BERKSHIRE HATHAWAY

Background, Analysis, and Valuation

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

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

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

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.

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

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

[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.

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.

Insurance Subsidiaries

It is impossible to truly understand Berkshire Hathaway's unique business model without a solid grasp of the insurance operations that represent the core of the company's strength. Warren Buffett's decision to purchase National Indemnity from Jack Ringwalt for $8.6 million in 1967 represented one of the first deployments of Berkshire Hathaway's capital outside the textile business. While National Indemnity's float was a modest $17 million[18] at the time, this float provided funds for Berkshire to purchase marketable securities and other investments that compounded at astonishingly high rates of the next four decades[19].

> ***"Since Berkshire purchased National Indemnity ("NICO") in 1967, property-casualty insurance has been our core business and the propellant of our growth. Insurance has provided a fountain of funds with which we've acquired the securities and businesses that now give us an ever-widening variety of earnings streams." – Warren Buffett*** [20]

The Benefits and Perils of Float

Every insurance business generates float, although the nature of the float and the cost varies greatly throughout the industry. Float exists because insurers require policyholders to make payment at the start of a coverage period while payments for insured losses occur over time. The duration of the float varies based on the type of insurance policy in question and whether the business is "long-tail" in nature[21]. Insurance companies are able to invest the funds that are held as float and shareholders of the business benefit from the investment returns on the float.

It must be emphasized that float is *not* an asset on the balance sheet. To the contrary, float is a liability[22] on the balance sheet that represents the estimated funds required to eventually satisfy policyholder claims. Furthermore, float does not come without risk because the cost of the float often proves to be higher than the rate of return an insurance company can generate by investing the float over time. If an insurer has a cost of float higher than its investment return, losses will ensue.

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[18] Warren Buffett's 2006 Letter to Shareholders, page 6.
[19] In his 2004 Letter to Shareholders, Warren Buffett states that Berkshire "would be lucky to be worth half of what it is today" had the company not made the National Indemnity purchase in 1967.
[20] Warren Buffett's 2004 Letter to Shareholders, page 5
[21] Certain types of insurance have "long-tails" meaning that liabilities are not known quickly. For example, float associated with reinsurance covering asbestos risk is typically long-tail while auto coverage tends to be short-tail.
[22] Berkshire's float is calculated by "adding net loss reserves, loss adjustment reserves, funds held under reinsurance assumed and unearned premium reserves, and then subtracting agents balances, prepaid acquisition costs, prepaid taxes and deferred charges applicable to assumed reinsurance." Warren Buffett's 1999 Letter to Shareholders, page 4.

"Float is wonderful – if it doesn't come at a high price. Its cost is determined by underwriting results, meaning how the expenses and losses we will ultimately pay compare with the premiums we have received. When an insurer earns an underwriting profit – as has been the case at Berkshire in about half of the 39 years we have been in the insurance business – float is better than free. In such years, we are actually paid for holding other people's money. For most insurers, however, life has been far more difficult: In aggregate, the property-casualty industry almost invariably operates at an underwriting loss. When that loss is large, float becomes expensive, sometimes devastatingly so." – Warren Buffett [23]

Berkshire Hathaway has built a remarkable long term record largely due to management's ability to accumulate a very large amount of float and to do so at zero to negative cost. At the end of 2009, Berkshire held $61.9 billion of float. Better yet, the cost of Berkshire's float has been negative over the past seven years.

How has Berkshire managed to operate at a consistent underwriting profit for so much of its history when, in the aggregate, the industry operates at an underwriting loss? The answer boils down to a culture of underwriting discipline in place at all Berkshire insurance subsidiaries. Insurance underwriters are instructed to reject inadequately priced risk even if this will lead to a reduction in premium volume[24]. Berkshire has made a commitment to not lay off workers[25] due to declining volume and sets compensation policies to reward underwriting profitability rather than volume growth. Berkshire wants to accumulate *cheap float*, preferably at a zero or negative cost over long periods of time.

Average Cost of Float	1999 to 2009	2004 to 2009	1999 to 2004
GEICO	-9.3%	-14.1%	-5.7%
General Re	3.0%	-1.2%	6.8%
Berkshire Hathaway Reinsurance	-1.7%	-3.1%	-0.4%
Other Primary	-5.4%	-6.2%	-5.2%
All Insurance Operations	-0.4%	-4.0%	2.7%

Exhibit 1: Historical Average Cost of Float for Berkshire Insurance Reporting Segments[26]

The exhibit shown above demonstrates that with the exception of General Re, all Berkshire Hathaway insurance subsidiaries have delivered negative cost float over the eleven year period ending in 2009. If one looks at the six year period ending in 2009, all insurance subsidiaries report a negative cost of float.

[23] Warren Buffett's 2005 Letter to Shareholders, Page 5.
[24] For a dramatic example of how willing managers are to reject inadequately priced risk, see page six of Warren Buffett's 2004 Letter to Shareholders illustrating National Indemnity's multi-decade record.
[25] See Warren Buffett's 2004 Letter to Shareholders, page 7.
[26] All exhibits in this research report use data collected from Berkshire Hathaway annual reports and 10-K filings. Excel spreadsheets with the data and related calculations are available to accompany this report.

A negative cost of float figure indicates that Berkshire Hathaway not only had use of the float for investment purposes but also earned underwriting profits. As we will see, the presence of high quality float is one of the key drivers of Berkshire Hathaway's intrinsic value.

Float Based Valuation Principles

While float is carried as a liability on the balance sheet and represents very real claims that must eventually be paid out to policy holders, cost free or negative cost float can create significant value for an insurance company's shareholders. As long as the insurer does not liquidate the business or shrink over a sustained period of time, low cost float takes on equity-like characteristics because it can be used to generate returns for the benefit of shareholders.

Alice Schroeder is widely credited for being the first Wall Street analyst to value an insurance business using a float based model[27]. The basic concept is that one may view the cash flows generated from float as a stream of income that can persist indefinitely. The difference between the return the insurer can achieve by investing the float and the cost of float represents the spread. As long as the spread is positive, the insurer benefits from positive cash flows as a result of holding the float. If these cash flows can be estimated for a number of years into the future, one can discount the cash flows to present value terms to arrive at the value the float represents to shareholders.

> ***"If you could see our float for the next 20 years and you could make an estimate as to the amount and the cost of it, and you took the difference between its cost and the returns available on governments, you could discount it back to a net present value." – Warren Buffett[28]***

Of course, it is easier said than done to come up with reasonable estimates of float over a long period of time and to determine the cost of float. Furthermore, small changes in the assumptions for the cost and level of float as well as the investment return can have a dramatic impact on the present value calculation. Nevertheless, the float based model is intellectually sound and represents a viable approach if conservative assumptions are used.

We will present data on the cost of float for each of Berkshire Hathaway's insurance segments along with information regarding how the float has grown over time. Based on historical patterns and forecasts of future developments, we will estimate cost and growth of float in the future. In addition, we will estimate the rate of return Berkshire is likely to achieve on the float. This exercise will result in a present value calculation for the cash flows that Berkshire can expect to generate from policyholder

[27] Berkshire Hathaway: The Ultimate Conglomerate Discount by Alice Schroeder and Gregory Lapin, PaineWebber Research report, January 1999.
[28] As quoted in Schroeder's paper, page 19, from 1992 Annual Shareholder's Meeting.

float going forward. We will then add Berkshire's insurance segment statutory capital to arrive at an estimate for the intrinsic value of Berkshire's insurance subsidiaries.

GEICO: *The Auto Insurance Powerhouse*

Warren Buffett and GEICO have a history spanning nearly six decades. In 1951, when Mr. Buffett was a 20 year old student at Columbia University, he famously took the train to Washington D.C. on a Saturday morning to find someone at GEICO headquarters who would be willing to answer questions regarding the business[29]. He found Lorimer Davidson, a financial Vice President at the time, and the two men spoke for four hours. With Benjamin Graham serving as Chairman of GEICO, the company quickly became "The Security I Like Best"[30] for Mr. Buffett and he put two-thirds of his $8,000 savings to work[31].

Fast forward twenty five years to early 1976 long after Mr. Buffett sold his original holdings in the company. After a series of missteps, GEICO was bleeding red ink and brought in a new CEO, Jack Byrne, who was rapidly making changes designed to engineer a turnaround. While GEICO retained the fundamental advantages that had led to its prior success, the company relaxed underwriting standards in the early 1970s while maintaining very low prices. By 1976, the company was teetering on the edge of bankruptcy[32].

Even while GEICO's ultimate fate was in no way assured, Warren Buffett began purchasing shares for Berkshire Hathaway in 1976 and eventually became the controlling shareholder. In early 1996, Berkshire Hathaway paid $2.3 billion for the half of the company that it did not already own.

GEICO is now the third largest private passenger auto insurer in the United States with 9 million auto policyholders operating 16 million vehicles. GEICO and Progressive[33] are neck and neck in terms of market share trailing only State Farm and Allstate[34]. While auto insurance is considered a commodity business, GEICO has managed to differentiate itself through clever advertising symbolized by the ever-present GEICO gecko. As we shall see from the presentation below, GEICO has been a dream business

[29] For an account of the meeting between Warren Buffett and Lorimer Davidson, see Lowenstein's *Buffett: The Making of an American Capitalist*, Page 43. Also see Warren Buffett's 1995 Letter to Shareholders.
[30] See *The Security I Like Best*, by Warren Buffett in The Commercial and Financial Chronicle, December 6, 1951.
[31] See Lowenstein, Page 49.
[32] See Lowenstein, Pages 194 to 202 and Warren Buffett's 1980 Shareholder Letter and 1995 Shareholder Letter for more details on GEICO's near death experience in the mid 1970s.
[33] For more on the competition between GEICO and Progressive, please see Appendix 3.
[34] See Berkshire Hathaway 2008 Annual Report and GEICO's website for more details on market share.

for Berkshire Hathaway over the past decade as it has leveraged a low cost model to generate significant cumulative underwriting profits while growing the amount of float available for Berkshire to invest at a steady rate.

Key Statistics: 1999 to 2009

The exhibit below presents a number of key statistics for GEICO for the past eleven years. All figures are expressed in millions. The combined ratio represents the total of underwriting losses and expenses divided by earned premiums. The cost of float represents underwriting losses divided by year end float. In years when underwriting profits are earned, the cost of float is *negative*.

All Figures in Millions		2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999
GEICO	Year End Float	9613	8454	7768	7171	6692	5960	5287	4678	4251	3943	3444
	Premiums Earned	13576	12479	11806	11055	10101	8915	7784	6670	6060	5610	4757
	Underwriting Gain/Loss	649	916	1113	1314	1221	970	452	416	221	-224	24
	Combined Ratio	95.2%	92.7%	90.6%	88.1%	87.9%	89.1%	94.2%	93.8%	96.4%	104.0%	99.5%
	Cost of Float	**-6.8%**	**-10.8%**	**-14.3%**	**-18.3%**	**-18.2%**	**-16.3%**	**-8.5%**	**-8.9%**	**-5.2%**	**5.7%**	**-0.7%**
	% of Total BRK Float	**15.5%**	**14.5%**	**13.2%**	**14.1%**	**13.6%**	**12.9%**	**12.0%**	**11.3%**	**12.0%**	**14.1%**	**13.6%**

Exhibit 2: Key Statistics for GEICO: 1999 to 2009

We can see that float has compounded at a 10.8 percent annualized rate from 1999 to 2009, with the pace of growth slowing slightly when one compares the second half of the decade to the first half. Premiums earned have compounded at the rate of 11 percent over the past decade. Other than one year of underwriting losses in 2000, GEICO has produced underwriting profits in every year. The combined ratio has averaged in the low 90s during this period. The cost of float has been negative due to the strong underwriting profitability of the insurance operations. To sum up the data, GEICO has proven to be a marvelous business that generates a growing amount of negative cost float. Berkshire Hathaway has access to GEICO's float for investment in businesses and securities while also realizing underwriting profitability. This is the best of both worlds.

Prior to the General Re acquisition in 1999, GEICO represented over 40 percent of Berkshire Hathaway's total float. The consolidation of General Re along with growth in the other insurance subsidiaries have reduced the overall impact of GEICO's float. In recent years, GEICO's float has accounted for approximately 13 to 14 percent of Berkshire Hathaway's total insurance float and grew to 15.5 percent in 2009. Although more limited in terms of impact on Berkshire's overall insurance results, GEICO's delivers very high quality float year after year and management has been able to do this even while the company has steadily increased market share.

Long Term Projections

While past history shows that GEICO has been capable of delivering growing amounts of negative cost float for Berkshire to invest, can these trends be sustained in the future? One of the penalties of success is that growth inevitably slows as a company gains market share. The rate of growth over the past decade has resulted in GEICO reaching the third highest market share in the United States auto insurance market which is up dramatically from seventh place in 1998. The company has more than doubled its market share from 3.5 percent in 1998 to 8.1 percent in 2009[35].

While GEICO's growth of float has not shown any signs of slowing in recent years, we believe that it is prudent to assume that float growth must decelerate in the future, particularly if the company maintains underwriting discipline. Indeed, growth of float in exchange for lower underwriting profitability (or even underwriting losses) would be counterproductive. GEICO's company culture will not permit trading market share and float growth for lower levels of underwriting profitability and risking a repeat of the company's near death experience in the 1970s. One other growth limiting factor to consider is that GEICO now operates in all fifty states after the company's entry into the Massachusetts market in early 2009. GEICO previously expanded into New Jersey in 2004[36].

In the float based valuation model, we will assume that GEICO's growth in float over the next decade will slow to 6 percent while the cost of float will run at roughly -5.5 percent.

Both assumptions are conservative given GEICO's strong track record. A deceleration in float growth and a moderation in underwriting profitability are prudent adjustments to make given GEICO's current market share compared to its starting point ten years ago. It is unlikely that the cost of float would deteriorate much beyond a -5.5 percent level given that there were only two years over the past eleven when results were worse.

General Re: *It's Finally "Fixed"*

When Warren Buffett decided to acquire General Re in 1998, it is doubtful that he anticipated the dismal financial results that the insurer would post over the next several years. Additionally, while Mr. Buffett knew about General Re's derivatives book, the amount of time and effort required to wind it down was greater than expected. General Re also caused numerous headaches due to involvement in a

[35] 1998 market share figure from Schroeder's 1999 report, page 29. 2000 market share figure from Berkshire Hathaway 2009 Annual Report, page 6.
[36] For an article covering GEICO's entry into Massachusetts, please see *GEICO Enters Massachusetts Market*, March 21, 2009, via The Rational Walk.

scandal related to American International Group early in the last decade. This unfortunate chapter in the history of General Re was finally closed in January 2010 with a $92 million settlement with the Federal Government that also required corporate governance changes[37].

In the quote below from early 2003, Warren Buffett reflects on the state of General Re during the years immediately following the acquisition[38]:

> ***"Gen Re's culture and practices had substantially changed and unbeknownst to management – and to me – the company was grossly mispricing its current business. In addition, Gen Re had accumulated an aggregation of risks that would have been fatal had, say, terrorists detonated several large scale nuclear bombs in an attack on the U.S. A disaster of that scope was highly improbable, of course, but it is up to insurers to limit their risks in a manner that leaves their finances rock-solid if the "impossible" happens. Indeed, had Gen Re remained independent, the World Trade Center attack alone would have threatened the company's existence." – Warren Buffett***

While the history of General Re during Berkshire Hathaway's eleven years of ownership has had its share of turbulence, the future of General Re is looking quite a bit brighter today.

Key Statistics: 1999 to 2009

In the four years immediately following the acquisition, General Re posted over $7.5 billion in cumulative underwriting losses while running an average combined ratio of 123% and a cost of float averaging in the low double digits as we can see in the exhibit below. Starting in 2003, results started to dramatically improve indicating that the company's problems have finally been "fixed".

