investors will use a combination of these different methodologies to value different parts of the business, or as a way to triangulate their own estimates. We believe that understanding the benefits and shortfalls of each of these methodologies can provide valuable insight into the ways in which different investors are approaching the firm's overall valuation. It also provides us with an opportunity to expand on our own discounted cash flow valuation, which we feel provides a more robust and reliable valuation than any of the other shortcut or alternative methods in use today.

#### **KEY TAKEAWAYS**

- An earnings-based multiple is too simplistic and misses aspects of Berkshire's value. While a price/earnings based multiple approach may work well when comparing similar companies in the same industry, there are no real comparable firms for Berkshire, which is basically a large collection of disparate companies operating independently of each other, making it difficult to determine the multiple that would best reflect a fair price for the firm overall.
- Book value serves as a reasonable proxy for intrinsic value, but paints an oversimplified picture. While book value multiples may paint an oversimplified picture of the relative price of a company, it is our preferred comparison metric for financials, and specifically for insurance companies. Buffett has used changes in book value as a proxy for changes in Berkshire's intrinsic value, and overall book value per share does seem to provide a bit of a floor for the valuation.
- ▶ The two-column approach to valuing Berkshire can be useful, but it is often misunderstood. When using this approach, investors must be careful to not simply treat all cash and investments as excess capital available to shareholders while adding up the business values separately. A large percentage of the investments Berkshire carries are pledged as collateral to the firm's insurance and financial operations and common shareholders do not have first or full claims to them.
- ▶ The float-based approach to valuing Berkshire is fraught with its own issues. While this method has been used widely, it has become less relevant as Berkshire has diversified its operations, making insurance a smaller and smaller contributor to the firm. The model itself is also extremely sensitive to relatively minor changes to the input variables that are used to calculate the present value of Berkshire's float: investment returns, the company's cost of float, the growth of its insurance float and the discount rate.
- ▶ We believe our discounted cash flow approach best captures Berkshire's complexity. In our opinion, each of the aforementioned methods has its failings due to oversimplification, a lack of intuitive justification or a lack of applicability to peer companies. Notably, many of the methods for valuing the insurance business do not seem to work consistently when applied to other insurers, which throws their validity into question. We believe that our discounted cash flow approach provides a more robust and reliable valuation for the firm.
- ▶ Berkshire's shares remain slightly undervalued in a market that appears to be fairly valued. Our fair value estimate for Berkshire is \$175,000 per Class A share (or \$117 per Class B share), reflective of a price to fair value multiple of around 0.85 times (inferring a more-than 15% gain from today's trading prices). While not as large of a margin of safety as we would normally like to see in a firm with a medium uncertainty rating, we do note that Berkshire has effectively created a floor on the company's stock price by announcing that it would buy back both Class A and Class B shares at prices up to 120% of reported book value. We do not expect any material changes to our valuation as a consequence of its planned purchase of **Heinz (HNZ)**.

## An earnings-based multiple is too simplistic and misses aspects of Berkshire's value

While a price/earnings based multiple may work well when comparing similar companies in the same industry, there are no real comparable firms for Berkshire, which is basically a large collection of disparate companies operating independently of each other, making it difficult to determine which multiple would best reflect a fair price for the firm overall. Not only do we believe that a simple earnings multiple can lead investors astray due to the complexity and diversity of Berkshire's operations, but also some special difficulties exist with insurance company earnings including the fact that they do not adequately capture the value of the firm's investments.

The table below highlights the price/earnings multiples, as well as the multiples of our analysts' fair value estimates relative to their earnings estimates, for some of the publicly traded peer companies for Berkshire's main operating segments. We illustrate the diversity of Berkshire's operations and the difficulty of assigning good comparisons to the firm's disparate businesses (with the multiples across the different business lines varying fairly widely).

Company	Price/Earnings	Fair Value/Earnings
TransCanada TRP	18.2x	19.5x
Duke Energy DUK	15.4x	14.3x
Xcel Energy XEL	14.6x	13.5x
Union Pacific UNP	14.4x	14.5x
Norfolk Southern NSC	12.3x	14.7x
Energy & Railroad Average	15.0x	15.3x
Travelers TRV	12.1x	11.7x
Progressive PGR	16.3x	16.2x
PartnerRe PRE	9.3x	10.1x
W.R. Berkley WRB	14.1x	14.9x
Insurance Average	13.0x	13.2x
Ingersoll-Rand IR	16.1x	12.8x
ITT Corp ITT	14.6x	13.9x
Ashland ASH	11.0x	N/A
CoreMark CORE	12.9x	10.7x
Manufacturing, Service & Retail Average	13.7x	12.5x
CIT Group CIT	11.4x	N/A
Marlin Business Services MRLN	14.1x	N/A
Rent-A-Center RCII	11.4x	N/A
Finance & Financial Services Average	12.3x	_

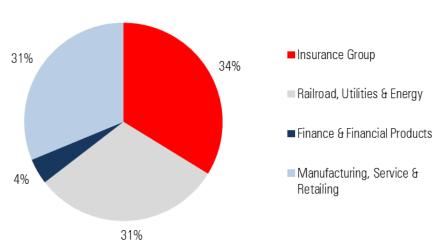
Note: Earnings estimates are taken from our analysts' models. In the cases where we don't cover the companies, the estimated earnings are derived through the mean analyst estimate.

Source: Morningstar, Thomson Reuters

In order to apply these price/earnings multiples to come up with a value for Berkshire overall we need to break down the firm's pre-tax earnings by their different sources, as shown in the chart on Page 3:



## **Estimated Pre-Tax Earnings Contribution by Segment**



Source: Morningstar Estimates

By combining this breakdown of Berkshire's pretax earnings by source with our fair value/earnings multiples (or with the price/earnings multiples in cases where a firm is not covered by a Morningstar analyst) we can produce a theoretical earnings based multiple for the company, as shown below:

Segment	% of Earnings	Applied Multiple
Insurance	34%	13.2x
	0.70	
Railroad, Utilities & Energy	31%	15.3x
Manufacturing, Service & Retailing	31%	12.5x
Finance & Financial Products	4%	12.3x
	100%	13.6x

Source: Morningstar

Notably, the multiple implied by this exercise is significantly lower than what we believe is a fair price for the company.

