BERKSHIRE HATHAWAY

Background, Analysis, and Valuation
(Sample Edition)

FEBRUARY 28, 2010

This report provides background information and analysis of Berkshire Hathaway based on data including the recently released 2009 Annual Report and Warren Buffett's annual letter to shareholders. Contrary to a common misconception, Berkshire Hathaway is not a closed end mutual fund run exclusively by Warren Buffett. The company is a large and growing conglomerate made up of subsidiaries with leading positions in many industries. A proper understanding of Berkshire Hathaway requires comprehension of the subsidiaries, with a particular focus on the insurance operations. Intrinsic value is impossible to estimate precisely but ranges of value are provided based on multiple models. We estimate the intrinsic value of Berkshire Hathaway stock at between $129,000 and $165,000 per Class A share or between $86 and $110 per Class B share.

The Rational Walk | **Ravi Nagarajan**
www.rationalwalk.com | **ravi@rationalwalk.com**

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Executive Summary

Berkshire Hathaway has been the subject of a great deal of media attention in recent months. Berkshire's recently completed acquisition of Burlington Northern Santa Fe, a highly unusual 50-for-1 stock split of the Class B shares, and Standard & Poor's decision to add Berkshire to the S&P 500 Index has combined to generate a great deal of interest among individual and institutional investors. Unfortunately, much of the media coverage has focused on individual pieces of the puzzle rather than the big picture.

Berkshire Hathaway is not simply a closed end mutual fund run solely by Chairman and CEO Warren Buffett. While Mr. Buffett's unique skills have created tremendous value for shareholders over the past forty five years, the company has evolved into a holding company owning subsidiaries engaged in a wide range of activities. Berkshire's most important operating segment is insurance. GEICO, General Re, and Berkshire Hathaway Reinsurance Group form the core of the insurance subsidiaries and generate large amounts of "float" that can be invested on behalf of shareholders. Berkshire's other subsidiaries are engaged in a wide variety of manufacturing, utility, service, and diverse retail operations.

Berkshire Hathaway's subsidiaries are run as independent entities with managers responsible for operating decisions. Mr. Buffett is responsible for providing oversight for each subsidiary CEO but he has a reputation for having a hands-off management approach when it comes to operations. Capital allocation is another matter. Rather than delegating capital allocation decisions to each subsidiary CEO, Mr. Buffett takes charge of the free cash flow generated by each subsidiary and reallocates capital either across Berkshire's existing operating subsidiaries, to investments in marketable securities, or by purchasing additional operating subsidiaries. This practice is a major competitive advantage, particularly when a capital allocator of Mr. Buffett's caliber is in charge of the process.

This report attempts to shed light on the factors that really matter when it comes to evaluating Berkshire Hathaway's business operations and estimating intrinsic value. At current prices, Berkshire Hathaway appears to be undervalued when evaluated using multiple valuation models. Many observers believe that Berkshire Hathaway is priced with a "Buffett Premium" to reflect Warren Buffett's unique capital allocation skills. A common concern is that this premium will disappear when Mr. Buffett steps down as CEO. We will argue that there is no "Buffett Premium" in Berkshire's current quotation. Additionally, we will explain why Berkshire Hathaway is more prepared for eventual management succession than most large companies.

This report is based primarily on data through the end of 2009 which predates the Burlington acquisition that closed on February 12, 2010. However, due to the importance of the acquisition, we will also consider Burlington's impact on Berkshire's intrinsic value going forward.

The following table presents our estimate of Berkshire Hathaway's intrinsic value per A share based on three valuation models:

Valuation Method	Intrinsic Value per A Share
Float Based Approach	$165,000
"Two Column" Approach	$129,000
Multiple of Book Value Approach	$135,000

While we believe that the float based valuation approach is the most appropriate measure of Berkshire Hathaway's intrinsic value, the "two column" and multiple of book value approaches are presented as well in an attempt to provide a range of value. We estimate Berkshire Hathaway's range of intrinsic value at $129,000 to $165,000 per Class A share or $86 to $110 per Class B share. Class B shares have the economic rights of 1/1500 of a Class A share. Unless otherwise noted in the report, all references to per share prices of Berkshire Hathaway stock refer to the Class A shares.

Based on the closing quotation of Berkshire Hathaway Class A stock of $119,800 on February 26, 2010, the company is trading moderately below our low range of intrinsic value and significantly below the high range. Since we consider the float based approach to most accurately measure intrinsic value, we view the low end of the range as the lowest conceivable estimate of fair value. In our view, a substantial margin of safety exists for shareholders at prices below $129,000 per Class A share.