All Figures in Millions		2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999
General Re	Year End Float	21014	21074	23009	22827	22920	23120	23654	22207	19310	15525	15166
	Premiums Earned	5829	6014	6076	6075	6435	7245	8245	8500	8353	8696	6905
	Underwriting Gain/Loss	477	342	555	526	-334	3	145	-1393	-3671	-1254	-1184
	Combined Ratio	91.8%	94.3%	90.9%	91.3%	105.2%	100.0%	98.2%	116.4%	143.9%	114.4%	117.1%
	Cost of Float	**-2.3%**	**-1.6%**	**-2.4%**	**-2.3%**	**1.5%**	**0.0%**	**-0.6%**	**6.3%**	**19.0%**	**8.1%**	**7.8%**
	% of Total BRK Float	**33.9%**	**36.0%**	**39.2%**	**44.9%**	**46.5%**	**50.2%**	**53.5%**	**53.9%**	**54.4%**	**55.7%**	**59.9%**

Exhibit 3: Key Statistics for General Re: 1999 to 2009

[37] For more information on the settlement, see *General Re Settlement in AIG Case Closes Difficult Chapter*, January 21, 2010 via The Rational Walk. The article also contains links to other information on the General Re/AIG Case.
[38] Warren Buffett's 2002 Letter to Shareholders, page 7.

While certain events could not have been foreseen in advance, such as the September 11, 2001 terrorist attacks, clearly there were structural problems at General Re which were undetected at the time of purchase. Under Mr. Buffett's leadership and new management at General Re, this should not repeat.

During the years immediately following the acquisition, General Re accounted for a majority of Berkshire Hathaway's total float. This figure has been steadily declining over the past decade with General Re's float only accounting for 33.9 percent of total Berkshire Hathaway float in 2009. After the first four disastrous years, General Re has posted consistent underwriting profits with the exception of a small loss in 2005. While underwriting profitability has improved, the level of float has stagnated as General Re's annual premium volume declined. In fact, General Re had lower earned premium volume in 2009 than in 1999 immediately after the acquisition.

It is readily apparent that General Re management has made the decision to reject inadequately priced risk even if that leads to lower premium volume and smaller growth in overall levels of float. As Warren Buffett has repeatedly stated in his letters to shareholders, it is far better for an insurance company to accept lower premium volume rather than to keep prices artificially low and risk crippling underwriting losses. This is particularly important in General Re's "long-tail" insurance where a great deal of estimation error can occur when underwriters attempt to forecast future claims experience.

Today, General Re provides Berkshire Hathaway with over $21 billion of negative cost float that has been used to invest in securities and businesses. While the cost of float at General Re is not nearly as attractive as at GEICO, we can confidently say that the business has finally been "fixed".

Long Term Projections

It is safe to predict that Warren Buffett and General Re management are now committed to rejecting inadequately priced risk as we can see by virtue of the company's willingness to see the level of float stagnate over several years. We can also see that management has succeeded in delivering negative cost float the for past four years.

In the float based valuation model, we will assume that General Re's growth in float over the next decade will stabilize at 2 percent while the cost of float will run at roughly 2 percent.

These are conservative projections because we are implicitly assuming that General Re's growth of float will not even keep up with likely growth in Gross Domestic Product over the next decade. While in any particular year, General Re may sacrifice volume, it is unlikely that the company will fail to at least retain its market share over an extended insurance cycle consisting of both "hard" and "soft" markets. Indeed, General Re is well placed to *increase* market share in the periods immediately after super-catastrophes because it will have capital due to conservative management practices while many competitors will be reeling from heavy losses. Opportunity will come to the patient and well prepared players.

Assuming a positive 2 percent cost of float appears to be conservative given management's ability to deliver negative cost float over the past four years. Nevertheless, we do not feel comfortable projecting negative cost float for General Re over the next decade simply because the company has, so far, failed to deliver negative cost float over a full decade under Berkshire's ownership. If we continue to see negative cost float over the next few years, it may be safer to assume that the performance can be maintained over very long periods. Even at a positive 2 percent cost of float, General Re will be delivering funds to Berkshire at a rate materially lower than its likely return on investments.

Berkshire Hathaway Reinsurance: *"There isn't anyone like Ajit"*

Berkshire Hathaway Reinsurance Group's lead insurance entity is National Indemnity Company which was Warren Buffett's first entry into the insurance business. For the past twenty-four years, National Indemnity's reinsurance business has been run by Ajit Jain who specializes in underwriting very large and unusual risks. Warren Buffett and Ajit Jain speak on the phone nearly every day[39]. Other than Charlie Munger, it is probably fair to say that Ajit Jain is Warren Buffett's closest business associate at Berkshire.

> ***"Our third major insurance operation is Ajit Jain's reinsurance division, headquartered in Stamford and staffed by only 31 employees. This may be one of the most remarkable businesses in the world, hard to characterize but easy to admire.***
>
> ***From year to year, Ajit's business is never the same. It features very large transactions, incredible speed of execution and a willingness to quote on policies that leave others scratching their heads. When there is a huge and unusual risk to be insured, Ajit is almost certain to be called.***
>
> ***Ajit came to Berkshire in 1986. Very quickly, I realized that we had acquired an extraordinary talent. So I did the logical thing: I wrote his parents in New Delhi and asked if they had another one like him at home. Of course, I knew the answer before writing. There isn't anyone like Ajit." --Warren Buffett [40]***

While some forms of insurance have commodity-like characteristics, this is not the case for Ajit Jain's business. National Indemnity has often taken on risks that other insurers would be unwilling or unable to assume. The backing of Berkshire Hathaway is a major factor that differentiates National Indemnity from other insurers and Warren Buffett's willingness to accept a high degree of volatility in annual

[39] *Snowball: Warren Buffett and the Business of Life*, Page 513.
[40] Berkshire Hathaway 2008 Annual Report page 8.

results makes it possible for Mr. Jain to optimize his underwriting for multi-year periods. The Berkshire Hathaway Reinsurance reporting segment is now responsible for over 40 percent of the float at Berkshire Hathaway and is the largest segment in terms of the level of float.

Key Statistics: 1999 to 2009

Berkshire Hathaway Reinsurance has experienced rapid growth over the eleven year period shown in the exhibit below. The jump in float from 2006 to 2007, along with the dramatically higher premium volume in 2007, is attributed to a one-time retroactive reinsurance deal with Equitas which resulted in a single premium of $7.1 billion. However, even adjusting for that one time jump in float, it is clear that Berkshire Hathaway Reinsurance has been growing at a steady pace in recent years.

All Figures in Millions		2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999
B-H Re	Year End Float	26223	24221	23692	16860	16233	15278	13948	13396	11262	7805	6285
	Premiums Earned	6706	5082	11902	4976	3963	3714	4430	3300	2991	4712	2387
	Underwriting Gain/Loss	349	1324	1427	1658	-1069	417	1047	547	-647	-162	-251
	Combined Ratio	94.8%	73.9%	88.0%	66.7%	127.0%	88.8%	76.4%	83.4%	121.6%	103.4%	110.5%
	Cost of Float	**-1.3%**	**-5.5%**	**-6.0%**	**-9.8%**	**6.6%**	**-2.7%**	**-7.5%**	**-4.1%**	**5.7%**	**2.1%**	**4.0%**
	% of Total BRK Float	**42.4%**	**41.4%**	**40.4%**	**33.1%**	**32.9%**	**33.1%**	**31.5%**	**32.5%**	**31.7%**	**28.0%**	**24.8%**

Exhibit 4: Key Statistics for Berkshire Hathaway Reinsurance: 1999 to 2009

Underwriting losses have only been recorded in four of the past eleven years. The largest losses were due to the September 11, 2001 terrorist attacks and the 2005 hurricane season. In other years, the group has demonstrated a consistent ability to deliver float at a negative cost. In some years, such as 2006 and 2008, results have been extremely strong. Float has grown at a rapid clip over the past decade and now stands at over $26.2 billion compared to $6.3 billion at the end of 1999.

As we could see with General Re, Berkshire's policy of maintaining high levels of underwriting discipline applies at Berkshire Hathaway Reinsurance as well. There were several years over the past decade when earned premium volume dropped precipitously when management could not charge adequate rates to justify the risks taken. As a percentage of Berkshire's overall float, Berkshire Hathaway Reinsurance has grown from just under 25% of float in 1999 to over 42% today.

Long Term Projections

We project that management will continue the disciplined pattern of rejecting inadequately priced risk and acting in an opportunistic manner when it comes to obtaining additional float at low or negative cost (such as the Equitas transaction in 2007). While the average cost of float has been negative over

the past decade and has actually averaged -3.1% over the past five years, this has also been a period of relatively light mega-catastrophe losses with the exception of the 2005 hurricane season.

In the float based valuation model, we assume that Berkshire Hathaway Reinsurance Group's float will grow over the next decade at a 3 percent rate while the cost of float will run at break-even levels.

These projections are subject to criticism by those who observe that Berkshire Hathaway Reinsurance Group has generated negative cost float on a consistent basis and has grown at rates far in excess of 3 percent. In defense of the more modest projections, we would note that the historical rates of float growth are based on a much smaller starting level of float. In addition, excluding the impact of the Equitas deal in 2007, float has grown at modest levels since 2004.

Our projection of zero cost float recognizes the historical superiority of Berkshire Hathaway Reinsurance Group's results compared to General Re but recognizes that years of exceptionally poor results are inevitable given the group's business model. On average, results should be highly satisfactory under Ajit Jain and Warren Buffett's leadership but we would be perfectly satisfied with zero cost float rather than demanding to be paid to hold the float. Indeed, zero cost float growing at a three percent rate would provide a powerful source of value for Berkshire given the starting level of float in excess of $26 billion.

Berkshire Hathaway Primary Group

Berkshire Hathaway's Primary Insurance Group consists of a wide variety of independently managed businesses that primarily write commercial liability policies. Included in this group are Medical Protective Corporation, National Indemnity's primary group, U.S. Investment Corporation, Homestate, Central States Indemnity Company, Applied Underwriters, and Boat U.S[41]. The businesses are lower profile in nature but deliver meaningful value for Berkshire in the aggregate.

> ***Our smaller insurers are just as outstanding in their own way as the "big three," regularly delivering valuable float to us at a negative cost. We aggregate their results below under "Other Primary." For space reasons, we don't discuss these insurers individually. But be assured that Charlie and I appreciate the contribution of each. – Warren Buffett[42]***

Key Statistics: 1999 to 2009

Berkshire Hathaway's Primary Group has experienced the most rapid growth in float and premium volume of any of the insurance groups over the past decade, although starting from a small baseline

[41] For further details on Berkshire Hathaway's primary group, the reader is referred to the Berkshire Hathaway 2008 Annual Report, Management Discussion, Page 68.
[42] 2008 Annual Report, Chairman's Letter, page 9.

level in 1999. The group has delivered 28.8% annualized growth in float from 1999 to 2009. This growth has decelerated significantly over the past four years as we can see from the exhibit shown below. The big jump in float and premium volume in 2005 is mostly accounted for by the acquisition of Medical Protective[43].

All Figures in Millions		2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999
B-H Primary Group	Year End Float	5061	4739	4229	4029	3442	1736	1331	943	685	598	403
	Premiums Earned	1773	1950	1999	1858	1498	1211	1034	712	501	325	257
	Underwriting Gain/Loss	84	210	279	340	235	161	74	32	30	25	17
	Combined Ratio	95.3%	89.2%	86.0%	81.7%	84.3%	86.7%	92.8%	95.5%	94.0%	92.3%	93.4%
	Cost of Float	**-1.7%**	**-4.4%**	**-6.6%**	**-8.4%**	**-6.8%**	**-9.3%**	**-5.6%**	**-3.4%**	**-4.4%**	**-4.2%**	**-4.2%**
	% of Total BRK Float	**8.2%**	**8.1%**	**7.2%**	**7.9%**	**7.0%**	**3.8%**	**3.0%**	**2.3%**	**1.9%**	**2.1%**	**1.6%**

Exhibit 5: Key Statistics for Berkshire Hathaway Other Primary Group: 1999 to 2009

In terms of the cost of float, performance of this group has been exceptional. It is the only group that has delivered underwriting profits in every year over the past decade. It is always unwise to extrapolate a short term trend into the future, but it is perfectly reasonable to draw conclusions based on a track record spanning over a full decade.

Long Term Projections

While it is unproductive to speculate regarding Berkshire's acquisition strategy, we can note that a significant amount of the growth of float in the Primary Group was the result of acquisitions such as Medical Protective. We believe that it is more prudent to evaluate the Primary Group in terms of organic growth than can be expected in the future based on existing businesses rather than to build in speculative assumptions regarding future acquisitions.

In the float based valuation model, we assume that Berkshire Hathaway Primary Group's float will grow over the next decade at a 8 percent rate while the cost of float will run at -5.0 percent.

An assumption of 8 percent growth seems justified given the group's track record over time and a negative 5 percent cost of float is the lowest that appears reasonable given the fact that the cost of float figure has averaged -5.4 percent over the entire eleven year period and has actually improved to an average of -6.2 percent from 2004 to 2009.

[43] For more information on the acquisition of Medical Protective, see Berkshire Hathaway 2005 Annual Report, page 60.

Consolidated Insurance Group Data and Projections

The exhibit below consolidates the key statistics presented for each of the four insurance segments. The data provide a useful summary of Berkshire's overall level of float, premiums earned, underwriting results, and cost of float over the past eleven years.

All Figures in Millions		2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999
B-H Totals	Year End Float	61911	58488	58698	50887	49287	46094	44220	41224	35508	27871	25298
	Premiums Earned	27884	25525	31783	23964	21997	21085	21493	19182	17905	19343	14306
	Underwriting Gain/Loss	1559	2792	3374	3838	53	1551	1718	-398	-4067	-1615	-1394
	Combined Ratio	94.4%	89.1%	89.4%	84.0%	99.8%	92.6%	92.0%	102.1%	122.7%	108.3%	109.7%
	Cost of Float	**-2.5%**	**-4.8%**	**-5.7%**	**-7.5%**	**-0.1%**	**-3.4%**	**-3.9%**	**1.0%**	**11.5%**	**5.8%**	**5.5%**

Exhibit 6: Key Consolidated Statistics for All Berkshire Hathaway Insurance Operations

We can see that the insurance subsidiaries in aggregate have generated negative cost float for the past seven years. This is, in fact, the expectation of Berkshire Hathaway management. A well managed insurance business should generate float at zero to negative cost, even when one accounts for the occasional disastrous year (such as 2001).

> ***"Of course, we ourselves will periodically have a terrible year in insurance. But, overall, I expect us to average an underwriting profit. If so, we will be using free funds of large size for the indefinite future." – Warren Buffett***[44]

The following exhibit summarizes the long term projections for *cost of float* that we have made for each of the four insurance reporting segments. We also list 2009 year end float and the percentage of total float represented by each insurance group. We can then arrive at a weighted average long term estimated cost of float for Berkshire's overall insurance business.

Long Term Cost of Float Estimates	Estimated Cost of Float	2009 Year End Float	% of Total Float
GEICO	-5.5%	9613	15.5%
General Re	2.0%	21014	33.9%
Berkshire Hathaway Reinsurance	0.0%	26223	42.4%
Other Primary	-5.0%	5061	8.2%
All Insurance Operations (Weighted Avg)	**-0.6%**	**61911**	**100.0%**

Exhibit 7: Long Term Cost of Float Estimates

[44] Warren Buffett's 2008 Letter to Shareholders, page 8.

The exhibit below provides a summary of the long term projections for *growth of float* that we have made for each of the four insurance reporting segments. We also list 2009 year end float and the percentage of total float represented by each insurance operation. We can then arrive at a weighted average long term rate of float growth for Berkshire's overall insurance business.