Value	Multiple
115,317	13.6x
149,688	17.6x
175,000	20.6x
	115,317 149,688

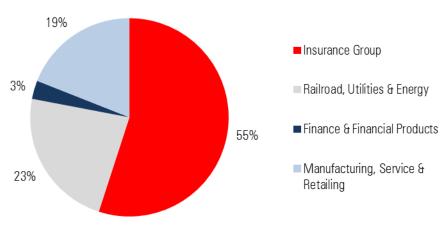
Source: Morningstar

There are a few issues that can cause Berkshire's reported results to not reflect the full economic value of the company and therefore limit the usefulness of an earnings-based multiple approach. Most notably, annual earnings do not adequately reflect the full value of the company's equity investments (and to address this, some practitioners have suggested including "look-through earnings" to the valuation, an approach we will discuss later). On top of that, using an earnings multiple to value an insurance company has its own limitations, which we discuss



in further detail below. While Berkshire no longer derives as large a percentage of its profits from insurance as it once did, it still represents more than half of the value of the company, based on our analysis.

# Contribution to Fair Value Estimate by Segment



Source: Morningstar

Annual earnings for insurance companies can be subject to significant volatility, which makes applying an earnings multiple a more difficult exercise. Insurance companies, and reinsurers in particular, are often subject to volatile claims that can cause earnings to fluctuate substantially from year to year. A hurricane loss or other significant storm could effectively wipe out an insurer's annual profits, while a year without major catastrophes could lead to abnormally high profitability. Berkshire's large reinsurance operations, concentrated in General Re and Berkshire Hathaway Reinsurance Group (BHRG), have significant exposure to large catastrophe and super catastrophe risks. Further, realized gains and losses on investments in Berkshire's insurance portfolios flow through the income statement, potentially distorting annual profitability. As such, it is not surprising to see a fairly wide spread in P/E multiples among the insurance peers listed in the comparison table above.

To address some of the shortfalls inherent in a simple earnings-based multiple, some investors have suggested incorporating "look-through earnings," which gives Berkshire credit for its proportional share of the earnings from the companies in its equity portfolio, into the process. Using this approach gets us closer to what we believe is a true value for Berkshire, but misses the mark slightly, as shown in the table below:



Look-Through Earnings	
Berkshire Share of Invesment Earnings	3,699
2013 Estimated BRK EPS Ex Investments	8,483
Total Earnings	12,182
Theoretical BRK Multiple	13.6x
BRK Value/Share	165,602

Note: Earnings estimates are taken from our analysts' models. In the cases where we don't cover the companies, the estimated earnings are derived through the mean analyst estimate.

Source: Company Filings. Morningstar. Thomson Reuters

The differential of this approach from our fair value estimate may be due to a few factors. Most notably, the multiple we apply is the one derived from the proportional weightings of Berkshire's operating businesses. Due to the inclusion of financial businesses and certain high capital intensity operations in the weighting, the multiple that gets assigned to Berkshire's subsidiaries is likely to be lower than the one that investors would assign to the firm's equity investments. Hence, an adjustment to the multiple may be needed. Additionally, except for the near-zero returns it generates, this method excludes the value the firm's cash hoard. Another shortfall with this approach is that it treats all equity investments as if they are owned fully by shareholders. In reality (as we will elaborate on when we examine the two-column method), some of the investments are directly backstopping insurance operations that lessen their value to equity holders. There may also be some double counting as we are including some of the dividends earned from these equity investments that are already reflected in the firm's income statement.

#### Book value serves as a reasonable proxy for intrinsic value, but paints an oversimplified picture

While a book value multiple is undoubtedly an oversimplified picture of the relative price of a company, it is our preferred comparison metric for financials, and specifically for insurance companies. Furthermore, it tends to work well for holding companies such as Berkshire. While there are drawbacks to any simplified multiple based approach, financial companies mark most of their assets, and some of their liabilities, to prevailing market prices (or in cases where market prices are not available, to current best estimates), making book value a more meaningful metric. We'd also note that book value has been highlighted by Buffett as a useful tool for tracking changes in the company's intrinsic value, insomuch as changes in Berkshire's book value tend to track changes in the company's intrinsic value. In each of his annual letters to shareholders, Buffett starts with a chart that compares Berkshire's annual growth in book value per share with the annual appreciation of the S&P 500, allowing investors to assess the firm's relative performance. Additionally, Buffett's annual commentary about Berkshire's performance tends to begin from the lens of the firm's growth in book value.

Buffett believes that highlighting book value is important because it is an easily observable measure of Berkshire's performance. But, as he mentions in each annual report, book value is not a substitute for intrinsic value. The company is worth more than the simple book value per share reported each year. Berkshire owns a collection of above average quality businesses that should produce returns that routinely exceed their required cost of capital. By definition, a business that generates these types of returns should have an intrinsic value above its reported book value. Additionally, goodwill skews reported book value for many companies, including Berkshire, so a comparison should sometimes include a comparison with tangible book value. Finally, since Berkshire owns a substantial number of non-financial businesses, which report most assets on a cost basis, the reported book value of these businesses will consistently understate current market values of assets less liabilities.



		Price/	Fair Value/	,
Company	Price/Book	Tangible Book	Book	Tangible Book
TransCanada TRP	2.0x	3.1x	2.2x	3.3x
Duke Energy DUK	1.2x	2.0x	1.1x	1.8x
Xcel Energy XEL	1.5x	1.4x	1.4x	1.4x
Union Pacific UNP	3.3x	3.3x	3.3x	3.3x
Norfolk Southern NSC	2.3x	2.3x	2.8x	2.8x
Energy & Railroad Average	2.1x	2.4x	2.2x	2.5x
Travelers TRV	1.2x	1.4x	1.2x	1.4x
Progressive PGR	2.4x	2.4x	2.4x	2.4x
PartnerRe PRE	0.9x	0.9x	0.9x	1.0x
W.R. Berkley WRB	1.3x	1.3x	1.4x	1.4x
Insurance Average	1.4x	1.5x	1.5x	1.6x
Ingersoll-Rand IR	2.2x	N/M	1.7x	N/M
ITT Corp ITT	3.2x	N/M	3.0x	N/M
Ashland ASH	1.6x	N/M	N/A	N/M
CoreMark CORE	1.4x	1.5x	1.2x	1.2x
Manufacturing, Service & Retail Average	2.1x		2.0x	
CIT Group CIT	1.1x	1.1x	N/A	N/A
Marlin Business Services MRLN	1.4x	1.4x	N/A	N/A
Rent-A-Center RCII	1.5x	N/M	N/A	N/A
Finance & Financial Services Average	1.3x	1.3x		