From Cigar Butts to Business Supermodels

There are numerous books and publications that provide detailed accounts of the history of Berkshire Hathaway as well as Warren Buffett's life and career. Additionally, it is impossible to fully understand Berkshire without studying the life and career of Vice Chairman Charles T. Munger. A list of resources for those interested in a comprehensive history of the company and its leaders is provided as an appendix to this document. This section merely attempts to provide some context regarding the remarkable history of Berkshire Hathaway and Warren Buffett's investment approach.

Warren Buffett's Early Investment Philosophy

Warren Buffett's early investment philosophy was largely based on the principles developed by Benjamin Graham. Mr. Buffett has stated on many occasions[1] that his view of investing changed dramatically when he first read Mr. Graham's book, *The Intelligent Investor*, in early 1950. Up to that point, Mr. Buffett had read every book on investing available at the Omaha public library but none were as compelling as Mr. Graham's straight forward approach summarized in the phrase: "Margin of Safety".

Benjamin Graham's approach is more fully documented in *Security Analysis* which, in contrast to *The Intelligent Investor,* is primarily aimed at professional investors. Mr. Graham's process involved examining securities from a quantitative perspective and making purchases only when downside risks are minimized. This approach rarely involved speaking to management since doing so could adversely influence the analyst's impartial view of the data. In particular, Mr. Graham was a proponent of purchasing stocks selling well under "net-net current asset value" arrived at by taking a company's current assets and subtracting *all liabilities*. In such cases, the buyer was paying nothing for the business as a going concern and had some downside protection due to liquid assets far in excess of all liabilities.

Mr. Buffett was able to leverage the "deep value" approach advocated by Benjamin Graham throughout the 1950s. In the five year period ending in 1961, the Buffett Partnerships trounced the Dow Jones Industrial average with a cumulative return of 251 percent compared to 74.3 percent for the Dow[2]. While Mr. Buffett employed multiple strategies, one approach involved finding companies that fit the "cigar butt" mold, meaning that they had "one puff left" and could be

[1] For example, see Mr. Buffett's preface to any recent edition of *The Intelligent Investor*.
[2] The Buffett Partnership track record is available in many publications. See, for example, Roger Lowenstein's *Buffett: The Making of an American Capitalist*, 1995 Hardcover Edition, Page 69.

purchased at a deep bargain price. This approach led Mr. Buffett to begin acquiring shares of Berkshire Hathaway, a struggling New England textile manufacturer, in late 1962. While Berkshire Hathaway was trading well under book value at the time, Mr. Buffett would later say that book value "considerably overstated" intrinsic value[3].

From Cigar Butts to Insurance

Berkshire Hathaway, as it existed in 1963 when the Buffett Partnership became the company's largest shareholder, was a *cheap company* from a quantitative perspective but it was not a *good company* in terms of offering a business that had durable competitive advantages. In fact, over the next two decades, Berkshire Hathaway continued to invest in the textile mills but would never gain sufficient traction to face off against overseas competitors with lower cost structures. Textiles are a commodity business and the low price producer has the advantage. In retrospect, Mr. Buffett's purchase of Berkshire Hathaway was a mistake[4].

While Berkshire's textile mills were doomed to eventual failure, a period of profitability[5] appeared in the mid to late 1960s that presented Mr. Buffett with a choice: He could either reinvest the profits in the textile business or redeploy the funds elsewhere. Above all else, Mr. Buffett is a master *capital allocator*. He could see the troubles brewing in textiles and, despite attempts by Berkshire's textile managers to obtain capital for new investments, Mr. Buffett chose to deploy the funds elsewhere. This approach was controversial, but the history of Berkshire's competitors shows that aggressive capital expenditures would only have delayed a decline temporarily and at great cost to shareholders.

Berkshire's entry into the insurance business with the purchase of National Indemnity in 1967[6] was a transformational event for the company. The textile business, despite a temporary period of profitability, required significant capital investments to continue to remain competitive. In contrast, insurance operations that are well run generate significant cash in the form of "float".

Float represents funds that are held by an insurance business between the time when policyholders submit payment and when funds are eventually paid out to settle claims. As long as underwriting practices are sound, float represents a low cost means of funding investments. Exceptional insurance businesses routinely generate cost free or negative cost float. By purchasing National Indemnity, Berkshire was on its way to transforming from a textile manufacturer *consuming* large amounts of capital at low to negative rates of return into an insurance powerhouse *generating* large amounts of float for investment in other businesses offering better prospects of high returns.