Forecasted Growth of Float	Estimated Growth Rate	2009 Year End Float	% of Total Float
GEICO	6.0%	9613	15.5%
General Re	2.0%	21014	33.9%
Berkshire Hathaway Reinsurance	3.0%	26223	42.4%
Other Primary	8.0%	5061	8.2%
All Insurance Operations (Weighted Avg)	**3.5%**	**61911**	**100.0%**

Exhibit 8: Long Term Growth of Float Estimates

In summary, we are anticipating that the consolidated insurance group will grow float at an average rate of 3.5 percent over the next decade and that the cost of float will average -0.6 percent. In other words, Berkshire's insurance operations as a group should provide modest underwriting profitability over the next ten years while growing at slightly above the level of average Gross Domestic Product expansion.

While we estimated the cost and growth of float rates independently for each insurance reporting segment, the consolidated figures provide an important "reality check" and do not appear to be unreasonable. Berkshire Hathaway clearly has some of the best insurance operations in the world in terms of delivering low cost float for investment. The average cost of float over the past eleven years was -0.4 percent and that includes several terrible years immediately following the General Re acquisition. Even with terrible years sure to come in the future, our assumption for slightly negative cost float is reasonable.

Although underwriting discipline will restrain float growth from time to time, it is perfectly reasonable to assume that Berkshire's insurance businesses will be well positioned to grow at least slightly faster than the overall economy over extended periods of time. This is because the conservatism of management will allow the insurance subsidiaries to periodically take market share after disasters that reduce the capacity of the industry as a whole. After a disaster, insurance rates often harden leading to opportunities to increase market share at attractive terms. ***Therefore, we will assume a 3.5 percent growth of float in perpetuity.***

Insurance Subsidiaries Valuation

As we discussed in the *Float Based Valuation Principles* section, the intrinsic value of Berkshire Hathaway's insurance business will be calculated by adding the net present value of the forecasted cash flows emanating from the use of policyholder float to the statutory capital levels held in the insurance business.

$$\boldsymbol{Insurance\ Subsidiary\ Valuation = Present\ Value\ of\ Float + Statutory\ Capital}$$

Present Value of Float

We already have arrived at two of the variables required to estimate the net present value of the cash flows generated from Berkshire Hathaway's insurance float based on the analysis we have completed on each of the four insurance segments:

We have arrived at an estimated long term cost of float of -0.6 percent and will assume that float grows at 3.5 percent, on average, in perpetuity.

In order to arrive at a present value figure, we will also need to determine the investment return Berkshire is likely to achieve by investing the float. In general, we wish to avoid making aggressive predictions for investment returns *regardless of the fact that Warren Buffett is the chief capital allocator.*

Due to Mr. Buffett's age, we simply cannot predict how many years he will be available to allocate capital. It is better to take any excess returns Mr. Buffett can earn as a "bonus" over the next several years rather than to bake overly optimistic assumptions into a long term valuation model .

We are assuming that Berkshire will achieve a 6 percent investment return on insurance float.

Our intention is to assume that Berkshire will not achieve returns far in excess of what we believe the thirty year Treasury Bond should offer over the long run. While the thirty year Treasury Bond is currently yielding less than five percent, there are many reasons to believe that yields are artificially depressed due to actions taken to ameliorate the economic recession that began in 2008[45].

[45] While we do not intend to dwell on macroeconomic factors or to offer predictions on the specific course of interest rates, we will note that unprecedented quantitative easing by the Federal Reserve cannot persist indefinitely. Additionally, foreign buyers of Treasuries such as China have been looking into ways to diversify their reserves over time. Higher rates in the long run are nearly certain even assuming a benign overall scenario.

The following formula is required to calculate the present value of the cash flows we anticipate will be generated from investing the float. We will treat the present value calculation as a "growing perpetuity":

$$\boldsymbol{Present\ Value = \frac{Year\ One\ Cash\ Flow}{Capitalization\ Factor}}$$

Where:

$$\boldsymbol{Year\ One\ Cash\ Flow = 2009\ Year\ End\ Float * (Investment\ Return - Cost\ of\ Float - Tax\ Burden)}$$

And:

$$\boldsymbol{Capitalization\ Factor = Discount\ Rate - Growth\ Rate}$$

We have not yet addressed the question of the tax burden. In order to generate float, Berkshire operates through an insurance subsidiary and this results in double taxation of shareholders' capital. According to Alice Schroeder's 1999 analysis, Mr. Buffett has commented that the cost of these corporate taxes to a Berkshire shareholder amounts to approximately 100 basis points, or 1 percent.[46]

We have also not discussed the rate that is used to discount the cash flows back to present value. We will use our six percent assumption for the long term rate on Treasury Bonds as the discount rate which may serve as a proxy for the risk free rate and is also used as our assumption of the investment return available to Berkshire for investing the float.

We are now able to incorporate the variables into the equation and come up with an estimate of the net present value of cash flows resulting from investment of float:

$$\boldsymbol{Present\ Value = \frac{61911 * [0.06 - (-0.006) - 0.01)]}{0.06 - 0.035}}$$

$$\boldsymbol{Present\ Value = 138,681}$$

From Berkshire Hathaway's annual report, we know that statutory capital for the Insurance business was approximately $64 billion[47]. Therefore, we can estimate the intrinsic value of Berkshire Hathaway's insurance subsidiaries as follows:

$$\boldsymbol{Insurance\ Subsidiary\ Valuation = 138,681 + 64,000 = \$202{,}681\ \text{million}}$$

We should note that Alice Schroeder's 1999 analysis subtracted $13 billion of estimated goodwill from General Re from her valuation estimate in an attempt to eliminate goodwill from the statutory capital

[46] See previously referenced paper written by Alice Schroeder and Gregory Lapin, page 20.
[47] See Berkshire Hathaway 2009 Annual Report, page 47.

figure. However, this is no longer necessary because under statutory accounting rules, the goodwill embedded in statutory capital is to be fully amortized over the ten years[48]. Since the General Re acquisition took place in early 1999, goodwill has been fully amortized from statutory capital (although not from GAAP which is why General Re's goodwill still appears on Berkshire's consolidated financial statements.)

Sensitivity Analysis

The reader should be aware that the present value calculation described here is subject to a great deal of variability based on the assumptions that are used in the equation. We have attempted to use conservative assumptions, but it is still prudent to examine the sensitivity of the analysis to changes in key variables.

Consider the following changes in the insurance subsidiary valuation based on the following hypothetical scenarios:

Scenario	Valuation of Insurance Subsidiaries (millions)
Baseline Case using Rational Walk Estimates	**202,681**
1% Increase in Float Growth Rate to 4.5%	295,134
1% Decrease in Float Growth Rate to 2.5%	163,058
1% Increase in Cost of Float to 0.4%	177,916
1% Decrease in Cost of Float to -1.6%	227,445
1% Increase in Investment Returns to 7%	227,445
1% Decrease in Investment Returns to 5%	177,916

We provide this sensitivity information to caution the reader regarding the need to use conservative assumptions. For example, if one uses a growth rate for float that approaches the discount rate, the present value figure will approach an infinite value. Common sense must govern the assumptions we use and the results derived from estimates using this model. We believe that the assumptions used in the baseline case presented in this report are well supported by past history and reasonable assumptions regarding the future.

Readers who are interested in performing additional sensitivity analysis can get a feel for the nature of changing various variables by modifying the estimated values in the "Insurance Segment Valuation" Excel spreadsheet that accompanies this report or by simply replacing our assumptions in the equations presented above.

[48] See page 47 of the 2009 Annual Report for details on the treatment of goodwill for statutory accounting purposes vs. GAAP.

Utilities and Energy

One of the most compelling aspects of Berkshire Hathaway's business model is that the company is constantly searching for new and diverse streams of income that can be obtained through investments of the free cash flow generated by the insurance subsidiaries and other operating companies. Simply because a particular operating unit generates cash flow does not mean that the cash flow should automatically be reinvested where it was generated. An excellent example of Berkshire's ability to redeploy cash flow into new business ventures is the investment in MidAmerican Energy Holdings Company which is the primary entity making up the Utilities and Energy reporting segment.

In 2009, Utilities and Energy generated $1,071 million of net income which nearly equals the depressed net income contribution from Berkshire's diverse manufacturing, service, and retailing group. Prior to March 2000, the Utilities and Energy reporting segment did not even exist, meaning that the earnings stream from utilities and energy was built entirely over the past decade through reinvestment of cash flows from other sources at Berkshire. The following exhibit shows the investments that Berkshire has made in MidAmerican over the past decade as disclosed in the company's annual 10-K filings:

Event Date	Description	Amount (millions)	Economic Interest	Voting Interest
March 14, 2000	900,942 shares of Common stock and 34,563,395 shares of a non-dividend paying convertible preferred stock.	1240	76.0%	9.7%
March 14, 2000	11% non-transferable trust preferred security.	455	76.0%	9.7%
March 2002	6,700,000 shares of convertible preferred stock	402	83.4%	9.7%
March 2002	11% non-transferable trust preferred security.	1273	83.4%	9.7%
August 2003	Partial redemption of 11% non-transferrable trust preferred security.	(150)	83.4%	9.7%
February 9, 2006	Upon repeal of PUHCA, Berkshire converted preferred stock to common stock and, upon conversion, owned 83.4% of voting common shares.	N/A	83.4%	83.4%
March 21, 2006	Acquisition of additional common shares to finance MidAmerican's purchase of PacifiCorp.	3400	87.8%	87.8%
March 2009	Berkshire issued 74,574 shares of Class B Common Stock to acquire certain non-controlling shareholder interests in MidAmerican. Berkshire Class B average closing price in March was approximately $2680 assigning an approximately $200 million market valuation to the stock issued.	200	89.5%	89.5%

Exhibit 9: Investments in MidAmerican Energy Holdings since March 2000

The Utility and Energy segment businesses include the operations of MidAmerican energy which serves 725,000 electric customers primarily in Iowa; Yorkshire Electricity and Northern Electric serving 3.8 million customers in the United Kingdom; Pacific Power and Rocky Mountain Power serving 1.7 million

customers in six western states; and Kern River and Northern Natural pipelines which carry approximately 8 percent of the natural gas consumed in the United States. When viewed from the perspective of nearly a decade after Berkshire began acquiring an interest in MidAmerican, the wisdom of the decision to go into utilities and energy cannot be denied, as Warren Buffett pointed out in a recent letter to shareholders:

> ***"We agreed to purchase 35,464,337 shares of MidAmerican at $35.05 per share in 1999, a year in which its per-share earnings were $2.59. Why the odd figure of $35.05? I originally decided the business was worth $35.00 per share to Berkshire. Now, I'm a "one-price" guy (remember See's?) and for several days the investment bankers representing MidAmerican had no luck in getting me to increase Berkshire's offer. But, finally, they caught me in a moment of weakness, and I caved, telling them I would go to $35.05. With that, I explained, they could tell their client they had wrung the last nickel out of me. At the time, it hurt.***
>
> ***Later on, in 2002, Berkshire purchased 6,700,000 shares at $60 to help finance the acquisition of one of our pipelines. Lastly, in 2006, when MidAmerican bought PacifiCorp, we purchased 23,268,793 shares at $145 per share.***
>
> ***In 2007, MidAmerican earned $15.78 per share. However, 77¢ of that was non-recurring – a reduction in deferred tax at our British utility, resulting from a lowering of the U.K. corporate tax rate. So call normalized earnings $15.01 per share. And yes, I'm glad I wilted and offered the extra nickel." – Warren Buffett[49]***

David Sokol is the Chairman of MidAmerican and Greg Abel is the current Chief Executive Officer. Mr. Sokol held the CEO position from 1991 to 2008 and holds a minority ownership interest in MidAmerican. Mr. Sokol is now Chairman and CEO of NetJets, another Berkshire subsidiary, and has been considered a potential future Berkshire CEO.

"Our partners in ownership of MidAmerican are Walter Scott, and its two terrific managers, Dave Sokol and Greg Abel. It's unimportant how many votes each party has; we make major moves only when we are unanimous in thinking them wise. Eight years of working with Dave, Greg and Walter have underscored my original belief: Berkshire couldn't have better partners." – Warren Buffett[50]

David Sokol

[49] Warren Buffett's 2007 Letter to Shareholders, Page 11.
[50] Warren Buffett's 2007 Letter to Shareholders, Page 10.

Earnings Summary: 2003 to 2009

The earnings summary for MidAmerican Energy Holdings appears in the exhibit below. Until 2005, the business was not fully consolidated in Berkshire's financial statements. Following the repeal of the Public Utility Holding Company Act (PUHCA)[51] on February 8, 2006, Berkshire converted its preferred stock to common stock and exceeded the ownership level required to consolidate MidAmerican. The presentation below was obtained from Berkshire's management discussions and allows for comparability before and after consolidation:

All figures in millions	2009	2008	2007	2006	2005	2004	2003
U.K. Utilities	248	339	337	338	308	326	289
Iowa Utility	285	425	412	348	288	268	269
Western Utilities	788	703	692	356			
Pipelines	457	595	473	376	309	288	261
Home Services	43	(45)	42	74	148	130	113
Income (Loss) from discontinued zinc project					8	(579)	(46)
Other (net)	25	186	130	245	107	172	190
Operating earnings before corporate interest and taxes	1,846	2,203	2,086	1,737	1,168	605	1,076
Constellation Energy		1,092					
Interest, other than to Berkshire	(318)	(332)	(312)	(261)	(200)	(212)	(225)
Interest on Berkshire Junior Debt	(58)	(111)	(108)	(134)	(157)	(170)	(184)
Income Tax	(313)	(1,002)	(477)	(426)	(248)	(53)	(251)
Net Earnings	**1,157**	**1,850**	**1,189**	**916**	**563**	**170**	**416**
Net Earnings Applicable to Berkshire	**1,071**	**1,704**	**1,114**	**885**	**523**	**237**	**429**
Debt owed to others	19,579	19,145	19,002	16,946	10,296	10,528	10,296
Debt owed to Berkshire	353	1,087	821	1,055	1,289	1,478	1,578

Exhibit 10: MidAmerican Energy Holdings Summary: 2003 to 2009

Net earnings applicable to Berkshire includes both Berkshire's share of net earnings from MidAmerican after subtracting minority interests as well as the interest (net of income taxes) that Berkshire receives from debt MidAmerican owes to Berkshire. As we would expect, net earnings jumped considerably after the purchase of PacifiCorp ("Western Utilities") in early 2006 which was funded, in part, by an additional $3.4 billion cash investment from Berkshire. There has been steady growth in the pipeline business over the years as well. Results in 2008 were unusually good due to a one time gain in

[51] For some basic background on the Public Utility Holding Company Act of 1935, see the Wikipedia entry at http://en.wikipedia.org/wiki/Public_Utility_Holding_Company_Act_of_1935.

Constellation Energy. MidAmerican realized a $917 million gain on the investment plus a $175 million breakup fee when an attempted takeover of Constellation was aborted[52]. Adjusting for the after-tax impact of this one time gain, normalized net earnings from MidAmerican over the past three years appears to be averaging roughly $1.1 billion per year. MidAmerican utilizes a significant amount of debt financing, but it should be noted that Berkshire Hathaway does not guarantee this debt. Berkshire continues to hold a small amount of MidAmerican's debt while debt owed to others totaled $19,579 million at the end of 2009.

In 2009, MidAmerican's results were impacted by lower regulated natural gas and electricity sales. This decline was due to lower consumption due to the economic downturn as well as mild temperatures in 2009. In addition, reported earnings were impacted by higher levels of depreciation due to additions of new wind-power generation facilities which was offset partially by lower costs of purchased natural gas and electricity. A weaker British Pound was mostly responsible for lower U.K. Utilities revenues when translated into U.S. Dollars.

We should highlight the fact that MidAmerican owns HomeServices of America which is the second largest full-service independent residential real estate brokerage firm in the United States. While HomeServices has posted poor results in recent years, there is every reason to believe that the company can generate $100 million or more in operating profits once real estate industry conditions normalize. This would represent additional upside value not explicitly recognized by using the past three years to approximate normalized earnings. There have already been improvements at HomeServices with a return to profitability in 2009. In his letter to shareholders, Warren Buffett predicted that HomeServices would be "much larger" in a decade[53].