Source: Company Filings, Morningstar

As with the price/earnings multiple, determining a fair value estimate for Berkshire based solely on a multiple of book value is difficult due to the diversity of the firm's operations. Book value multiples differ a great deal for the firm's main business lines. Determining a blended multiple of book value to use for valuing Berkshire is even more troublesome, as assigning weightings to the firm's segments is problematic. In the firm's annual report a number of segments with very different business characteristics are lumped together, such as manufacturing, service, and retailing being included with its insurance operations and labeled as "other." It should also be noted that the finance and financial products segment has had a negative book value the last couple of years. If we were to make our best guess at the book value attached to each of Berkshire's main segments, based on its third-quarter book value per share of \$111,718 per Class A share (or \$74 per Class B share) and assuming a value of \$0 for the finance and financial products segment, it might look something like this:

Segment	% of BV	<b>Applied Multiple</b>
Insurance	58%	1.5x
Railroad, Utilities & Energy	30%	2.2x
Manufacturing, Service & Retailing	12%	2.0x
Finance & Financial Products	0%	1.3x
_	100%	1.8x

Source: Morningstar



In this case, as opposed to the earnings based multiple, the implied multiple is slightly above what we believe is fair for Berkshire based on our fair value estimate relative to the firm's book value.

	Value	Multiple
Theoretical Multiples Approach	197,412	1.8x
Market Price	149,688	1.3x
Momingstar Fair Value	175,000	1.6x

Applying the same weightings that we used for the earnings multiple, which was based on estimated earnings contributions for each of Berkshire's segments, leads us to a similar implied multiple for the firm overall.

Segment	% of Earnings	<b>Applied Multiple</b>
Insurance	34%	1.5x
Railroad, Utilities & Energy	31%	2.2x
Manufacturing, Service & Retailing	31%	2.0x
Finance & Financial Products	4%	1.3x
	100%	1.8x

Source: Morningstar

This also leads to a higher valuation when compared with our fair value estimate relative to the firm's book value.

	Value	Multiple
Theoretical Multiples Approach	204,542	1.8x
Market Price	149,688	1.3x
Momingstar Fair Value	175,000	1.6x

Source: Morningstar

The differential in both instances is likely due to improper weightings for the respective components. As we've previously detailed, insurance contributes 34% to our projected earnings but represents a larger component of the value of Berkshire. If insurance were to receive a higher weighting in either tables, the implied price/book multiple would move more toward what we think is fair for the company. Additionally, using peer comparisons for non-financial industries where book value is a much less relevant metric will occasionally cause problems.

While determining the appropriate multiple may be difficult, book value would seem to provide something of a floor for the value of the stock. Buffett clearly believes that Berkshire's intrinsic value is well above book value, and that the appropriate multiple is fairly static.

"At Berkshire, however, book value very roughly tracks business values. That's because the amount by which Berkshire's intrinsic value exceeds book value does not swing wildly from year to year, though it increases in most years. Over time, the divergence will likely become ever more substantial in absolute terms, remaining reasonably steady, however, on a percentage basis as both the numerator and denominator of the business-value/book-value equation increase." — 2011 Berkshire Annual Report



It should also be noted that Buffett has explicitly tied Berkshire's stock repurchase plan to a multiple of book value. In September 2011, the company's board of directors authorized a program to buy back both Class A and Class B shares at a price no higher than a 10% premium over Berkshire's then-current book value per share. In December of last year, the board raised this threshold to 120% of book value, coincident with the announcement of the purchase of 9,200 shares of stock from the estate of a longtime shareholder. Buffett has said he will only purchase shares of Berkshire when they are trading at a significant discount to its underlying intrinsic value, indicating that he believes the fair price to book multiple is considerably above that. We agree with this sentiment as our fair value is equivalent to a multiple of approximately 160% of third quarter 2012 book value (and 220% of tangible book value).

## The two-column approach to valuing Berkshire can be useful, but it is often misunderstood

The two-column method has become increasingly popular of late, and it has been publicly employed by a number of different market participants. Possibly most well-known for his use of a this method valuation is Whitney Tilson from T2 Partners, who regularly updates and publishes a slide deck with his opinions on Berkshire Hathaway on his website (<a href="http://www.tilsonfunds.com/BRK.pdf">http://www.tilsonfunds.com/BRK.pdf</a>). In addition to Tilson's method, there are a number of other ways to separate investments from the operating business in order to arrive at a more precise valuation model of Berkshire. Some of the approaches are not necessarily comprehensive in themselves but rather seek to overcome shortfalls of the previously mentioned approaches by supplementing a different valuation approach, such as seeking to overcome the difficulty of placing an earnings multiple on the insurance earnings by developing a valuation proxy for the insurance businesses.

This approach has also become popular because of some implicit support from Buffett, who has repeatedly talked about separating the value of investments from the earnings of the operating businesses in a number of his annual reports. Though his comments have evolved somewhat over time, a notable example of this guidance on the calculation of intrinsic value can be found in Berkshire's 1997 annual report:

"In our last two annual reports, we furnished you a table that Charlie and I believe is central to estimating Berkshire's intrinsic value. In the updated version of that table, which follows, we trace our two key components of value. The first column lists our per-share ownership of investments (including cash and equivalents) and the second column shows our per-share earnings from Berkshire's operating businesses before taxes and purchase-accounting adjustments (discussed on pages 69 and 70), but after all interest and corporate expenses. The second column excludes all dividends, interest and capital gains that we realized from the investments presented in the first column. In effect, the columns show what Berkshire would look like were it split into two parts, with one entity holding our investments and the other operating all of our businesses and bearing all corporate costs."

There are a number of ways in which the two-column approach is applied, but in general it involves separating the earnings of the operating business from the investment portfolio. How this specifically is done will vary. Some investors take the most literal interpretation and count the per share value of investments that Berkshire holds and attribute that value to shareholders. They then add the value of the remaining businesses, usually through a multiple of earnings excluding investments, to arrive at a total per share value. More recently, Buffett has suggested that the value of the insurance business is driven almost entirely by the investment portfolio and the returns it generates. Using this alternative interpretation, some have removed insurance earnings from the pre-tax earnings before ascribing a value to that portion of the company.

We believe taking the per share book value of the investments and assigning that value to the insurance operations will substantially overstate the value of that business. In the table on Page 9, we conduct a similar exercise for



other publicly traded insurance companies. In our opinion, this table shows clearly that this approach dramatically overvalues insurance operations.