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[3] See comment in Berkshire Hathaway Owner's Manual, Page 5.
[4] Mr. Buffett directly stated that buying Berkshire was a mistake in his 1989 letter to shareholders.
[5] See Lowenstein, Page 133.
[6] For a good history of the National Indemnity purchase, see Lowenstein, pages 133 to 135.

See's Candies: The Turning Point

Few Californians can recall a holiday season where See's Candies were not a prominent part of the festivities. The brand is so powerful in California and other western states that many consumers would never think of buying a competing product. See's Candies is a textbook example of a company with a formidable economic "moat". Such companies have built up brand identity that simply cannot be replicated by new entrants even in cases where significant capital investments are made[7].

Berkshire Hathaway Vice Chairman Charles Munger has been widely credited with convincing Warren Buffett that there are certain situations where deviating from Benjamin Graham's "deep value" approach can be justified. Mr. Munger has rebutted[8] the notion that his influence was a deciding factor in Mr. Buffett's overall record, but many accounts[9] of the events surrounding the See's Candies purchase supports the conclusion that Mr. Munger deserves much credit for shifting Berkshire's bias from cigar butts selling at a "bargain price" to excellent businesses selling at a "fair price".

See's Candies is the perfect example of a business that produces an excellent return on equity year after year but requires very little capital investment in order to sustain the "moat" that makes such returns possible. When Berkshire purchased See's Candies for $25 million in 1972, the company only had $8 million of net tangible assets. However, See's was earning approximately $2 million after tax at the time[10]. $17 million of the $25 million purchase price could not be accounted for by assets on See's balance sheet but represented the value represented by intangible "brand equity". Brand equity is not an asset that a strict practitioner of Benjamin Graham's investing approach would be willing to pay for. However, the presence of brand equity simply cannot be denied based on the results that would follow after Berkshire's acquisition.

Over the first twenty years of Berkshire's ownership of See's Candies, sales increased from $29 million to $196 million while pre-tax profits grew from $4.2 million to $42.4 million. However, that is not even the most amazing part of the story. What is more remarkable is that Berkshire Hathaway only had to

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[7] For an excellent brief history of See's Candies, see Max Olson's paper entitled Quality without Compromise.
[8] See Mr. Munger's statement in *Poor Charlie's Almanack, Third Edition*, "Rebuttal: Munger on Buffett"
[9] For example, see Alice Schroeder's account of the See's Candies purchase in *Snowball: Warren Buffett and the Business of Life*, Chapter 34.
[10] See the appendix to Warren Buffett's 1983 Letter to Shareholders.

reinvest $18 million of retained earnings over that twenty year period while $410 million of cumulative pre-tax earnings were sent back to Berkshire for redeployment in other investments[11].

Fast forward to 2007. See's sales were $383 million with pre-tax profits of $82 million. Total capital employed to run the business was $40 million, meaning that only $32 million of retained earnings had to be invested over 35 years. Pre-tax earnings from 1972 to 2007 amounted to a total of $1.35 billion[12].

There have been many other key turning points in the history of Berkshire Hathaway but the decision to pay a "premium price" for See Candies in 1972 may best symbolize the transformation of Mr. Buffett's approach toward investing. This is perfectly summarized in Mr. Buffett's 1992 Letter to Shareholders:

> ***"In my early days as a manager I, too, dated a few toads. They were cheap dates - I've never been much of a sport - but my results matched those of acquirers who courted higher-priced toads. I kissed and they croaked.***
>
> ***After several failures of this type, I finally remembered some useful advice I once got from a golf pro (who, like all pros who have had anything to do with my game, wishes to remain anonymous). Said the pro: "Practice doesn't make perfect; practice makes permanent." And thereafter I revised my strategy and tried to buy good businesses at fair prices rather than fair businesses at good prices." – Warren Buffett***

Berkshire Hathaway is the company it is today because Mr. Buffett stopped kissing toads like the original Berkshire textile business and started aggressively pursuing supermodels like See's Candies instead even if they were more "expensive dates". As we shall see, Berkshire has no shortage of supermodels today.

[11] See Warren Buffett's 1991 Letter to Shareholders.
[12] See Warren Buffett's 2007 Letter to Shareholders, page 6.

Ravi Nagarajan
ravi@rationalwalk.com

Valuation Approach

One of the mistakes many investors make involves attempting to estimate the value of a business with excessive precision. Indeed, the quest for exact mathematical precision in finance has led to models such as the Capital Asset Pricing Model[13] that are elegant but use suspect variables such as Beta (a measure of stock price volatility) as a proxy for risk to arrive at estimates of where a stock should trade. In our view, risk involves the possibility of permanent loss of capital rather than stock price volatility.