Utility and Energy Valuation

From a valuation perspective, MidAmerican's electric utility and natural gas pipeline business are similar to other utilities operating in the United States with publicly traded stocks. However, there are no comparable companies that exactly match MidAmerican's mix of utilities in the United Kingdom and United States along with its interest in HomeServices.

We will take a simple approach in our valuation of Berkshire's Utility and Energy segment by applying a market multiple to the earnings attributed to Berkshire's ownership interest. Value Line Investment Survey publishes data for the electric utility industry in the United States. The February 26, 2010 issue[54]

[52] For more details on the Constellation transaction, see page 71 of the 2008 Annual Report.
[53] Warren Buffett's 2009 Letter to Shareholders, page 8.
[54] See Value Line Investment Survey, "Electric Utility (East) Industry", page 148, dated February 26, 2010. While the industry page is specific to the Eastern United States, the composite data are for a composite of the western, central, and eastern regions.

contains composite statistics for all of Value Line's electric utility sub-industry classifications (West, Central, and East). Value Line estimates that the average price/earnings ratio for the industry was 14.8 in 2006, 17.0 in 2007, 15.4 in 2008, and 15.4 in 2009. It appears that a P/E multiple of 15 to 16 is well supported. We will calculate the Utility and Energy Segment valuation as follows:

$$\boldsymbol{Valuation = Normalized\ Earnings\ Applicable\ to\ Berkshire\ x\ 15\ PE\ Multiple}$$

$$\boldsymbol{Valuation = \$1.1\ Billion\ x\ 15 = \$16.5\ Billion}$$

As a reality check on this figure, it is useful to note that the carrying book value of the Utility and Energy segment is $19.3 Billion as of December 31, 2009 based on data presented in the Consolidated Balance Sheet. It is highly unlikely that the market value of MidAmerican could be any less than $16.5 billion. In fact, our simple valuation model produces a result that could be viewed as far too conservative given the quality of MidAmerican's business units.

Finance and Financial Products

Berkshire Hathaway's Finance and Financial Products segment consists of companies engaged in the sale and financing of manufactured homes, transportation and furniture equipment leasing, and operations engaged in various proprietary investment strategies. Warren Buffett has personally managed many of the proprietary strategies over the years leading some observers to consider the "proprietary strategies" portion of this reporting segment to be "Buffett's Hedge Fund". On a less pleasant note, the unwinding of the General Re derivatives book[55] also took place within this segment. Berkshire also had an investment in Value Capital, an investment fund run outside Berkshire, which was wound down in 2006.

The following exhibit provides a summary of the Financial Products Segment for the past five years:

All figures in millions	2009		2008		2007		2006		2005	
	Revenue	**Earnings**	**Revenue**	**Earnings**	**Revenue**	**Earnings**	**Revenue**	**Earnings**	**Revenue**	**Earnings**
Manufactured Housing and Finance	3257	187	3560	206	3665	526	3570	513	3175	416
Furniture & Transportation Equipment Leasing	661	14	773	87	810	111	880	182	856	173
Other Earnings	669	580	614	494	644	369	674	462	528	233
Total Revenues	4587		4947		5119		5124		4559	
Pre-Tax Earnings		781		787		1006		1157		822
Income Taxes and Minority Interests		287		308		374		425		308
Net Earnings		**494**		**479**		**632**		**732**		**514**

Exhibit 11: Financial Products Segment Selected Data: 2005 to 2009

Clayton Homes: *The Survivor*

Clayton Homes is the largest company in the manufactured home industry with deliveries of 27,499 units to customers in 2008, which was approximately 34% of the industry's total sales of 81,889 units for the year[56]. Total industry sales collapsed to 60,000 units in 2009. The manufactured housing industry has been in a near freefall for years since hitting a peak of 372,843 units in 1998. Unlike the majority of competitors in the

The Clayton i-House

[55] For a description of the Gen Re derivatives runoff, see Warren Buffett's 2003 Letter to Shareholders, page 14. In Mr. Buffett's 2006 Letter to Shareholders, he declares that the unwinding was nearly complete after $409 million in pre-tax losses.

[56] See Warren Buffett's 2008 Letter to Shareholders, page 9.

industry, Clayton refrained from pursuing unethical practices such as selling homes to buyers who clearly could not afford the product. Many manufactured housing companies were willing to finance homes for buyers who had no hope of affording the property in the long run because they could securitize mortgages and unload the debt to investors. In sharp contrast with the default rates afflicting most of the industry, Clayton's default rate was only 3.6% in 2008. Clayton accomplished this record by going back to the basics in terms of lending standards. The company has also demonstrated a willingness to help customer s who temporarily run into trouble[57].

One major headwind facing Clayton Homes is the differential between mortgage rates available to buyers of traditional site-built homes compared to buyers of factory-built homes. Government backed loans are particularly difficult for potential Clayton customers to secure. The disadvantage facing buyers of manufactured housing in terms of higher interest rates can often offset the price advantage of a factory-built home[58].

While Clayton's results over the past two years have reflected the unprecedented decline in the housing sector, it is notable that the company has remained profitable and has been able to avoid the disastrous pitfalls facing many competitors. Clayton has been introducing innovative new products such as the Clayton i-House pictured on the previous page. The i-House is designed to appeal to buyers who are concerned about environmental impacts and could expand the reach of manufactured housing into demographics that previously would not have considered a home that is not site built.

Clayton Homes has formidable advantages over its competitors, not the least of which is backing from Berkshire Hathaway when it comes to funding its loan portfolio. Since acquiring Clayton in 2003[59], Berkshire has issued debt to fund Clayton's loan portfolio and charges Clayton one percent over Berkshire's borrowing cost. The interest that Clayton pays to Berkshire is *in addition* to the figures reported as net income and appears instead in the "Other" category. In effect, Clayton is leveraging Berkshire's high credit rating to achieve a lower cost of funds than competitors.

When the eventual housing recovery comes, we believe that Clayton will be ideally positioned to gain additional market share and to surpass the peak earnings posted in 2007. It is not unreasonable to estimate that normalized earnings could exceed $400 million over the economic cycle based on Clayton's history.

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[57] For a more complete description of Clayton's experiences in the late 1990s, please read the following article on The Rational Walk, "Clayton Homes: An Admirable Track Record": http://www.rationalwalk.com/?p=550. For an article on Clayton's Payment Protection Plan, see http://www.rationalwalk.com/?p=1030

[58] See Warren Buffett's 2009 Letter to Shareholders, page 12.

[59] Warren Buffett's account of the Clayton purchase and the history of the company appears in his 2003 Letter to Shareholders, pages 4-5.

CORT and XTRA

CORT is a the national leader in "rent to rent" furniture that is used in both offices and residential locations such as temporary occupants of apartments. Many individuals confuse CORT with businesses engaged in the "rent to own" market serving low income people who usually have poor credit. Wesco Financial, an 80 percent owned subsidiary of Berkshire, purchased CORT in 2000. XTRA Corporation was purchased in September 2001 and is a leading operating lessor of transportation equipment such as over-the-road trailers and intermodal equipment. Together, CORT and EXTRA make up the Furniture and Transportation Leasing line item listed in the exhibit on the prior page.

As we can see from the exhibit, both leasing businesses have suffered over the past few years during the economic downturn. Earnings peaked in 2006 and have steadily declined since then. While this is not surprising given the nature of either business, the fundamental economics of both furniture and transportation leasing should remain intact once economic conditions improve. It is difficult to come up with a figure for normalized earnings, but it would be hard to argue for a number under $125 million.

Other Activities

The following exhibit shows the sources of pre-tax earnings that appear in the "Other Activities" line the Finance and Financial Products segment:

Breakdown of "Other Earnings" *All Figures in millions*	**2009**	**2008**	**2007**	**2006**	**2005**
Net Investment Income	278	330	272	274	200
Life and annuity operations	116	23	-60	29	11
Gen Re Securities Run Off	0	0	0	-5	-104
Value Capital	0	0	0	6	-33
Other, including interest paid to Berkshire by Clayton	186	141	157	158	159
Total Pre-Tax Earnings	**580**	**494**	**369**	**462**	**233**

Exhibit 12: Breakdown of "Other Activities" Pre-Tax Earnings

As we can see, earnings in this category come from diverse sources including investment and trading income, a life and annuity operation, and other activities including interest paid to Berkshire by Clayton Homes. In 2005 and 2006, there were charges for the derivatives book run-off at General Re and the termination of the Value Capital investment. Earnings in this category are difficult to predict in advance but it is not unreasonable to assume normalized earnings of approximately $400 million pre-tax.

Finance and Financial Products Valuation

Based on the discussion above and our estimates of normalized pre-tax earnings power of $400 million for Clayton Homes, $125 million for CORT and XTRA, and $400 million for Other Activities, we arrive at pre-tax normalized earnings of $925 million which should result in approximately $550 million of net income after minority interest and taxes. The inherent cyclicality of the business and the variability of the proprietary trading business argues for a conservative below market multiple of 10 times net normalized earnings:

Valuation = Normalized Earnings x 10 P/E Multiple

Valuation = $550 Million x 10 = $5.5 Billion

Manufacturing, Service, and Retailing

As Warren Buffett has said, Berkshire's activities in the manufacturing, service, and retailing segment "cover the waterfront". Indeed, this reporting segment includes businesses selling candy, carpet, paint, bricks, recreational vehicles, underwear, precision machinery, equipment for the livestock industry, and much more. Many of Berkshire's subsidiaries have numerous subsidiaries of their own. To take an extreme example, Marmon is a large conglomerate consisting of 130 manufacturing and service businesses operating in eleven diverse business sectors. Many of Berkshire's subsidiaries regularly make their own "tuck in" acquisitions such as Iscar's purchase of Tungaloy in November 2008.

In recent years, the granularity of Berkshire's reporting segments has been reduced by necessity due to the number of acquisitions that have taken place. For example, in the 1999 annual report, See's Candies had its own operating segment. Today, See's is consolidated into the "Retailing" segment which also contains Berkshire's furniture and jewelry businesses. This has made it somewhat more difficult to measure individual businesses over time as they are consolidated into larger reporting groups.

We will not attempt a detailed evaluation of each of the individual businesses within each segment. To do so would require a much more extensive discussion which could be interesting but would not shed much light on the aggregate intrinsic value of this reporting segment.

The following exhibit presents a high level overview of the contributions to revenues and earnings from each of the reporting segments within the manufacturing, service, and retailing group over the past five years:

All figures in millions	2009		2008		2007		2006		2005	
Reporting Segment	**Revenue**	**Pre Tax Profit**	**Revenue**	**Pre Tax Profit**	**Revenue**	**Pre Tax Profit**	**Revenue**	**Pre Tax Profit**	**Revenue**	**Pre Tax Profit**
Marmon	5,067	686	5,529	733						
McLane Company	31,207	344	29,852	276	28,079	232	25,693	229	24,074	217
Shaw Industries	4,011	144	5,052	205	5,373	436	5,834	594	5,723	485
Other Manufacturing	11,926	814	14,127	1,675	14,459	2,037	11,988	1,756	9,260	1,335
Other Service	6,585	(91)	8,435	971	7,792	968	5,811	658	4,728	329
Retailing	2,869	161	3,104	163	3,397	274	3,334	289	3,111	257
Total Revenues	61,665		66,099		59,100		52,660		46,896	
Pre-Tax Earnings		2,058		4,023		3,947		3,526		2,623
Income Taxes and Minority Interests		945		1,740		1,594		1,395		977
Net Earnings		**1,113**		**2,283**		**2,353**		**2,131**		**1,646**

Exhibit 13: Operating Summary for Manufacturing, Service, and Retailing 2005 to 2009

We can begin to form some initial impressions regarding the impact of the recent recession on the businesses in this group. Shaw Industries, manufacturing, and retailing have all been impacted by slow economic conditions in recent years. A discussion of each segment will shed more light on the five year history and allow us to form some impressions regarding prospects for these businesses in an economic recovery. But before we begin, it is instructive to step back ten years to view the manufacturing, service, and retailing group in the proper perspective.

Taking a Long Term View: 1999 to 2009

It is often difficult to gain a proper perspective regarding the progress of a company such as Berkshire Hathaway when one is looking at results from year to year. Satisfactory progress may occur or there may be some setbacks along the way. From time to time, dramatic acquisitions are made. To provide a more complete perspective on Berkshire's transformation over the past decade, let's step back a decade and examine the results of the businesses in this group that Berkshire owned in 1999.

All Figures in Millions		1999		
1999 Reporting Segment	**Current Segment Category**	**Revenue**	**Pre-Tax Earnings**	**BRK Share of Net Earnings**
Buffalo News	Other Service	157	55	34
Flight Services	Other Service	1856	225	132
Home Furnishings	Retailing	917	79	46
International Dairy Queen	Other Service	460	56	35
Jewelry	Retailing	486	51	31
Scott Fetzer Companies	Other Manufacturing	1021	147	92
See's Candies	Retailing	306	74	46
Shoe Group	Other Manufacturing	498	17	11
Totals		**5701**	**704**	**427**

Exhibit 14: 1999 Results for Businesses in today's Manufacturing, Service, and Retailing Segment

The exhibit shown above presents the revenue and pre-tax earnings of Berkshire Hathaway's non-insurance businesses in 1999. Each of the line items represents a reporting segment in 1999. We have also listed the present-day reporting segment in which each business now resides. In 1999, revenues of the non-insurance subsidiaries represented approximately 25.3 percent of the total for all of Berkshire's reporting segments[60].

In 2009, the revenue of the Manufacturing, Service, and Retailing group represented 54.8 percent of Berkshire's total revenue in all segments. Revenues have grown from $5.7 billion in 1999 to $61.7 billion in 2009 while pre-tax earnings have increased from $704 million in 1999 to a very depressed $2.1

[60] See Berkshire Hathaway 1999 Annual Report, page 41.

billion in 2009. Pre-tax earnings in 2007 and 2008 were close to $4 billion. Much of the drop in aggregate operating margin is due to the acquisition of McLane given its high sales volume and razor thin profit margins.

Where did this rapid growth come from? Clearly, the majority of the growth has been due to the numerous acquisitions of new wholly owned subsidiaries. Berkshire Hathaway in 2009 is barely recognizable from the perspective of someone who last examined the company ten years ago. As we have noted before, Warren Buffett routinely harvests free cash flow from the insurance and operating businesses and uses the funds to acquire new businesses with better prospects for high returns on invested capital.

We anticipate that this pattern will continue in the future and can be confident that Berkshire's collection of operating companies in 2019 will look much different than in 2009, although we find it unproductive to speculate on the specific moves that could be made.

Marmon

Berkshire purchased 60 percent of Marmon Holdings for $4.5 billion in March 2008 which, at the time, was the largest cash purchase in Berkshire's history[61]. Since the initial transaction, Berkshire has purchased additional shares of Marmon and now holds a 63.6 percent interest. Under the terms of the agreement, Berkshire will purchase the remaining shares of Marmon between 2011 and 2014 for consideration based on the future earnings of Marmon.