	MRQ Cash &			Investments/Fair
Company	Investments Per Share	Fair Value Estimate	Stock Price	Value
Travelers TRV	219.82	78.00	80.58	282%
Progressive PGR	27.54	24.00	24.13	115%
PartnerRe PRE	300.44	93.00	86.29	323%
W.R. Berkley WRB	115.34	44.00	41.58	262%

Source: Company Filings, Morningstar

The problem with this approach in Berkshire's case, and in the case of nearly all financials and insurance companies, is that investments and cash are a required part of the operating business. The per share value of the investments as reflected on the balance sheet is therefore not equivalent to their worth to shareholders. A discount needs to be applied to the per-share value of investments as reported by Berkshire, as in many cases these investments and cash are supporting reserves that are necessary for the insurance businesses. We believe this method tends to overestimate the value of Berkshire by effectively ignoring the policy obligations and other liabilities which support these investments.

That said, this approach could potentially be altered to provide a more realistic value in a couple of ways. First, we could discount the investments. An insurer's cost of equity is higher than the returns it can generate on its investments over the long term, and therefore the reported values should be discounted in order to determine their fair value to shareholders. For example, assume that a given insurance company has a cost of equity of 10% and has a \$100 million investment portfolio that yields a return of 6% pretax in perpetuity (4.5% post-tax). The value of the investment portfolio to shareholders, after considering discounting, is then just \$45 million, which is calculated by dividing the aftertax return by the cost of equity and multiplying by the size of the portfolio. Applying this method to other insurance companies generates a more reasonable result, but it still looks like a very imprecise method, because we are completely ignoring disparities in underwriting income.

Company	45% of MRQ Cash & Investments Per Share	Fair Value Estimate	Stock Price	45% of Investments/ Fair Value
Travelers TRV	98.92	78.00	80.58	127%
Progressive PGR	12.39	24.00	24.13	52%
PartnerRe PRE	135.20	93.00	86.29	145%
W.R. Berkley WRB	51.90	44.00	41.58	118%

Source: Company Filings, Morningstar

Other practitioners have sought to separate the excess cash and investments from the portion that is used to backstop the insurance operations, where the amount of float can serve as a proxy for required capital. While we think this approach is better than simply taking the cash and investments on the balance sheet at par, issues still remain. Most notably, separating the float from the rest of the investments does not necessarily indicate the cash that is truly excess and available for shareholders. Berkshire routinely keeps more capital than is necessary to run its business, which gives it both financial flexibility to pounce on opportunities and superior financial strength. Therefore it seems obvious that more cash and investments than simply the calculated float are implicitly required to run Berkshire. Buffett has commented that he will not let cash fall below \$20 billion. This could be used as a rough approximation of cash and investments in excess of the float, but again, that would be the amount at which



the company could no longer make acquisitions or other investments, which are arguable a core part of Berkshire's operations.

# The float-based approach to valuing Berkshire is fraught with its own issues

The final approach we will examine for discounting the value of the investment portfolio is the float method. Over the years, the terminology surrounding this approach has become mixed to the point where many people use the terms float-based as a synonym for the two-column approach. The method we will investigate is similar to the one originally outlined by Alice Schroeder at PaineWebber in the late 1990s (<a href="http://www.shookrun.com/fa/cases/brk-painewebber.pdf">http://www.shookrun.com/fa/cases/brk-painewebber.pdf</a>). This approach seeks to capture the premium of the insurance business over book value by capitalizing the future cash flows from the insurance float (the excess of premiums paid by policyholders that have not yet been paid out as claims). As detailed in the table below, we calculate a spread representing an estimation of Berkshire's long-term returns on its float. In this case, the cost is negative, indicating an expectation of an underwriting profit. The hypothetical yield on the current value of the float is then capitalized in order to generate the estimated premium over book value. As this approach theorizes that the value of the float represents a premium over book, adding the statutory capital assigned to the insurance business less the carrying cost of Burlington Northern Santa Fe (BNSF) yields the final result. As originally suggested by valuation work done by Ravi Nagarajan at Rational Walk (<a href="http://www.rationalwalk.com/?page\_id=5352">http://www.rationalwalk.com/?page\_id=5352</a>), we are subtracting the purchase price for BNSF as its shares are held at cost on National Indemnity's books. Including this in the calculation would lead to double counting.

Float Method Calcula	tion
Cost of Float	-1.0%
Investment Return	7.0%
Spread	8.0%
Tax Effect	32.0%
After-tax Spread	5.4%
Discount Rate	5.5%
Long-term Growth	3.0%
Perpetuity Factor	2.5%
PV of Float (\$ mil)	152,320
Insurance Statutory Surplus	95,000
Less: BNSF	(34,129)
Value of Insurance/Invesments	213,191
Per share	129,020

Source: Company Filings, Morningstar Estimates

This insurance and investment value is then combined with a multiples-based approach that estimates the worth of the non-insurance businesses. While we believe that hypothetically this is an improvement over taking investments at their full value, there are a number of problems. First, the model is very sensitive to small changes in assumptions. Since we are essentially assuming an immediate perpetuity by capitalizing the hypothetical earnings from the float, the approach requires overly conservative assumptions. Also, assigning a precise discount rate is problematic. Again, since small changes have a significant impact on our conclusions the uncertainty is meaningful. Finally, and most importantly, using this framework does not seem to give appropriate values to peer insurers, as shown in the table on Page 11:



Peer	Peer Insurers Float Calculation				
	TRV	PGR	WRB	PRE	
Amount of Float	43,384	7,574	8,639	11,010	
Cost of Float	1.0%	-1.0%	-1.0%	0.0%	
Investment Return	6.5%	6.5%	6.5%	6.0%	
Spread	5.5%	7.5%	7.5%	6.0%	
Tax Effect	25.0%	32.0%	30.0%	17.0%	
After-tax Spread	4.1%	5.1%	5.3%	5.0%	
Discount Rate	5.5%	5.5%	5.5%	5.5%	
Long-term Growth	2.0%	2.5%	2.0%	2.0%	
Perpetuity Factor	3.5%	3.0%	3.5%	3.5%	
PV of Float (\$ mil)	51,131	12,876	12,958	15,666	
Insurance Statutory Surplus	19,170	5,269	4,108	5,836	
Total	70,301	18,145	17,066	21,502	
Per share	178.97	29.60	124.10	340.22	
Fair Value	78.00	24.00	44.00	93.00	
Stock Price	80.58	24.13	41.58	86.29	