The valuation of any business is theoretically represented by the cash the business will generate over its remaining life discounted to present value to account for the time value of money. Since the future is necessarily uncertain, one cannot hope to arrive at a precise number for the value of a business. Instead, the goal should be to arrive at a reasonable *range of value* for a business. The decision to purchase a business should only be made if it can be obtained at a significant discount from intrinsic value. Warren Buffett describes the concept of intrinsic value as follows[14]:

> ***"Intrinsic value is an all-important concept that offers the only logical approach to evaluating the relative attractiveness of investments and businesses. Intrinsic value can be defined simply: It is the discounted value of the cash that can be taken out of a business during its remaining life.***
>
> ***The calculation of intrinsic value, though, is not so simple. As our definition suggests, intrinsic value is an estimate rather than a precise figure, and it is additionally an estimate that must be changed if interest rates move or forecasts of future cash flows are revised. Two people looking at the same set of facts, moreover—and this would apply even to Charlie and me—will almost inevitably come up with at least slightly different intrinsic value figures. That is one reason we never give you our estimates of intrinsic value. What our annual reports do supply, though, are the facts that we ourselves use to calculate this value." – Warren Buffett***

There are numerous approaches that have been used to estimate Berkshire Hathaway's intrinsic value. In our view, the most compelling model involves evaluating Berkshire Hathaway's insurance float as the main driver of value. This method was pioneered by Alice Schroeder and Gregory Lapin in their well known paper on Berkshire Hathaway published in 1999[15]. We will use this basic framework as the primary valuation technique throughout this paper. One limitation of the "float based" model is a high

[13] Explanations of the Capital Asset Pricing Model (CAPM) can be found in any current investment textbook. For a basic description see the Wikipedia entry at http://en.wikipedia.org/wiki/CAPM.
[14] Berkshire Hathaway Owner's Manual, page 5.
[15] Berkshire Hathaway: The Ultimate Conglomerate Discount by Alice Schroeder and Gregory Lapin, January 1999. The report was written while the authors worked as analysts at PaineWebber. Ms. Schroeder later wrote a detailed account of Warren Buffett's life in *Snowball: Warren Buffett and the Business of Life*.

level of sensitivity to the variables used in the analysis. Therefore, a conservative set of assumptions will be used to come up with a range of intrinsic value rather than an exact figure.

Since the "float based" approach is not without controversy, we will also present two more traditional valuation yardsticks for Berkshire Hathaway.

First, we will examine the "two column"' approach that many Berkshire shareholders believe was implicitly endorsed by Warren Buffett in his shareholder letters. In Berkshire Hathaway's 2008 Letter to Shareholders, Mr. Buffett states that he believes that Berkshire has two main areas of value[16]:

> ***Berkshire has two major areas of value. The first is our investments: stocks, bonds and cash equivalents. At yearend [2008] those totaled $122 billion (not counting the investments held by our finance and utility operations, which we assign to our second bucket of value). About $58.5 billion of that total is funded by our insurance float.***
>
> ***Berkshire's second component of value is earnings that come from sources other than investments and insurance. These earnings are delivered by our 67 non-insurance companies, itemized on page 96. We exclude our insurance earnings from this calculation because the value of our insurance operation comes from the investable funds it generates, and we have already included this factor in our first bucket.***

Second, we will look at Berkshire Hathaway's reported book value per share and attempt to draw some conclusions regarding intrinsic value based on the historical relationship between book value and market value. Book value per share is a problematic yardstick because it only captures the value of intangible assets (goodwill) at historic purchase prices and gives no credit to economic goodwill at subsidiaries that have built up over many decades. For example, no credit is given to See's Candies obvious value above Berkshire's historic cost. Nevertheless, according to Mr. Buffett[17] the *change in book value* can serve as a rough proxy for *changes in intrinsic value* over time:

> ***Book value far understates Berkshire's intrinsic value, a point true because many of the businesses we control are worth much more than their carrying value. Inadequate though they are in telling the story, we give you Berkshire's book-value figures because they today serve as a rough, albeit significantly understated, tracking measure for Berkshire's intrinsic value. In other words, the percentage change in book value in any given year is likely to be reasonably close to that year's change in intrinsic value.***

Since an exact figure for intrinsic value cannot be reasonably calculated, our goal is to arrive at a conservative range of values and draw appropriate conclusions regarding the current stock price.

[16] See the "Yardsticks" section of Mr. Buffett's 2008 Letter to Shareholders, page 4.
[17] Berkshire Hathaway Owner's Manual, page 5.

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