Marmon is a conglomerate built over the course of fifty years by the Pritzker family and currently made up of over 130 manufacturing and service businesses[62] that operate under independent management. It is notable that Marmon itself has a business model that is quite similar to Berkshire itself in terms of allowing individual subsidiaries to operate without micromanagement from headquarters. Marmon's management team includes the former CEO of Illinois Tool Works which is a highly successful conglomerate employing a similar management structure. Here is Warren Buffett's characterization of the Marmon transaction and management team:

> ***"We arrived at a price using only Marmon's financial statements, employing no advisors and engaging in no nit-picking. I knew that the business would be exactly as the Pritzkers represented, and they knew that we would close on the dot, however chaotic financial markets might be. During the past year, many large deals have been renegotiated or***

[61] Berkshire Hathaway 2007 Annual Report, Page 5.
[62] For a listing of Marmon's subsidiaries, follow this link: http://www.marmon.com/MemberCompanies.asp

> ***killed entirely. With the Pritzkers, as with Berkshire, a deal is a deal. Marmon's CEO, Frank Ptak, works closely with a long-time associate, John Nichols. John was formerly the highly successful CEO of Illinois Tool Works (ITW), where he teamed with Frank to run a mix of industrial businesses. Take a look at their ITW record; you'll be impressed". – Warren Buffett***[63]

Marmon's collection of businesses have not been spared from the impact of the recession. While Marmon's management was able to achieve a record high 13.5 percent pre-tax profit margin in 2009, sales were down 27 percent for the year compared to 2008 full year results[64]. Please note that the figures in the exhibit for 2008 show Marmon's results from the date of Berkshire's acquisition of the company rather than full year 2008 results.

While it may appear that Marmon's value has diminished since Berkshire's initial purchase, the fact that the company achieved record high pre-tax profit margins in 2009 demonstrates that the core economics of the business remain intact and should recover along with the economy. We will assume normalized pre-tax earnings power of $750 million for Marmon before minority interests.

McLane Company

McLane is engaged in the wholesale distribution of grocery and non-food items to retailers, convenience stores, and restaurants. The business was purchased from Wal-Mart Stores in 2003 for approximately $1.5 billion. McLane has accounted for close to fifty percent of revenues in the manufacturing, service, and retail group over the past five years.

McLane typically operates on very low margins (in most years pre-tax margins have been under one percent) so the contribution from the business is much less important as a percentage of overall group earnings. In recent years, McLane's contribution to the manufacturing, service, and retail group's pre-tax earnings has averaged approximately 6 percent. However, the fact that McLane held up well last year while most other businesses ran into severe headwinds increased McLane's contribution to the group's pre-tax earnings to 16.7 percent. Additionally, an inventory adjustment related to an increase in federal tobacco excise taxes boosted 2009 performance.

Taking a longer term view, McLane's business has held up well during the recession with increases in revenues and profits in each of the past four years. McLane is a good example of a solid, albeit boring, business with good long term economics driven by scale. Wal-Mart Stores still accounts for approximately one-third of McLane's revenues. With McLane now within the Berkshire family of

[63] See Warren Buffett's 2007 Letter to Shareholders, page 5.
[64] See Warren Buffett's 2009 Letter to Shareholders, page 11.

businesses, expansion possibilities have come up that were previously hindered by potential customers who competed with Wal-Mart and were reluctant to do business with a Wal-Mart subsidiary[65].

McLane's pre-tax profits of $344 million were enhanced by the tobacco excise factor discussed above so it is likely that 2010 pre-tax margins will not be as strong. However, it seems reasonable to expect pre-tax margins to come in at slightly under 1 percent which has been the pattern in recent years. We will assume normalized pre-tax earnings power for McLane of $310 million.

Shaw Industries

Shaw Industries is the world's largest manufacturer of tufted broadloom carpeting and also carries a full line of other types of flooring. Due to high correlation between spending on flooring items and the state of the real estate market, Shaw's results have suffered in recent years. Both new home construction and sales of existing homes have declined dramatically leading to the company's third consecutive year of declining revenues and earnings. The nature of Shaw's business is inextricably tied to the housing sector but, as the leading manufacturer within the industry, Shaw should have the ability to fully participate in the eventual recovery.

Berkshire purchased 87.3 percent of Shaw in January 2001 for $2.1 billion in cash. The remaining interest in Shaw was purchased in January 2002 for Berkshire stock with a market value of approximately $324 million. At the time of purchase, Shaw was Berkshire's largest non-insurance business[66].

Shaw's revenues in 2009 were $4,011 million which represents a decline of 21 percent from 2008. Carpet volumes declined 18 percent due to overall weakness in the housing sector. Pre-tax profits declined 30 percent from 2008 to $144 million. While Shaw was able to benefit from lower raw material costs in 2009, the company incurred higher manufacturing costs due to declining sales volume which decreased manufacturing efficiencies. The company incurred plant closure costs of $101 million in 2009 compared to closure costs of $59 million in 2008.

While it is difficult to predict the exact timing of a recovery in the housing sector, looking at Shaw's results over the past five years provides clues regarding the company's earnings power on a normalized basis. Shaw's pre-tax earnings peaked at $594 million in 2006 after posting pre-tax earnings of $466 million and $485 million in 2004 and 2005 respectively. Average pre-tax earnings for the past five years is calculated at $373 million. The 2005 to 2009 period includes both an unprecedented real estate

[65] See Warren Buffett's 2003 Letter to Shareholders, page 6.
[66] See discussion in Warren Buffett's 2001 Letter to Shareholders, page 13.

boom and bust. We will take a conservative approach and assume normalized pre-tax earnings power of $350 million for Shaw which is slightly under the five year average.

Other Manufacturing

The Other Manufacturing group is comprised of a number of distinct businesses including manufacturers of building products such as Acme Building Products, Benjamin Moore paints, Johns Mansville, and MiTek. Berkshire's apparel business is led by Fruit of the Loom which also includes Russell athletic brands and Vanity Fair brands. Other manufacturers also includes Iscar, Forest River, and CTB International.

As we have seen in other reporting segments, Berkshire's businesses in this group have faced serious headwinds during the recession. Overall sales for the group declined to $11,926 million from $14,127 million in 2008. Pre-tax profits fell by 51 percent to $814 million from $1,675 million in 2008. Profits were impacted both by lower sales and a reduction in manufacturing efficiencies as facility utilization declined along with production. Berkshire has reported that all of the businesses in this group have taken cost reduction measures and will delay capital spending until the economy improves.

The Other Manufacturing group had average pre-tax earnings of $1,523 million over the past five years. Peak pre-tax earnings of $2,037 million were recorded in 2007. While we cannot predict the exact arrival of positive impacts associated with an economic revival, an assumption of $1,500 million in pre-tax earnings strikes us as reasonable for this group since the average includes both an economic boom and the most severe economic downturn since the Great Depression.

While it is not practical to provide a profile of each of the businesses in this group, we would like to briefly highlight Iscar Metalworking. Berkshire purchased 80 percent of Iscar for $4 billion in 2006 with the remaining 20 percent ownership retained by the founding Wertheimer family. Iscar has demonstrated resilience during the economic downturn. Although results were down significantly from 2008, Iscar reported profits while its largest two competitors operated at a loss throughout most of the year[67]. Here is how Warren Buffett described Iscar's business in a recent annual letter to shareholders:

> ***"Iscar continues its wondrous ways. Its products are small carbide cutting tools that make large and very expensive machine tools more productive. The raw material for carbide is tungsten, mined in China. For many decades, Iscar moved tungsten to Israel, where brains turned it into something far more valuable. Late in 2007, Iscar opened a large plant in***

[67] See Warren Buffett's 2009 Letter to Shareholders, page 11.

> ***Dalian, China. In effect, we've now moved the brains to the tungsten. Major opportunities for growth await Iscar. Its management team, led by Eitan Wertheimer, Jacob Harpaz, and Danny Goldman, is certain to make the most of them". – Warren Buffett[68]***

Mr. Buffett is so confident in Iscar's leadership that he is expanding the reach of the company through "tuck in" acquisitions such as Iscar's purchase of Japanese tool maker Tungaloy in 2008 for a reported $1 billion[69].

Iscar is one of many examples of a family owned and operated business that decided to sell to Berkshire Hathaway due to a desire to ensure that the company will be able to continue operating in the manner that led to its initial success while also benefitting from the backing of Berkshire's unique strengths. When Iscar Chairman Eitan Wertheimer decided to sell his business, he wrote a brief letter to Warren Buffett introducing the company. According to Mr. Buffett, the quality of the company and the character of management "jumped off the page"[70]. We discuss management succession issues at Berkshire in a later chapter. One key concern is whether family run businesses will be as willing to sell to Berkshire after Warren Buffett steps down as CEO.

Other Service

Other Service is a diverse group of businesses includes NetJets, Flight Safety, Business Wire, The Pampered Chef, International Dairy Queen, and The Buffalo News. Of these businesses, NetJets has the most impact on the aggregate results of the group. There is limited disclosure regarding the results of each individual business unit within this group but the 2009 annual report does highlight the fact that NetJets has been the main driver of poor results during the recession.

NetJets has been a major problem for Berkshire Hathaway in recent years. While the company is the clear leader in fractional ownership of jets and has an excellent reputation for customer service and safety, financial results have left much to be desired in the years since Berkshire's acquisition of the company for $725 million in 1998. Over the course of Berkshire's ownership, NetJets has posted cumulative pre-tax losses of $157 million while debt soared from $102 million to a peak of $1.9 billion in April 2009. According to Warren Buffett, NetJets would have been "out of business" without Berkshire's backing[71]. NetJets also had a management change in 2009 when the company's founder and longtime CEO Rich Santulli was replaced by David Sokol who also serves as Chairman of MidAmerican.

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[68] Warren Buffett's 2007 Letter to Shareholders, page 13.
[69] See Reuters article at http://www.reuters.com/article/idUST7920020080922
[70] Warren Buffett's 2006 Letter to Shareholders, page 5. For an interview of Mr. Wertheimer, please see the following link: http://www.rationalwalk.com/?p=1966
[71] See Warren Buffett's 2009 Letter to Shareholders, Page 11.

> ***"Dave Sokol, the enormously talented builder and operator of MidAmerican Energy, became CEO of NetJets in August. His leadership has been transforming: Debt has already been reduced to $1.4 billion, and, after suffering a staggering loss of $711 million in 2009, the company is now solidly profitable.***
>
> ***Most important, none of the changes wrought by Dave have in any way undercut the top-of-the-line standards for safety and service that Rich Santulli, NetJets' previous CEO and the father of the fractional ownership industry, insisted upon. Dave and I have the strongest possible personal interest in maintaining these standards because we and our families use NetJets for almost all of our flying, as do many of our directors and managers. None of us are assigned special planes nor crews. We receive exactly the same treatment as any other owner, meaning we pay the same prices as everyone else does when we are using our personal contracts. In short, we eat our own cooking. In the aviation business, no other testimonial means more." – Warren Buffett[72]***

While it is reassuring to read that Warren Buffett has confidence in the future of NetJets, it must be noted that prior commentary on this business has been very positive over the past twelve years. The fact that David Sokol has been brought in to fix the business is a positive sign given his track record at MidAmerican and also has led many to believe that Mr. Sokol may be a top candidate for the CEO position at Berkshire once Mr. Buffett steps down[73].

The Other Service group posted a pre-tax *loss* of $91 million in 2009 compared to pre-tax profits of $971 million in 2008. NetJets posted a $711 million loss for 2009 and included asset writedowns of $676 million. At this time, Berkshire management has indicated that no further writedowns should be required and, barring a further economic downturn or political action against private aviation, NetJets should return to profitability in 2010[74].

While 2009 results were very poor, it is very likely that this represents an aberration due to the results at NetJets. In the five year period from 2004 to 2008, the Other Service group posted average pre-tax profits of $668 million with peak pre-tax profits of $971 million in 2008. While we should not rely on a return to peak profitability in our valuation, it appears reasonable to assume that long term normalized pre-tax earnings power should be at least $750 million.

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[72] See Warren Buffett's 2009 Letter to Shareholders, Page 12.

[73] See the following article on The Rational Walk for more information and links to additional articles on Mr. Sokol: http://www.rationalwalk.com/?p=3008. For more articles and continuing coverage of Mr. Sokol, follow this link: http://www.rationalwalk.com/index.php?s=%22David+Sokol%22

[74] See Berkshire Hathaway 2009 Annual Report, page 72. Also, see this article on The Rational Walk for an interview with Mr. Sokol on CNBC where he comments on prospects for profitability at NetJets in 2010: http://www.rationalwalk.com/?p=4375.

Retailing

The Retailing segment consists of Berkshire's home furnishing and jewelry businesses as well as See's Candies. The home furnishing businesses include Nebraska Furniture Mart, R.C. Willey[75], Star Furniture, and Jordan's. The jewelry businesses include Borsheim's, Helzberg, and Ben Bridge. Given the decline in overall economic activity during 2009, it is notable that the group posted roughly flat pre-tax profits of $161 million on a revenue decline of approximately 8 percent. See's Candies, Star Furniture, and Nebraska Furniture Mart posted increased pre-tax earnings while the Jewelry businesses posted a pre-tax loss. Please see the introductory essay of this document, *From Cigar Butts to Business Supermodels*, for a more in depth discussion of See's Candies.

The Retailing group posted peak pre-tax profits of $289 million in 2006 and had average pre-tax profits of $229 million over the past five years. The presence of an economic moat in many of these businesses is readily apparent based on results in 2008 and 2009. Based on our assessment of the economic characteristics of these businesses, we fully expect an eventual return to peak levels of profitability. However, due to the unknown timing and pace of the economic recovery, we will assume normalized earnings of $230 million in our valuation which is approximately equal to the five year average.

Manufacturing, Service, and Retailing Valuation

The following table presents a summary of our estimate of "normalized" pre-tax earnings for the manufacturing, service, and retailing group:

Reporting Segment	Pre-Tax Normalized Earnings (millions)
Marmon	350
McLane Company	750
Shaw Industries	310
Other Manufacturing	1,500
Other Service	750
Retailing	230
Total	**3,890**

After accounting for minority interests and taxes, the contribution of the manufacturing, service, and retaining group to normalized net earnings should be approximately $2,150 million. Net earnings came in at $1,113 million for the group in a very depressed 2009 but net income was in the neighborhood of our normalized $2,150 million estimate from 2006 to 2006 *even though Marmon's contribution did not*

[75] For a fascinating account of R.C. Willey, please see the following book review of The R.C. Willey Story: How to Build a Business Warren Buffett Would Buy: http://www.rationalwalk.com/?p=3094.

exist prior to the March 2008 acquisition. Our estimate of normalized net income for this segment implicitly assumes that peak earnings of $2,353 million in 2007 before Marmon's acquisition will not be exceeded for some time. Therefore, a quick economic recovery would make these assumptions too conservative.

The current book value of the Manufacturing, Service, and Retailing segment is $30,469 million which includes $16,499 million of Goodwill[76]. As Warren Buffett has noted in his letters to shareholders, Berkshire Hathaway's operating subsidiaries have economic goodwill that exceeds the goodwill carried on the balance sheet. This is confirmed when one looks at the earnings power of the businesses compared to tangible capital. Applying a multiple of 15 times our estimate of normalized net income of $2,150 million results in a valuation of $32,250 million for the group which only slightly exceeds book value. This is likely to be a conservative estimate.

Valuation = Normalized Earnings x 15 P/E Multiple

Valuation = $2,150 Million x 15 = $32.25 Billion

[76] Berkshire Hathaway 2009 Annual Report, page 10.

Berkshire Hathaway Valuation Summary

As we described in the *Valuation Approach* section, we consider the float based valuation model for Berkshire Hathaway's insurance subsidiaries to be the most intellectually sound method for arriving at the intrinsic value of the business. We have made conservative estimates regarding the future of Berkshire's insurance subsidiaries to arrive at an estimate of the present value of the cash flows Berkshire is likely to generate on policyholder float. We then added this present value estimate to the statutory surplus of the insurance business to arrive at a valuation for the insurance group. We then examined Berkshire's other sources of value in Finance and Financial Services, Utilities and Energy, and Manufacturing, Service, and Retailing. The table below provides a summary of the valuation of each of the components of value:

Business Group	**Intrinsic Value Estimate** *(figures in millions)*
Insurance Subsidiaries	202,681
Utilities and Energy	16,500
Finance and Financial Products	5,500
Manufacturing, Service, and Retail	32,250
Total	**256,931**

The total of $256.9 billion implies a valuation of $165,575 per A share. Berkshire Hathaway had a total of 1,551,749 Class A equivalent shares outstanding on December 31, 2009. Each B share has the economic interest of 1/1500 of one A share.