Source: Company Filings, Morningstar Estimates

This approach results in estimated intrinsic values similar to the approach that takes investments at 100% of their carrying value. Besides the problems we noted above with applying the float based approach to Berkshire, we notice certain debatable assumptions that were used in the original implementation of the float method that can lead to erroneous results for insurance companies. Most importantly, we question whether using the risk-free rate as a discount rate is appropriate. By definition the discount rate should be that return that investors require on a project and we believe it is unrealistic to assume that investors would only require the risk-free rate given the volatility of both the insurance and investment earnings. Instead, we propose using our estimate of the cost of equity that reflects these risks. Using the risk-free rate as a discount factor is aggressive and may have led other practitioners to use overly conservative estimates on other model inputs. We believe it is important to be able to differentiate between insurance companies through the underwriting profitability (shown as the cost of float in this method), which, along with the discount rate, has been adjusted in the table on Page 12:



Peer Insurers Alternate Float Calculation					
	TRV	PGR	WRB	PRE	
Amount of Float	43,384	7,574	8,639	11,010	
Cost of Float	2.0%	-3.0%	-2.0%	0.0%	
Investment Return	6.5%	6.5%	6.5%	6.0%	
Spread	4.5%	9.5%	8.5%	6.0%	
Tax Effect	25.0%	32.0%	30.0%	17.0%	
After-tax Spread	3.4%	6.5%	6.0%	5.0%	
Discount Rate	10.0%	10.0%	10.0%	12.0%	
Long-term Growth	2.0%	2.5%	2.0%	2.0%	
Perpetuity Factor	8.0%	7.5%	8.0%	10.0%	
PV of Float (\$ mil)	18,303	6,524	6,425	5,483	
Insurance Statutory Surplus	19,170	5,269	4,108	5,836	
Total	37,473	11,793	10,533	11,319	
Per share	95.40	19.24	76.59	179.10	
Fair Value	78.00	24.00	44.00	93.00	
Stock Price	80.58	24.13	41.58	86.29	

Source: Company Filings, Morningstar Estimates

This approach moves the values in the right direction for these insurers, but in nearly all cases they are still far from either the market price or our estimate of their fair value. In our opinion, there are a number of possible factors that may lead to this conclusion, most of which are due to the simplifying assumptions necessary to complete the model combined with its lack of flexibility. Since we are calculating the value of each insurance company through an immediate perpetuity we lose the ability to forecast interim periods of excess or subpar profitability and growth. Also, while it attempts to mimic the cash flows of the insurance operations, the model does not account for excess or deficient capital levels or leverage, which may be an important valuation factor for assessing the firm's value to shareholders. We show the implications for Berkshire's estimated value from our modified float approach on Page 13:



Berkshire Alternate Float C	alculation
Cost of Float Investment Return Spread	<i>-3.0%</i> 7.0% 10.0%
Tax Effect After-tax Spread	32.0% 6.8%
Discount Rate Long-term Growth Perpetuity Factor	10.0% 3.0% 7.0%
PV of Float (\$ mil) Insurance Statutory Surplus Less: BNSF	100,000 95,000 (34,129)
Value of Insurance/Invesments  Per share	160,871 <b>97,357</b>

Source: Company Filings, Morningstar Estimates

In the matrix below we examine the valuation implications for each possible implementation of the two-column method we have discussed. Each row includes a different valuation method for the firm's investment portfolio and the corresponding columns reflect both the earnings used and the multiple placed on them for the remainder of the business. In the first row, we take the per share value of investments at 100%, which is then added to 8 times and 10 times pretax non-investment earnings as well as 8 times and 10 times pretax, non-investment, and insurance earnings. The second row reflects the approach which discounts the investments based on the firm's cost of equity and our expected returns, again with the same earnings multiples. For the discounted approach, we used a cost of eguity of 10% and a pre-tax portfolio return of 7.7%. The third row uses the investments in excess of the firm's insurance float as the excess portion available to shareholders. Finally, the last two rows use the traditional float method and our alternate method, respectively, to calculate both the value of the investments and of the insurance operations for shareholders. We have denoted the cells as "not applicable" in cases where it is clear that the multiple of earnings should explicitly include or exclude insurance operations; (for example, the float method uses investments to derive insurance value and therefore the earnings multiple should exclude insurance earnings).

#### Float and Investment Method Valuation Matrix (Values per Class A Share)

Morningstar Fair Value: 175,000 Stock Price: 149,688

## **Applied Earnings Multiple**

		8x Pre-tax Non-	10x Pre-tax Non-	8x Pre-tax, Ex	10x Pre-tax, Ex
		investment Earnings	investment Earnings	Insurance & Investments	Insurance & Investments
	At 100%	199,389	221,026	183,373	201,007
Investment Valuation	Discounted	148,702	170,340	132,687	150,320
Method	Excess of Float	155,815	177,453	N/A	N/A
Method	Float Based	N/A	N/A	199,556	217,190
	Alternate Float	N/A	N/A	167,892	185,526

Source: Company Filings, Morningstar



As expected, we get results that more closely align with our fair value estimate from either discounting or using the excess investments above the firm's float instead of taking the full value of per share investments. The float method seems to be improved by our alternate approach, but, as mentioned earlier, there appears to be flaws with its applicability to other insurers. This indicates that its proximity to our fair value estimate may be due to coincidence or unique circumstances at Berkshire rather than from the approach's fundamental accuracy. For all of the methods, one must still decide on an appropriate multiple to earnings for either the rest of the business or the rest of the business, excluding insurance operations.

## These approaches are useful for triangulating estimates, but are not robust enough by themselves

The methods we have examined thus far, which are summarized in the table below, provide a wide range of potential intrinsic values for Berkshire.

**Summary of Valuation Approaches** 

Momingstar Fair Value: 175,000 Stock Price: 149,688				
Method	Estimate/Range			
Blended Simple Earnings Multiple	115,317			
Blended Earnings Multiple w/ Look-Through	165,602			
Blended Book Multiple	204,542			
Two Column w/ Cash & Investments at 100%	183,373 - 221,026			
Two Column w/ Cash & Investments Discounted	132,687 - 170,340			
Two Column w/ Excess of Float	155,815 - 177,453			
Float Based	199,556 - 217,190			
Alternate Float Based	167,892 - 185,526			

Source: Thomson Reuters, Morningstar, Company Filings

While some approaches seem to provide values that are fairly close to the market price or our fair value estimate, we believe that all the approaches are flawed or lacking. In our opinion, each has its failings due to either oversimplification, a lack of intuitive justification or a lack of applicability to peer companies. Notably, many of the methods for valuing the insurance business do not seem to work consistently when applied to other insurers, which throws their validity for Berkshire into question. These approaches may simply appear to work for Berkshire by coincidence or jerry-rigged assumptions rather than being a fundamentally sound way to value the company.