To avoid false precision, let us round the estimate to $165,000/A share and $110/B share.

As we noted in the *Sensitivity Analysis* of the Insurance section of this document, one objection to the float based valuation model is the fact that relatively small changes in variables such as the cost of float or growth of float produce large changes in the present value calculation. For example, a one percent increase in the growth of float assumption results in an additional $92.5 billion to our estimate of intrinsic value. A one percent increase in the cost of float would reduce our estimate of intrinsic value by $24.8 billion.

While the use of aggressive assumptions can indeed result in intrinsic value estimates that appear far too high, by using conservative assumptions well grounded in past experience and reasonable expectations of future developments, we believe that the valuation presented here is defensible and realistic. However, as we will point out in the next section, alternative ways of looking at Berkshire's intrinsic value may produce lower valuations that are more in line with Berkshire's typical trading levels in recent years.

Alternative Valuation Approaches

Charlie Munger and others have advocated the use of multiple mental models when evaluating investments. Through the use of multiple models, the analyst has an opportunity to examine a business from several perspectives. This process can sometimes lead to the conclusion that certain long held assumptions may be invalid or may require adjustments. When applied to the subject of valuation, multiple models allow us to perform useful reality checks. In this spirit, we will briefly outline two alternative methods that many analysts have used to evaluate Berkshire Hathaway's intrinsic value.

The "Two Column" Approach

In several recent annual reports, Warren Buffett has commented directly on the subject of intrinsic value by stating that Berkshire can be viewed as having two major "areas of value"[77]. The first area of value is represented by Berkshire's investments in stocks, bonds, and cash equivalents, not including investments held in the finance and utility operations. The second area of value is represented by earnings coming from sources other than investments and insurance. Mr. Buffett excludes earnings coming from the insurance group because the value of the insurance operations comes from investable funds that are generated and included in the first area of value.

At the end of 2009, Berkshire's consolidated cash and invested assets outside of the utility and financial products divisions was approximately $146 billion[78]. We have outlined the results of Berkshire's non-insurance businesses in previous sections of this report and assigned an intrinsic value estimate of $54.25 billion to these businesses based on estimates of normalized income and conservative earnings multiples. Mr. Buffett has not specifically commented on how to value the earnings steam of the non insurance subsidiaries but the use of conservative multiples of normalized earnings seems like a reasonable approach.

One implicit assumption embedded in the two column approach is that insurance subsidiary float will continue to be cost free over long periods of time. Otherwise, it would not be appropriate to consider Berkshire's total investments without deducting part of the total funded by policyholder float.

Our estimate of Berkshire's intrinsic value using the "two column" approach is $200.25 billion which is the sum of the two areas of value. This results in an intrinsic value estimate of approximately $129,000 per A share and $86 per B share.

The value of Berkshire based on the "Two Column" approach is $129,000/A share and $86/B share.

[77] For example, see the 2008 Annual Report, page 5.
[78] See Berkshire Hathaway 2009 Annual Report, page 75.

Multiple of Book Value Approach

One of the most easily obtained statistics on Berkshire Hathaway's progress is book value per share. This figure is reported in each quarterly and annual report and can be tracked over time. While there are serious limitations associated with using book value as a proxy for Berkshire's intrinsic value, *changes* in book value can signal corresponding *changes* in intrinsic value.

> ***"In aggregate, our businesses are worth considerably more than the values at which they are carried on our books. In our all-important insurance business, moreover, the difference is huge. Even so, Charlie and I believe that our book value – understated though it is – supplies the most useful tracking device for changes in intrinsic value." – Warren Buffett***[79]

Mr. Buffett has also commented directly on the relationship between book value and intrinsic value for the insurance subsidiaries:

> ***"Our property-casualty (P/C) insurance business has been the engine behind Berkshire's growth and will continue to be. It has worked wonders for us. We carry our P/C companies on our books at $15.5 billion more than their net tangible assets, an amount lodged in our "Goodwill" account. These companies, however, are worth far more than their carrying value – and the following look at the economic model of the P/C industry will tell you why." – Warren Buffett***[80]

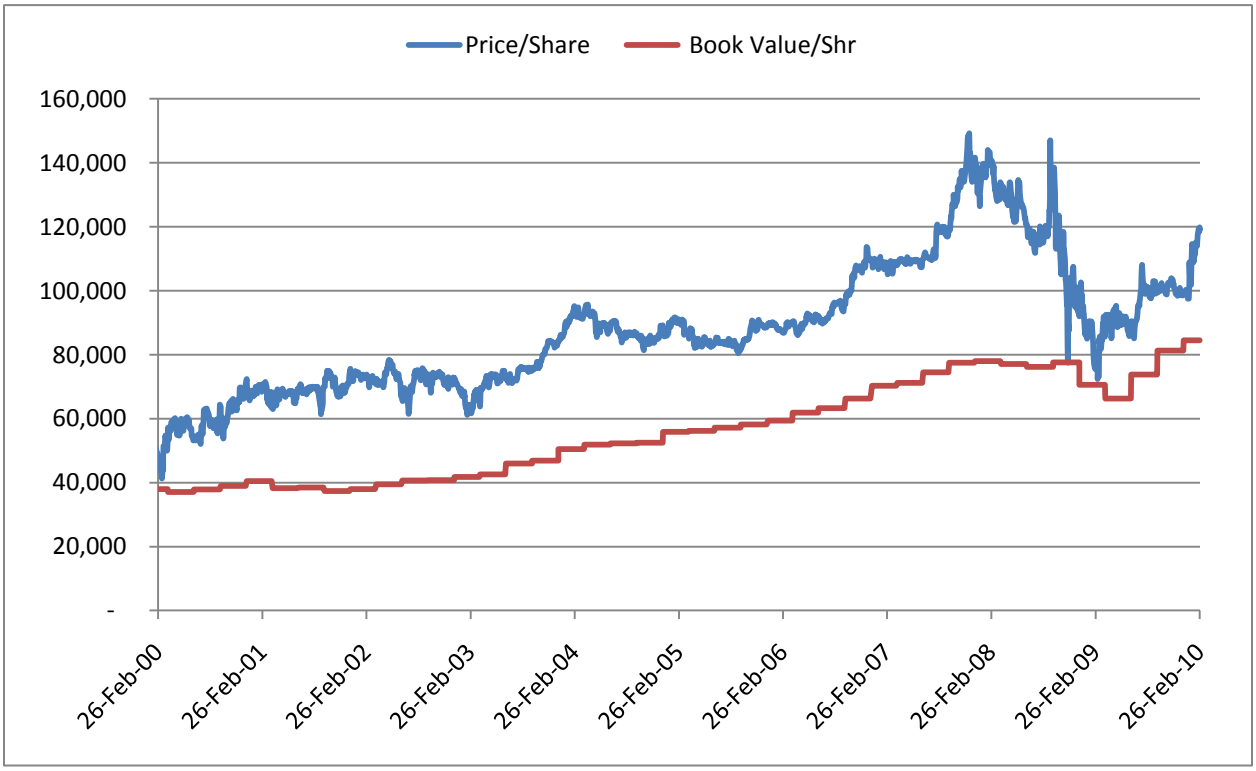
Book value is seriously limited as an intrinsic value proxy due to the fact that the carrying value of subsidiaries that were purchased in the distant past are reported at historic value rather than the current market value of the subsidiary. In certain cases, the difference can be very large. Warren Buffett explains the distinction between book value and intrinsic value in the Owner's Manual[81] which every shareholder and potential shareholder should review.

In an attempt to examine the typical relationship between Berkshire's market value and book value, we obtained data for Berkshire's closing price for each trading day between January 1, 2000 and February 26, 2010[82]. We compared each daily closing price with the book value figure corresponding to the closing date of the last quarter. For example, we compared the closing price on February 26, 2010 to the book value figure on December 31, 2009.

[79] See 2009 Letter to Shareholders, page 3
[80] See 2009 Letter to Shareholders, page 6
[81] The Owner's Manual is available in every annual report and as a separate document on the Berkshire Hathaway website at http://www.berkshirehathaway.com/ownman.pdf.
[82] The full data set is available in the Excel workbook that accompanies this paper. Source: Google Finance.

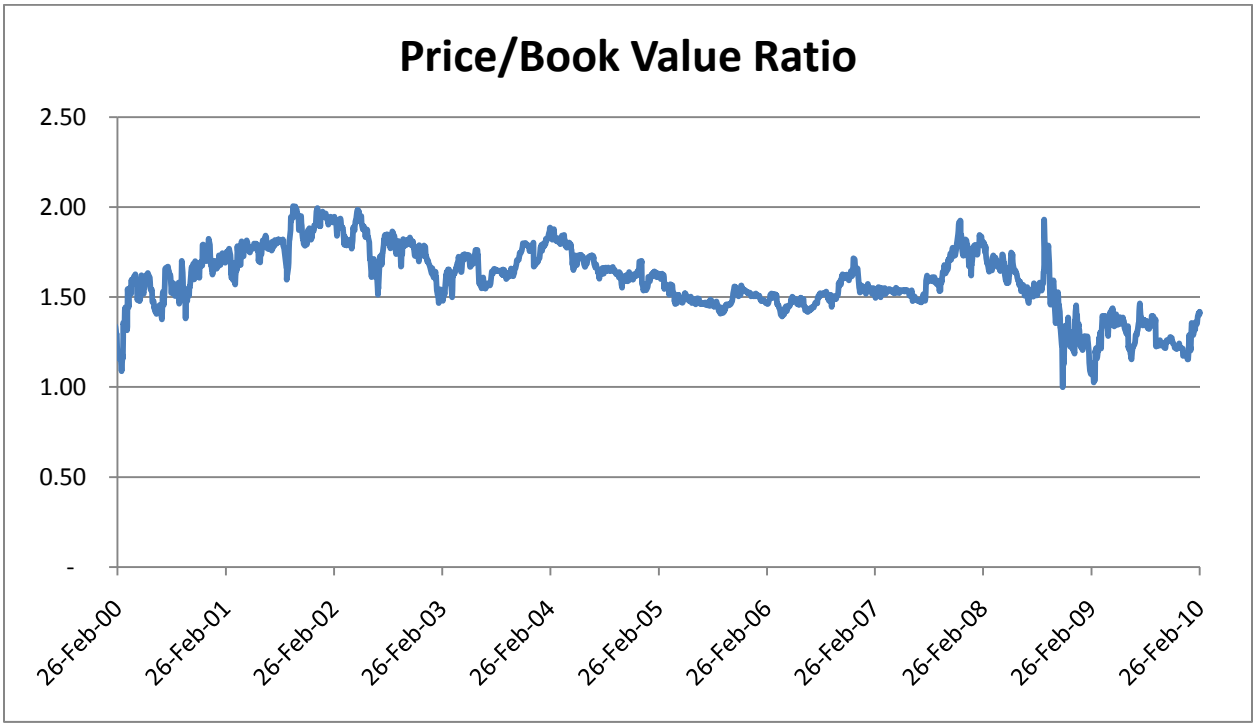
The result of this analysis revealed that the price to book value ratio has ranged between 1.0 and 2.0 with an average ratio of 1.59 over the past ten years. The standard deviation of price/book values was 0.18, meaning that price/book value ranged between 1.41 and 1.77 approximately 68 percent of the time.

The chart displayed below shows the closing price of Berkshire Hathaway A shares from February 26, 2000 to February 26, 2010 along with the book value per share figure for the fiscal period end date preceding the market value date. As we can see, Berkshire's market price is far more volatile than its book value. This is to be expected given the inherent mood swings that exist in markets, as embodied by Benjamin Graham's fictional "Mr. Market" character. At times, the market has been willing to pay only book value for Berkshire while at other times, Mr. Market has offered to pay twice book value.



Over the past two years, the volatility in Berkshire's market price has been quite high. Book value also took a hit during this period as the market value of Berkshire's investments declined precipitously in 2008 and 2009. Since the market bottom in the first quarter of 2009, Berkshire's book value has more than fully recovered and stands at a record high level of $84,487 as of December 31, 2009. The current market price to book value ratio is 1.42 based on Berkshire's closing price of $119,800 on Friday, February 26. While this is well above the lowest ratios recorded over the past two years, it is still far below the average ratio of 1.59.

The following chart shows the market price to book value ratio over the past ten years:



We can see that the ratio has consistently been below the average level in recent years. Despite a recovery in Berkshire's share price since the 2009 market lows, market value has failed to fully reflect the recovery of book value.

If we use the average price to book ratio of 1.59 and apply it to Berkshire's 2009 year end book value of $84,487, we arrive at a price of slightly more than $134,000 per A share or $89 per B share. Although one can argue that the average ratio of the past ten years is too high or too low, it seems like a reasonable proxy of what the market has been willing to pay for each dollar of book value.

The value of Berkshire based on the Book Value approach is $134,000/A share and $89/B share.

For those who wish to arrive at a broad range of potential values for Berkshire Hathaway, it is possible to take the "two column" approach as a minimum value and the "float based" approach as a maximum value noting that the $165,000/A share float valuation is at the upper end of historical price/book ratios. This would give us an intrinsic value range of $129,000 to $165,000 per A share and $86 to $110 per B share.

Using a composite of the three valuation methods, we can view Berkshire's intrinsic value range as between $129,000 and $165,000 per A share and $86 to $110 per B share.

Q1 2010 Developments

There were two major developments that took place after the end of 2009. While the data used in our valuation is based on information contained in Berkshire Hathaway's 2009 annual report, we will also take a brief look at developments during the first quarter of 2010 given the importance of the Burlington Northern Santa Fe acquisition and Berkshire's inclusion in the Standard & Poor's 500 index.

Burlington Northern Acquisition

Berkshire did not include projections regarding the impact of the Burlington Northern acquisition on pro-forma consolidated financial statements because the close of the Burlington acquisition only took place two weeks prior to publication of the annual report. However, Warren Buffett did include extended commentary on the acquisition in his letter to shareholders and devoted significant attention to the use of Berkshire's stock to fund part of the acquisition:

> ***In our BNSF acquisition, the selling shareholders quite properly evaluated our offer at $100 per share. The cost to us, however, was somewhat higher since 40% of the $100 was delivered in our shares, which Charlie and I believed to be worth more than their market value. Fortunately, we had long owned a substantial amount of BNSF stock that we purchased in the market for cash. All told, therefore, only about 30% of our cost overall was paid with Berkshire shares.***
>
> ***In the end, Charlie and I decided that the disadvantage of paying 30% of the price through stock was offset by the opportunity the acquisition gave us to deploy $22 billion of cash in a business we understood and liked for the long term. It has the additional virtue of being run by Matt Rose, whom we trust and admire. We also like the prospect of investing additional billions over the years at reasonable rates of return. But the final decision was a close one. If we had needed to use more stock to make the acquisition, it would in fact have made no sense. We would have then been giving up more than we were getting.***[83]

Final terms for the acquisition were announced on February 12, 2010 and the following table shows the composition of cash and shares used to fund the purchase:

BNI Elections	Shares of BNI	Cash Value Paid ($)	Stock Value Paid ($)	Total Consideration
No Election	41,760,408	4,176,040,800		4,176,040,800
Elected Cash	108,054,170	10,805,417,000		10,805,417,000
Elected Stock	114,692,846	888,869,557	10,580,415,044	11,469,284,600
Totals	**264,507,424**	**15,870,327,357**	**10,580,415,044**	**26,450,742,400**

Exhibit 15: Composition of Payment for BNI Purchase

[83] See Warren Buffett's 2009 Letter to Shareholders, page 17

Berkshire issued approximately 95,000 Class A equivalent shares to fund the transaction at an effective price per share of approximately $111,500. As we have seen in our section on valuation, the effective cost of using shares to fund the transaction amounts to issuing stock in the company at a price that is considerably below our estimate of Berkshire's intrinsic value. Mr. Buffett noted that he was not pleased about using shares and directly stated that he felt that Berkshire's shares were undervalued at the time of the transaction. While the issuance of shares was unfortunate from a valuation perspective, the total impact of the acquisition could be favorable if Burlington Northern represents an attractive destination for Berkshire's diverse streams of free cash flow.

Crazy Deal or Heck of an Investment?

Bruce Greenwald, Professor of Finance at Columbia University, is one of the most respected authorities on value investing. Given Prof. Greenwald's reputation, many Berkshire shareholders were taken aback at his depiction of the Burlington Northern acquisition as a "crazy deal"[84]. At the same time, other value investors such as Bruce Berkowitz, Founder of Fairholme Funds, have defended the transaction as a means of profitably deploying Berkshire's policyholder float[85]. Who is correct?

The answer is likely to be based on the degree to which Berkshire Hathaway uses Burlington Northern as a profitable destination for free cash flow generated by the operating companies or for policyholder float. The exhibit on the following page contains information regarding Burlington Northern's operating history over the past five years.

We can see that Burlington Northern has devoted a significant portion of operating cash flow toward capital expenditures over the past five years. Of the amount spent on capex over the five year period, nearly 80 percent has been identified by the company as "maintenance" capex. Although the figure for depreciation is below the maintenance capex amount, this difference can be accounted for by the fact that depreciation is based on the historical cost of the assets while maintenance capex is purchased at today's prices.

The company has not pursued any significant expansion capex over the past five years. Instead, the majority of free cash flow has been returned to shareholders either via dividends or share repurchases. The apparent lack of significant expansion capex can be verified by small growth in the overall size of the company's fleet of locomotives and freight cars, along with a steady average age for rolling stock. Additionally, the majority of railway investments have gone toward existing tracks rather than expansion activities.

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[84] See Prof. Greenwald's comments in a recent issue of Advisor Perspectives: http://www.advisorperspectives.com/newsletters09/46-greenwald3.php

[85] See this article on The Rational Walk for more details on Mr. Berkowitz's comments: http://www.rationalwalk.com/?p=4178

Fiscal years ending December 31	2009	2008	2007	2006	2005	Total 2005-2009
(in millions)						
Net Income	**1,721**	**2,115**	**1,829**	**1,889**	**1,534**	**9,088**
Cash Flow From Operations (a)	**3,413**	**3,977**	**3,492**	**3,189**	**2,706**	**16,777**
Cash Capital Expenditures, excl Equipment:						
Maintenance of way (rails, ties, surfacing)	1,605	1,561	1,359	1,226	1,053	6,804
Mechanical	107	168	141	152	136	704
Other	110	133	105	121	108	577
Total Maintenance Cap-Ex	**1,822**	**1,862**	**1,605**	**1,499**	**1,297**	**8,085**
Information Services	83	83	75	65	64	370
Terminal and line expansion	86	230	568	450	389	1,723
Total Cash Capital Expenditures (b)	**1,991**	**2,175**	**2,248**	**2,014**	**1,750**	**10,178**
Depreciation	**1,537**	**1,397**	**1,293**	**1,176**	**1,111**	**6,514**
Free Cash Flow (a) - (b)	**1,422**	**1,802**	**1,244**	**1,175**	**956**	**6,599**
Deployment of Free Cash Flow						
Dividends	546	471	380	310	267	1,974
Share Repurchases	16	1,147	1,265	730	799	3,957
Total Cash Flow to Shareholders	**562**	**1,618**	**1,645**	**1,040**	**1,066**	**5,931**
Equipment Configuration	**2009**	**2008**	**2007**	**2006**	**2005**	
Locomotives	TBD - in 2009 10-K	6,510	6,400	6,330	5,790	
Total Freight Cars		82,555	85,338	85,121	81,881	
Average age of locomotive fleet		15	15	15	15	
Average age of freight car fleet		14	14	14	15	
Railway Investments	**2009**	**2008**	**2007**	**2006**	**2005**	
Track miles of rail laid	923	972	994	854	711	
Cross ties inserted (thousands)	3,310	3,167	3,126	2,957	3,171	
Track resurfaced (miles)	15,456	13,005	11,687	12,588	12,790	

Exhibit 16: Burlington Northern Santa Fe Operating Statistics, 2005 to 2009[86]

Assuming that Bruce Berkowitz and others are correct regarding the opportunities for Berkshire to deploy low to no cost funds from float into the railroad business, one must then come to the conclusion that Mr. Buffett is planning on a rapid expansion of Burlington Northern in the coming years.

If Burlington Northern continues on its current course of capital expenditures, the company will still be generating significant free cash flow each year. Virtually all of the free cash flow was returned to

[86] For more discussion on Burlington Northern's capital expenditure history, please see the following article on The Rational Walk: http://www.rationalwalk.com/?p=4614.

shareholders over the past five years and, going forward, these cash flows could instead be reinvested in Burlington Northern for expansion purposes. Another way of looking at this is that *prior to requiring any cash inflows from Berkshire, Burlington Northern already has around $1.5 billion of cash each year to invest in expansion.*

A reasonable conclusion to come to after looking at the data as well as the rationale for the acquisition is that Mr. Buffett must be planning a major expansion of Burlington Northern's operations. If the railroad does not expand, it will continue to generate enough cash flow to maintain operations, fund modest expansion, and return some funds to Berkshire Hathaway in the form of dividends.

That may not seem like a bad result. However, if this is all Mr. Buffett has planned for Burlington Northern, the deal is subject to Prof. Greenwald's criticism based on the price paid for the company. The main way in which this transaction generates value for Berkshire Hathaway shareholders is if profitable expansion is possible and can not only consume Burlington Northern's internally generated cash but also a significant amount of cash flow from Berkshire's other operating companies.

To answer the question that was previously posed regarding the variance of opinion between Prof. Greenwald and Mr. Berkowitz, we must conclude that the "jury is still out". Shareholders will have to wait for a minimum of two or three years of results to determine whether the acquisition made sense, particularly due to the use of undervalued stock to fund part of the transaction.

Standard & Poor's 500 Inclusion

The other major development for Berkshire during the first quarter was the decision by Standard & Poor's to add the company to the Standard & Poor's 500 index[87]. Standard & Poor's needed to replace Burlington Northern in the S&P 500 and decided that Berkshire would be the most logical choice. Berkshire has long been the largest company measured by market capitalization that was not in the index. Standard & Poor's previously expressed concerns regarding liquidity. After the 50-for-1 stock split of the B shares, trading volume increased to the point where Standard & Poor's felt comfortable adding Berkshire to the index.

What impact does this have on intrinsic value? There is no impact since the presence of Berkshire in the index, by itself, changes nothing about the earnings power of the business. However, in the short run, Berkshire's stock price did increase as institutions that either explicitly or implicitly follow the S&P 500 had to purchase shares. It is likely that inclusion in the S&P 500 will attract additional analyst coverage for Berkshire. Whether any of this has an impact on the relationship between Berkshire's typical trading price and intrinsic value is yet to be determined. In theory, additional scrutiny of the business may lead to a narrowing of the gap between intrinsic value and market value.

[87] For coverage of the announcement, see The Rational Walk article at http://www.rationalwalk.com/?p=4668.

Management Succession Concerns

It seems like every few months, a major financial publication rediscovers the fact that Warren Buffett is in his late 70s and has not publicly named his successor. A good example appeared in The Wall Street Journal last October[88]. Most articles express the obvious concern that Berkshire Hathaway will no longer benefit from Mr. Buffett's unique management and investment abilities after he is no longer running Berkshire.

Concerns regarding management succession will only grow as Mr. Buffett approaches his 80th birthday this August. Although the eventual loss of Mr. Buffett will obviously affect the intrinsic value of the business, the concern regarding the "uncertainty" associated with CEO succession at Berkshire appears to be unfounded.

The Berkshire Hathaway Owner's Manual which is included in the company's annual report each year contains a section regarding management succession. Mr. Buffett clearly explains his intentions for running Berkshire Hathaway in the future and tells shareholders that plans are in place if the management succession is needed immediately:

> ***"At my death, the Buffett family will not be involved in managing the business but, as very substantial shareholders, will help in picking and overseeing the managers who do. Just who those managers will be, of course, depends on the date of my death. But I can anticipate what the management structure will be: Essentially my job will be split into two parts. One executive will become CEO and responsible for operations. The responsibility for investments will be given to one or more executives. If the acquisition of new businesses is in prospect, these executives will cooperate in making the decisions needed, subject, of course, to board approval. We will continue to have an extraordinarily shareholder-minded board, one whose interests are solidly aligned with yours.***
>
> ***Were we to need the management structure I have just described on an immediate basis, our directors know my recommendations for both posts. All candidates currently work for or are available to Berkshire and are people in whom I have total confidence."***

Those who remain concerned about succession usually fall into two camps. The first camp consists of shareholders who are simply concerned regarding the prospect of *anyone other than Mr. Buffett* running the company. With the human condition being what it is, there is simply nothing that can be done to alleviate this concern. The day will inevitably come when management succession will be needed and the new CEO and investment officer are *virtually guaranteed* to be less capable than Warren Buffett even though they will still be excellent managers. But this is obvious. How could it be

[88] The Wall Street Journal, *Finding Value in Berkshire After Buffett*, by Scott Patterson on October 9, 2009.

otherwise when the shoes they are trying to fill are those occupied by the greatest investor of the past sixty years?

The second camp consists of shareholders who lack full confidence in the *succession planning process* and will not be satisfied unless the names of the leading candidates are disclosed immediately and shareholders are kept informed of the list of candidates as they change over time.

The problem with demanding the names of successors is that the request can only be satisfied in one of two ways and each would substantially harm Berkshire Hathaway's future prospects. One option is for Mr. Buffett to name the CEO candidates in a public way immediately along with their respective ranking if a replacement is needed right away. However, since the timing of the actual succession is unknown, the list of candidates for both the CEO and CIO positions will change over time. Furthermore, internal candidates who are not on the list or rank lower on the list than they would like could choose to pursue CEO positions elsewhere. Nearly all of the CEOs running Berkshire's larger subsidiaries could easily find employment at the CEO level at a publicly traded company. Berkshire would lose valuable management talent in exchange for no tangible benefits.

The other option would create immediate certainty. Mr. Buffett could name a date when he will resign as CEO while remaining Chairman. The successor could then be named and certainty would be provided, but at the high cost of sidelining Mr. Buffett while he is still willing and able to manage the company. In addition, many managers who are passed over may seek employment elsewhere.

The question boils down to whether shareholders are willing to accept some uncertainty in terms of the identity of the eventual successor as CEO in exchange for Mr. Buffett's management skills even though his tenure is of unknown duration. The only other choice is for shareholders to impose substantial tangible and intangible costs on the company immediately by demanding a timetable for succession that would sideline the most successful investor of the past sixty years prematurely.

The path forward seems obvious, even though it is a moot point given Mr. Buffett's ability to control this decision through his ownership interest in the company. Ultimately, Berkshire Hathaway shareholders must trust that Mr. Buffett and the Board have established solid succession plans. The presence of highly talented managers such as David Sokol[89] should reassure shareholders that the company will have a Captain at the helm when Mr. Buffett finally steps down.

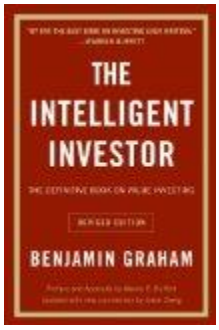
[89] We consider Mr. Sokol to be the front runner to eventually replace Mr. Buffett as CEO. We have covered Mr. Sokol extensively on The Rational Walk. For a list of articles referencing Mr. Sokol on The Rational Walk, please refer to the following link: http://www.rationalwalk.com/index.php?s=%22David+Sokol%22

Appendix 1: Further Reading

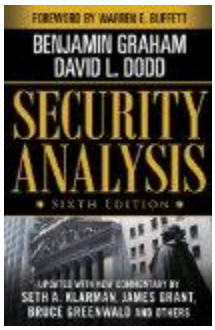
This section provides links to a number of resources for further reading. We list books in three categories first: Investing Principles, Warren Buffett and Charles Munger, and The Madness of Crowds and Human Misjudgment. In addition to books, we list several online resources that are worth monitoring on a regular basis.

Investing Principles

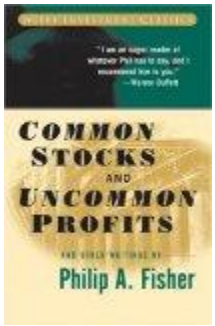
The following books form the foundation required for a solid understanding of value investing. It is impossible to provide a full listing of the large number of valuable books that are available. However, the reader who diligently follows the principles in the following books should not suffer poor results.



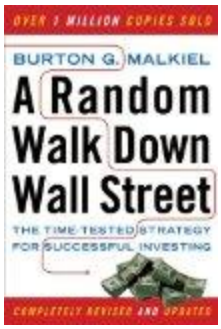
The Intelligent Investor by Benjamin Graham is perhaps the most widely cited but least followed book on investing. Few investors on Wall Street have failed to read this classic and countless individual investors have done so as well. Nevertheless, the vast majority has failed to absorb the lesson of "Mr. Market" that is the key to success or failure in the field of investing. For those who have the appropriate temperament and capabilities, *The Intelligent Investor* serves as an outstanding introduction to the field of value investing in a format that will not intimidate those without formal training in finance.



Security Analysis by Benjamin Graham and David Dodd is the classic investment textbook that every value investor must read. However, it is not nearly as accessible as *The Intelligent Investor* and some individuals grow frustrated with the book, particularly with some of the older editions. However, the sixth edition, reviewed in more detail on The Rational Walk in 2009, is greatly improved with introductions and examples from contemporary investors. Many investors believe that the essays by investors including Seth Klarman, James Grant, Bruce Berkowitz, Bruce Greenwald, and others justify the price of the book alone.



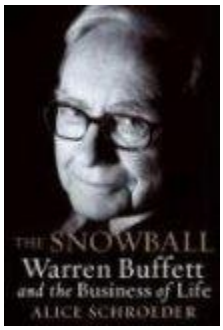
On the cover of *Common Stocks and Uncommon Profits* by Philip A. Fisher appears the following quote: "I am an eager reader of whatever Phil has to say, and I recommend him to you. — Warren Buffett". What is fascinating about Mr. Buffett's quote is that the investing approach described by Mr. Fisher is very different from the Graham style of value investing. In fact, Mr. Fisher's views are regarded as key foundations for the field of growth investing. The Rational Walk's review of the book provides more details regarding why Mr. Buffett finds the contents valuable.



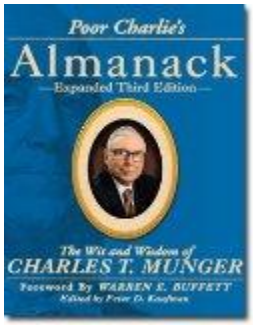
Readers of this paper may wonder why Burton Malkiel's *A Random Walk Down Wall Street* appears on the recommended reading list. First, Mr. Malkiel presents the argument for market efficiency in a very clear manner that is easily accessible to those new to investing. Second, it is critical for value investors to understand the prevailing views driving the decision making process of the vast majority of investors. While most value investors reject the notion of market efficiency, there are worse outcomes than adopting an indexing strategy of the type advocated by Mr. Malkiel (despite the poor record of indexing over the past decade).

Warren Buffett and Charles Munger

The following books are "must read" items for anyone seriously interested in the history of the men who took a struggling textile maker destined for eventual failure and turned it into the business powerhouse that Berkshire Hathaway represents today. While Mr. Buffett is significantly more famous, much of Berkshire Hathaway's success over the past few decades must be credited to Mr. Munger's insistence that some high quality businesses are worth pursuing even if they cannot be obtained at bargain basement prices.