## A DCF Model that Explicitly Forecasts Sources of Berkshire's Profitability Provides the Best Results

When calculating our fair value estimate for Berkshire Hathaway's shares, we use a sum-of-the-parts methodology that values the different businesses separately and then combines these values to arrive at a total value for the firm. As part of this process, we use discounted cash flow methodologies to value each of the company's major segments--Insurance; Railroad, Utilities & Energy; Manufacturing, Service & Retailing; and, Finance & Financial Products. We believe that our discounted cash flow approach allows us to explicitly model all of the cash flows, along with necessary reinvestments and excess capital, associated with Berkshire's total enterprise, and therefore provides investors with a more robust and reliable valuation of the company's shares than any of the shortcut or alternate methods we've examined.

Our valuation model for Berkshire is built on our insurance DCF template with supplemental models created for the non-insurance businesses in the company's portfolio. Given the segmentation that exists within Berkshire's reported financial statements, as well as the fact that both Burlington Northern Santa Fe and MidAmerican Energy



Holdings (MEHC) file quarterly and annual reports with the SEC, we are able to strip out and model the results for these businesses. With our discounted cash flow model for insurance companies, we are able to explicitly forecast the income statement, balance sheet, and resulting cash flows for Berkshire's insurance operations, accounting for earned premium growth, loss and expenses of the insurance operations (which leads to the booking and increases/decreases of reserves), investment cash flows, and the required capital levels of the business, among numerous other factors, during the initial projection period. In contrast to many of the other approaches we've mentioned, we believe this method captures all the different dynamics and moving parts associated with Berkshire's insurance operations.

With regards to the company's non-insurance operations, which encompass a wide array of businesses, including Burlington Northern Santa Fe (railroad), MidAmerican Energy (energy generation and distribution), McLane (food distribution), Marmon (manufacturing), Shaw Industries (carpeting), Benjamin Moore (paint), Fruit of the Loom (apparel), Dairy Queen (restaurant), and See's Candies (food retail), we model four distinct segments--Burlington Northern, MidAmerican, the firm's Manufacturing, Service & Retailing segment, and its Finance & Financial Products division--based on the level of information we have to work with for each of these areas of operation. Much like we do with Berkshire's insurance operations, we use a discounted cash flow approach to model the growth and profitability of each of these different segments, along with the cash flows and investments necessary to support this growth, to arrive at our fair value estimates.

In a few cases, we will triangulate the DCF-derived estimates with multiple-based approaches--including EV/EBITDA and price/book--to arrive at our final per share value estimate. As part of this process, we also run Burlington Northern and MidAmerican, both of which file quarterly and annual reports, through our general DCF model, further ensuring that our fair value estimate for each of these subsidiaries is within range of the stand-alone valuation that can be produced for each firm. Once we've calculated our per share fair value estimates for each of the segments, we roll them up to arrive at our total value for the firm. While we believe that our approach to valuing Berkshire allows us to capture more than a few important valuation factors that a quick back-of-the-envelope approach is likely to miss, we also recognize the fact that, as with most models, a DCF model is only as good as its inputs, which require a broader level of knowledge about each of the operations being valued.

#### **Berkshire Hathaway's Insurance Unit Valuation**

We estimate that Berkshire's insurance operations are worth \$93,900 per Class A share (or \$63 per Class B share). Our forecast for premium growth, while averaging 6%, is driven by an assumption of an eventual hardening of the insurance pricing market. There has been increasingly positive news on this front more recently, and we believe that Berkshire's insurance operations, in particular its reinsurance business, stand to benefit from significant price increases when the pricing gains accelerate. We believe that GEICO will continue to grow premiums at a pace that is slightly above the industry's average rate of growth, as direct-selling continues to take incremental share from the agency channel overall. In the long run, though, we expect these growth rates to slow, as insurance companies tend to grow roughly in proportion with the rate of GDP and inflation.

# **Insurance: Key Valuation Assumptions**

Metric	5-Year CAGR/Average
Premium Growth	6%
Total Investment Return	8%
Combined Ratio	94%



With regards to total investment return, we believe that Berkshire will continue to have success in its investments, as evidenced by the above average rate of return assumed on the portfolio, which reflects a combination of both investment yield and market appreciation. The higher average rate of return is largely driven by Berkshire's higher allocation to equities, as well as its ability to use the strength of the firm's balance sheet to procure higher yielding investments, all of which have contributed to the higher long-term returns that Berkshire has historically been able to generate through this strategy. And, finally, we assume a 6% average underwriting margin for the firm. While Berkshire's insurance business is subject to volatility through its catastrophe underwriting, we expect this business (on average) to be solidly profitable. It should also be noted that GEICO provides a consistently high level of underwriting profitability, which we believe will continue because of its cost and scale advantages.

Insurance and Investments Summary	
Morningstar Estimated Value Per Share: 93,900	

Metric	Value	Implied Multiple
Book Value	65,334	1.4x
2013 Earnings	2,881	32.6x

Source: Morningstar Estimates, Company Filings

As mentioned above, we believe that book value is an appropriate multiple to use for triangulating and rationalizing our fair value estimates for insurance companies. On that basis, the value for Berkshire's insurance operations seems about right at 1.4 times book value, given that the business is about equally split among GEICO and Berkshire's other property-casualty operations and its reinsurance operations, comprised of General Re and BHRG.

Company	Price/Book	Price/ Tangible Book	Fair Value/ Book	Fair Value/ Tangible Book
Travelers TRV	1.2x	1.4x	1.2x	1.4x
Progressive PGR	2.4x	2.4x	2.4x	2.4x
PartnerRe PRE	0.9x	0.9x	0.9x	1.0x
W.R. Berkley WRB	1.3x	1.3x	1.4x	1.4x
Insurance Average	1.4x	1.5x	1.5x	1.6x

Source: Company Filings, Morningstar

#### Railroad, Utilities & Energy Valuation

Of the more than 70 non-insurance businesses in its portfolio, the two largest contributors to Berkshire's pretax earnings are Burlington Northern and MidAmerican. As both subsidiaries file quarterly and annual reports with the regulators, we are able to create more detailed valuation models for their operations. In aggregate, we estimate that Berkshire's Railroad, Utilities & Energy operations are worth \$43,200 per Class A share (or \$29 per Class B Share), with more than two thirds of that value coming from Burlington Northern, which continues to generate strong results for Berkshire. BNSF operates one of the largest railroad systems in North America, with around 32,000 route miles of track in 28 states (primarily west of the Mississippi River) and two Canadian provinces. During the last decade, the railroad has generated an 8% revenue CAGR and average operating margins of around 25%. The business has traditionally required at least \$2 billion in capital expenditures annually, and carried a fair amount of debt on its books (leaving it with a WACC of around 8%).



**Railroad: Key Valuation Assumptions** 

Metric	5-Year CAGR/Average
Revenue Growth Operating Margins	5% 27%
Source: Company Filings, Morningstar	

In our base case scenario for the railroad operations, we assume that BNSF generates average annual revenue growth of around 5% longer term. While this may seem conservative given the firm's history, as well as the fact that most railroads have seen a significant improvement in pricing power over the past decade (based in part on their ability to pass through fuel price increases), we feel that a 5% CAGR for revenue represents a fairly stable blend of volume growth and pricing over the long run. With regards to profitability, BNSF is likely to close out 2012 with pretax margins of around 28% of revenue. We see future results trending down to around 27%, due to higher operating costs longer term. This leads to a \$31,500 per Class A share (or \$21 per Class B Share) value for BNSF.

Railroad Summary					
Momingstar Estimated Value Per Share: 31,500					
Metric	Value	Implied Multiple			
Tangible Book Value       23,549       1.3x         2013 Earnings       2,096       15.0x					
Source: Morningstar Estimates, Company Filings					

The fair value estimate for BNSF relative to earnings appears to be about right at 15.0 times, relative to 14.5 times for Union Pacific and 14.7 times for Norfolk Southern, and a group average of 15.3 times.

Company	Price/Earnings	Fair Value/Earnings
TransCanada TRP	18.2x	19.5x
Duke Energy DUK	15.4x	14.3x
Xcel Energy XEL	14.6x	13.5x
Union Pacific UNP	14.4x	14.5x
Norfolk Southern NSC	12.3x	14.7x
Energy & Railroad Average	15.0x	15.3x

Note: Earnings estimates are taken from our analysts' models. In the cases where we don't cover the companies, the estimated earnings are derived through the mean analyst estimate.

Source: Morningstar, Thomson Reuters

Looking more closely at the utilities and energy assets, Berkshire holds both energy generation (PacifiCorp, MidAmerican Energy Company, and Northern Powergrid) and energy distribution (Northern Natural Gas and Kern River) assets, which are consolidated under MidAmerican Energy Holdings (MEHC). The majority of the holding company's revenue and profitability (as well as its ongoing capital investments) is driven by its two main regulated utilities--MidAmerican Energy and PacifiCorp. With regulators typically setting customer rates that allow utilities to earn 10%-12% returns on equity, and MEHC being a fairly active acquirer of assets over the years, the holding company generated a 9% revenue CAGR and operating margins of around 23% during the last decade. The



business has traditionally required at least \$2 billion in capital expenditures annually, and has also carried a fair amount of debt on its books, leaving it with a WACC between 7% and 8%.

**Utilities & Energy: Key Valuation Assumptions** 

Metric	5-Year CAGR/Average
Revenue Growth	4%
Operating Margins	23%

Source: Company Filings, Morningstar

In our base-case scenario for MEHC, we assume that the company generates average annual revenue growth of around 4% longer term. While this may seem conservative given the firm's history, results have been much more tepid over the last five years. As such, we feel that 4% average annual revenue growth is a fairly good estimate in an environment where the economy is slowly working its way back to full potential, and MEHC continues to invest in additional capacity. With regards to profitability, the holding company is likely to close out 2012 with operating margins of around 24%. We see future results trending back down to 23% of annual revenue, which would put results in line with MEHC's average profit levels during both the last 5- and 10-year periods. We also assume that capital expenditures are somewhat higher than they have been in the past, as MEHC spends more to upgrade its energy generation and distribution networks. This leads to an \$11,900 per Class A share (or \$8 per Class B Share) value for MEHC, adjusted for Berkshire's 89.8% ownership interest in the firm.

Utilites & Energy Summary				
Momingstar Estimated Value Per Share: 11,700				
Metric Value Implied Multip				
Book Value	1.2x			
2013 Earnings	878	13.3x		

Not unlike what we saw with the insurance segment, book value per share can be used to triangulate and rationalize our fair value estimates for Berkshire's utilities and energy segment. Despite its blend of energy generation and distribution assets, the segment's implied multiple of 1.2 times sits much closer to the multiples for the regulated utilities--**Duke Energy (DUK)** and **Xcel Energy (XEL)**--we've highlighted in our comparison table, which makes sense, given that the majority of the holding company's revenue and profitability is driven by its two main regulated utilities--MidAmerican Energy and PacifiCorp. The implied multiple also sits closer to the regulated utilities, as opposed to the pipeline operators, in the collection of peers--Duke Energy, Xcel Energy, **American Electric Power (AEP)**, **Wisconsin Energy (WEC)**, **TransCanada (TRP)**, and **Spectra Energy (SE)**--that we defer to when triangulating our own valuation estimate for MEHC. This is also the case when looking at MEHC on a fair value/earnings basis, with the utilities and energy segment's implied multiple of 13.3 times, more in line with Duke Energy and Xcel Energy, the two regulated utilities in our comparison table, and being well below the group

## Manufacturing, Service & Retailing Valuation

Berkshire's manufacturing, service and retailing operations are the next largest contributor to the firm's overall value and include a wide array of businesses operating across more than a handful of different industries. These include

average of 15.3 times (but just slightly below the average of the regulated utilities of 13.9 times).



businesses like Marmon (diversified manufacturing), McLane (food distribution), Lubrizol (specialty chemicals), Shaw Industries (carpeting/flooring), Benjamin Moore (paint), Fruit of the Loom (apparel), Dairy Queen (restaurant), and See's Candies (food retail). This segment tends to grow through a combination of organic growth and acquisitions, generating a 17% revenue CAGR, with operating margins of around 8% on average, during the last decade. The business has traditionally required less than \$2 billion in capital expenditures annually and carried an appropriate level of debt on its books, leaving it with a WACC of around 8%.

#### Manufacturing, Service & Retailing: Key Valuation Assumptions

Metric	5-Year CAGR/Average
Revenue Growth	5%
Operating Margins	7%

Source: Company Filings, Morningstar

In our base-case scenario for Berkshire's manufacturing, service and retailing operations, we assume that the segment generates average annual revenue growth of around 5% longer term, based on a combination of organic growth and acquisitions. While this may seem conservative when compared with the historical results for the group, the 5-year CAGR for revenue has been closer to 7%. We also feel that most of the businesses in the segment are driven by economic/population growth, with any additional growth coming from acquisitions (like the Lubrizol deal in 2011). With regards to profitability, the segment likely generated operating margins in the 7%-8% range overall this year, but given the nature of these businesses we feel it prudent to maintain margins at around

7% longer term. We also assume that capital expenditures increase as the size of this group overall increases. This leads to a \$32,900 per Class A share (or \$22 per Class B Share) value for the manufacturing, service and retailing operations.

Manufacturing, Service & Retailing Summary			
Momingstar Estimated Value Per Share: 32,900			
Metric	Value	Implied Multiple	
Book Value	13,168	2.5x	
2013 Earnings	2,764	11.9x	

Using an earnings multiple to triangulate and rationalize our fair value estimate for the company's manufacturing, service and retailing operations is a bit more tenuous. For starters, our four companison companies--Ingersoll-Rand (IR), ITT (ITT), Ashland (ASH), and CoreMark (CORE)--may be reflective of some of the bigger contributors--namely. Marmom, Lubrizol, and Mclane--to earnings for the segment, but they ignore a whole host of companies and industries that may trade at higher or lower multiples than we are seeing with just these four comparable firms. But our implied earnings multiple is not widely divergent from the peer companies.



Company	Price/Earnings	Fair Value/Earnings
Ingersoll-Rand IR	16.1x	12.8x
ITT Corp ITT	14.6x	13.9x
Ashland ASH	11.0x	N/A
CoreMark CORE	12.9x	10.7x
Manufacturing, Service & Retail Average	13.7x	12.5x

Note: Earnings estimates are taken from our analysts' models. In the cases where we don't cover the companies, the estimated earnings are derived through the mean analyst estimate.

Source: Morningstar, Thomson Reuters

#### **Finance & Financial Products Valuation**

The finance and financial products segment is Berkshire's smallest segment, generating around 5% of annual operating income on average over the last decade. It includes two rental companies, XTRA (truck trailers) and CORT Business Services (furniture), and Clayton Homes, the leading producer and financer of manufactured homes in the United States, along with a collection of other financial assets. This segment has seen its ups and downs over the last decade, with the financial crisis and the great recession impacting revenue and profitability over the last five years. With equity and credit markets much more stable these days, and the economy gradually working its way toward a sustained recovery, we see the potential for 5% annual top-line growth in this segment longer term, with operating margins increasing from 17%-18% this past year to 19% over time.

## **Finance and Financial Products: Key Valuation Assumptions**

5-Year CAGR/Average
5%
19%

Source: Company Filings, Morningstar

All of which generates a \$5,000 per Class A share (or \$3 per Class B Share) value for the finance and financial products segment.

Finance & Financial Products Summary				
Morningstar Estimated Value Per Share: 5,000				
Metric	Value			
Book Value 2013 Eamings	0 355	- 14.1x		

Source: Morningstar Estimates, Company Filings

Our comparison companies for the finance and financial products segment should be a bit more conducive to comparisons based on book value per share. That said, with the segment having a negative book value the last couple of years, it is difficult to compare our fair value estimate for these operations with the peer group--CIT Group (CIT), Marlin Business Services (MRLN), and Rent-A-Center (RCII)--represented in our comparison table.



Company	Price/Book	Price/ Tangible Book	Fair Value/ Book	Fair Value/ Tangible Book
CIT Group CIT	1.1x	1.1x	N/A	N/A
Marlin Business Services MRLN	1.4x	1.4x	N/A	N/A
Rent-A-Center RCII	1.5x	N/M	N/A	N/A
Finance & Financial Services Average	1.3x	1.3x		

Source: Company Filings, Morningstar

The implied earnings/fair value multiple of 14.1 times for the segment, though, does line up fairly well with the average price/earnings multiples (based on consensus estimates) for the three companies in our comparison table.

Company	Price/Earnings	Fair Value/Earnings
CIT Group CIT	11.4x	N/A
Marlin Business Services MRLN	14.1x	N/A
Rent-A-Center RCII	11.4x	N/A
Finance & Financial Services Average	12.3x	

Note: Earnings estimates are taken from our analysts' models. In the cases where we don't cover the companies, the estimated earnings are derived through the mean analyst estimate.

Source: Morningstar, Thomson Reuters

## Berkshire's shares remain slightly undervalued in a market that appears to be fairly valued

Our fair value estimate is equivalent to \$175,000 per Class A share (or \$117 per Class B share), reflective of a price to fair value multiple of around 0.85 times (inferring a more than 15% gain from today's trading prices). While not as large of a margin of safety as we would normally like to see in a firm with a medium uncertainty rating, we do note that Berkshire has effectively created a floor on the company's stock price by announcing that it would buy back both Class A and Class B shares at prices up to 120% of reported book value, which stood at \$111,718 per Class A share (and \$74 per Class B share) at the end of the third quarter of 2012. Furthermore, we anticipate that Berkshire's book value per share increased to at least \$115,000 per Class A share (and \$77 per Class B share) at the end of last year, meaning that Buffett would be willing to step in and buy the company's common stock at prices up to \$138,000 per Class A share (and \$92 per Class B share).

We do not anticipate that the firm's recently announced purchase of Heinz will have a material impact on our fair value estimate. Heinz is a classic Buffett firm that benefits from a significant competitive advantage caused by its strong brand presence. While the price is a little higher than we would have liked to see the firm pay, Berkshire is converting \$12 billion in cash that was earning next to zero returns into an equity and preferred stake in the firm, the latter of which yields 9%.

That said, we would be remiss if we did not mention the fact that there are a few overhangs and headwinds that could hold down future stock appreciation--such as the ever increasing size of the firm and the eventual question of Buffett's succession. As such, we believe that a little caution is appropriate when considering Berkshire for any investment portfolio. For more detailed information on these issues please see our <u>company report</u> and our <u>moat trend presentation</u> on Morningstar Select.