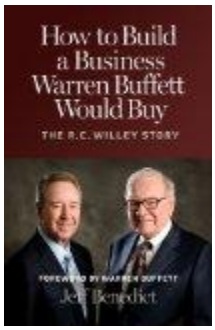


Alice Schroeder was granted unprecedented access to Warren Buffett himself, his files, and his family and colleagues over a number of years and the end result was *Snowball: Warren Buffett and the Business of Life*. This is not a book that outlines Mr. Buffett's investing techniques in detail, but it is of interest to those who wish to know more about his history from a personal perspective. To be sure, business topics are discussed, but the new insights tend to be more on the personal side. For a full review of this book along with Roger Lowenstein's 1995 Buffett biography *The Making of an American Capitalist*, see The Rational Walk's book review.



From first appearances, *Poor Charlie's Almanack*, edited by Peter Kaufman, might appear as a book that can be read casually. While it is true that the book is richly illustrated and produced, it would be a grave error to regard the content with any less reverence than *Security Analysis* or *The Intelligent Investor*. The great virtue of this book is the multi-disciplinary emphasis expressed in Mr. Munger's speeches and other writings. Those who are most likely to appreciate the message should have a grasp of basic concepts of investing. However, anyone can benefit from the life lessons expressed in these pages.

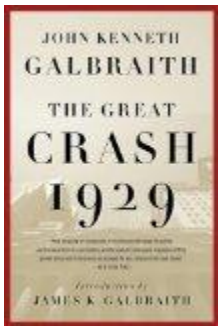
Lawrence Cunningham has done a great service for investors everywhere by compiling information from Warren Buffett's shareholder letters into a very accessible compilation in *Essays of Warren Buffett: Lessons For Corporate America*. Why would anyone pay to read letters that can be downloaded for free on Berkshire Hathaway's web site? Mr. Cunningham adds a great deal of value by arranging the letters into a convenient and topical format rather than a purely chronological format. Read a full review on The Rational Walk for more information on this book.



The R.C. Willey Story, skillfully told by author Jeff Benedict, is easily one of the most inspiring business stories one could hope to read. Anyone who is cynical about "up from the bootstraps" American success stories should read this book about Bill Child's life story. From an investment perspective, it is hard to come away from reading the book without thinking of at least a few attributes to look for when searching for investment candidates. Mr. Child's interactions with Warren Buffett represent a great case study of how Mr. Buffett approaches business acquisitions. Read a full review of the book on The Rational Walk for more details.

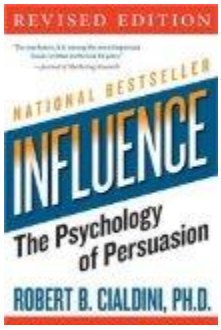
The Madness of Crowds and Human Misjudgment

Intelligent investing requires more than simply understanding how to read financial statements and evaluate the competitive position of a business. There are numerous psychological tendencies that individuals must be aware of in order to avoid repeating the mistakes of prior generations. It's a cliché to observe that those who neglect history are doomed to repeat it, but that does not make the observation any less true.



"What has been is what will be, and what has been done is what will be done; and there is nothing new under the sun." – Ecclesiastes 1:9.

In *The Great Crash of 1929*, John Kenneth Galbraith describes in excruciating detail the human follies that led to the 1929 stock market crash along with some of the well intentioned, yet futile steps taken by market participants and government officials to remedy the situation. This book was recommended by Warren Buffett at the 2009 Berkshire Hathaway annual meeting for a very important reason.



Robert B. Cialdini's *Influence: The Psychology of Persuasion* is critically important for anyone interested in understanding the psychological tricks than can be used to manipulate individuals in business and in life. From an investment perspective, Mr. Cialdini provides the tools required to determine whether your investment advisor is manipulating you using common psychological tricks. For example, it is hard to imagine that anyone who internalizes the techniques in this book would have fallen victim to Bernard Madoff's Ponzi scheme. It is therefore a "must read" for anyone who uses advisory services of any kind.

Online Resources

There are numerous resources available for value investors who wish to follow Berkshire Hathaway, Warren Buffett, and Charlie Munger, as well as to improve their own overall investing skill set. While this list is definitely not exhaustive, it represents a good selection of websites, blogs, and other resources that are worth monitoring.

- **The Rational Walk:** www.rationalwalk.com. The Rational Walk was created by Ravi Nagarajan, the author of this document, in February 2009 to serve as a platform for discussing various value investing topics inspired by the principles of Benjamin Graham, Warren Buffett, Charles Munger, and others. Berkshire Hathaway has been a frequent topic on this blog with extensive coverage of all major events that have taken place over the past year including the Burlington Northern Santa Fe acquisition.

- **Berkshire Hathaway Intrinsivaluator.** www.creativeacademics.com/finance/IV.html. The Berkshire Hathaway Intrinsivaluator attempts to calculate the intrinsic business value of Berkshire Hathaway using multiple models and pre-defined data sets. The site is often updated with data based on released financial statements and permits the user to adjust assumptions and see the impact on intrinsic value.

- **Guru Focus.** www.gurufocus.com. Guru Focus maintains extensive data on the portfolios of a number of prominent investors including Warren Buffett. Much of the content is free of charge but the site also has premium membership products.

- **The Manual of Ideas.** www.manualofideas.com. The Manual of Ideas provides a series of differentiated, idea-driven publications for serious investors. While the publications require a

subscription, there is also a free blog that is frequently updated with items of interest. Potential subscribers can also start a free trial subscription. Highly recommended for the intelligent enterprising investor.

- **Dataroma's Listing of Berkshire's Portfolio.** www.dataroma.com/m/holdings.php?m=brk. This site provides a very easy to use interface to monitor Berkshire Hathaway's portfolio of common stocks reported on SEC Form 13F each quarter. The site also has data for a number of additional well known investors.

- **Simoleon Sense.** www.simoleonsense.com. Simoleon Sense is a website dedicated to enriching sophisticated investors' latticework of mental models. The site is run by Miguel Barbosa who has dedicated his efforts to Charlie Munger and Warren Buffett among others. The site is updated very frequently and is a great resource for those who are interested in taking Charlie Munger's advice on interdisciplinary thinking seriously.

- **Property Casualty Insurers Association of America.** www.pciaa.net. This site is required reading for anyone interested in the Property-Casualty insurance industry. Most content appears to be free.

- **The Ben Graham Centre For Value Investing.** www.bengrahaminvesting.ca. This website is part of the Richard Ivey School of Business and was established in 2006. The Centre focuses on applied research in the value investing field and has interesting content and interviews available at no cost.

- **Heilbrunn Center for Graham & Dodd Investing.** http://www4.gsb.columbia.edu/valueinvesting The Heilbrunn Center for Graham & Dodd Investing at Columbia Business School is a leading center for the practice and theory of investing. The Center hosts the annual Columbia Investment Management Conference which features some of the top names in the investment management business.

- **SEC Company Search Database.** www.sec.gov/edgar/searchedgar/companysearch.html. This entry may seem self evident but far too few investors read SEC Filings. The first stop when considering an investment should be the Securities and Exchange Commission website. Use this search database to find information on any publicly traded company. The latest 10-K report provided by each company often contains the best summary of information available at no cost to any investor and should be the starting point for due diligence.

Appendix 2: 13-F Portfolio Positions

The table shown below lists the positions Berkshire Hathaway has reported to the Securities and Exchange commission through the company's latest 13-F Filing on February 16, 2010. The 13-F filing listed all positions Berkshire held in stocks traded on American exchanges as of December 31, 2009 including ADRs of foreign issuers. **The 13-F report does not include positions traded directly on foreign exchanges.** The presentation below reconciles with the 13-F filing and does not attempt to incorporate data related to foreign holdings. Subsequent to the end of the quarter, Berkshire closed the Burlington Northern Santa Fe acquisition so we have eliminated those shares from current holdings. Additionally, on February 4, 2010, Berkshire filed a Form 4 with the SEC indicating that a small number of shares of Moody's were sold on February 2. There may have been other changes since December 31, 2009 under confidentiality agreements.

Security	Ticker	Shares at 12/31/2009	Shares at 02/26/2010	Share Count Change in Q1 2010	Quote 12/31/2009	Quote 2/26/2010	Market Value 12/31/2009	Market Value 2/26/2010
American Express	AXP	151,610,700	151,610,700	-	40.52	38.19	6,143,265,000	5,790,012,633
Bank of America	BAC	5,000,000	5,000,000	-	15.06	16.66	75,300,000	83,300,000
Becton Dikinson	BDX	1,500,000	1,500,000	-	78.86	77.87	118,290,000	116,805,000
Burlington Northern Santa Fe	BNI	76,777,029	-	(76,777,029)	98.62	N/A	7,571,751,000	N/A
CarMax	KMX	8,000,000	8,000,000	-	24.25	20.19	194,000,000	161,520,000
Coca Cola	KO	200,000,000	200,000,000	-	57.00	52.72	11,399,999,000	10,544,000,000
Comcast	CMCSK	12,000,000	12,000,000	-	16.01	15.49	192,120,000	185,880,000
Comdisco Holding Co	CDCO.OB	1,538,377	1,538,377	-	10.00	9.25	15,383,000	14,229,987
Conoco Phillips	COP	37,711,330	37,711,330	-	51.07	48.00	1,925,918,000	1,810,143,840
Costco	COST	5,254,000	5,254,000	-	59.17	60.97	310,879,000	320,336,380
Exxon Mobil	XOM	421,800	421,800	-	68.19	65.00	28,763,000	27,417,000
Gannett Inc	GCI	2,202,200	2,202,200	-	14.85	15.15	32,703,000	33,363,330
General Electric	GE	7,777,900	7,777,900	-	15.13	16.06	117,680,000	124,913,074
GlaxoSmithKline	GSK	1,510,500	1,510,500	-	42.25	37.14	63,819,000	56,099,970
Home Depot	HD	2,757,898	2,757,898	-	28.93	31.20	79,786,000	86,046,418
Ingersoll Rand	IR	5,636,600	5,636,600	-	35.74	31.91	201,431,000	179,863,906
Iron Mountain	IRM	7,000,000	7,000,000	-	22.76	25.88	159,320,000	181,160,000
Johnson & Johnson	JNJ	27,132,467	27,132,467	-	64.41	63.00	1,747,602,000	1,709,345,421
Kraft Foods Inc	KFT	138,272,500	138,272,500	-	27.18	28.43	3,758,246,000	3,931,087,175
Lowes Companies	LOW	6,500,000	6,500,000	-	23.39	23.71	152,035,000	154,115,000
M&T Bank	MTB	6,715,060	6,715,060	-	66.89	77.43	449,171,000	519,947,096
Moodys	MCO	31,814,610	31,808,409	(6,201)	26.80	26.62	852,632,000	846,739,848
NRG Energy Inc	NRG	6,000,000	6,000,000	-	23.61	21.84	141,660,000	131,040,000

Ravi Nagarajan
ravi@rationalwalk.com

Nalco Holding	NLC	9,000,000	9,000,000	-	25.51	23.26	229,590,000	209,340,000
Nestle	NSRGY	3,400,000	3,400,000	-	48.35	49.74	164,390,000	169,116,000
Nike	NKE	7,641,000	7,641,000	-	66.07	67.60	504,841,000	516,531,600
Proctor & Gamble	PG	87,503,411	87,503,411	-	60.63	63.28	5,305,331,000	5,537,215,848
Republic Services Inc	RSG	8,290,500	8,290,500	-	28.31	28.14	234,704,000	233,294,670
Sanofi Aventis	SNY	3,903,933	3,903,933	-	39.27	36.60	153,306,000	142,883,948
Sun Trust Banks	STI	2,398,206	2,398,206	-	20.29	23.81	48,659,000	57,101,285
Torchmark Corp.	TMK	2,823,879	2,823,879	-	43.95	46.50	124,110,000	131,310,374
The Travelers Companies	TRV	27,336	27,336	-	49.86	52.59	1,363,000	1,437,600
US Bancorp	USB	69,039,426	69,039,426	-	22.51	24.61	1,554,077,000	1,699,060,274
USG Corporation	USG	17,072,192	17,072,192	-	14.05	13.48	239,864,000	230,133,148
United Parcel Service	UPS	1,429,200	1,429,200	-	57.37	58.74	81,993,000	83,951,208
United Health Group	UNH	1,175,000	1,175,000	-	30.48	33.86	35,814,000	39,785,500
Wal Mart	WMT	39,037,142	39,037,142	-	53.45	54.07	2,086,536,000	2,110,738,268
Washington Post	WPO	1,727,765	1,727,765	-	439.60	420.31	759,526,000	726,196,907
Wells Fargo	WFC	320,088,385	320,088,385	-	26.99	27.34	8,639,185,000	8,751,216,446
Wellpoint Inc	WLP	1,343,820	1,343,820	-	58.29	61.87	78,331,000	83,142,143
Wesco Financial	WSC	5,703,087	5,703,087	-	343.00	375.55	1,956,159,000	2,141,794,323
						TOTALS	**57,929,532,000**	**49,871,615,619**

Resources:

Link to Form 13-F: Portfolio as of December 31, 2009: http://www.sec.gov/Archives/edgar/data/1067983/000095012310013284/v55055ve13fvhr.txt
Link to Form 4: Moody's Sales on February 2, 2010: http://sec.gov/Archives/edgar/data/109694/000118143110006804/xslF345X03/rrd265068.xml

Ravi Nagarajan
ravi@rationalwalk.com

Appendix 3: GEICO vs. Progressive

Since Berkshire Hathaway acquired full control of GEICO in 1995, the company has advanced from seventh to third position among auto insurers according to Warren Buffett's 2008 letter to shareholders[90]. GEICO's main competitive advantage is derived from its low cost operations which are made possible by the direct sales model the company uses to sell insurance policies. By selling products over the phone and online, significant efficiencies can be captured compared to a traditional agency distribution model. Progressive also employs a direct channel (although they also have a sales channel through independent agents) and the company has a strong long term track record.

While this appendix is not in any way a complete review of Progressive, it is nonetheless interesting to compare GEICO and Progressive over an extended period in terms of overall volume of premiums earned, underwriting results, and operating efficiency.

Track Record: 1999 to 2009

The following exhibit shows selected underwriting results for GEICO and Progressive over the past eleven years. Both GEICO and Progressive have posted impressive results over an extended period of time as evidenced by consistent underwriting profits along with strong premium growth.

	GEICO					Progressive				
Year	**Premiums Earned**	**Loss Ratio**	**Expense Ratio**	**Comb. Ratio**	**UW Profit**	**Premiums Earned**	**Loss Ratio**	**Expense Ratio**	**Comb. Ratio**	**UW Profit**
1999	4,757	80.2%	19.3%	99.5%	24	5,684	74.9%	21.6%	96.5%	199
2000	5,610	85.7%	18.3%	104.0%	(224)	6,348	83.2%	21.7%	104.9%	(311)
2001	6,060	79.9%	16.5%	96.4%	221	7,162	73.5%	21.4%	94.9%	365
2002	6,670	77.0%	16.7%	93.7%	416	8,884	70.9%	21.5%	92.4%	675
2003	7,784	76.5%	17.7%	94.2%	452	11,341	67.4%	19.9%	87.3%	1,440
2004	8,915	71.3%	17.8%	89.1%	970	13,170	65.0%	20.2%	85.2%	1,949
2005	10,101	70.6%	17.3%	87.9%	1,221	13,764	68.0%	20.1%	88.1%	1,638
2006	11,055	70.1%	18.0%	88.1%	1,314	14,118	66.5%	20.1%	86.6%	1,892
2007	11,806	72.2%	18.4%	90.6%	1,113	13,877	71.5%	21.1%	92.6%	1,027
2008	12,479	74.8%	17.9%	92.7%	916	13,631	73.5%	21.1%	94.6%	736
2009	13,576	77.0%	18.2%	95.2%	649	14,013	70.6%	21.0%	91.6%	1,177

Data In Millions

Sources: Berkshire Annual Reports; PGR Value Line Report Dated 12/18/2009, Progressive's 2009 annual results reported in January 2010: http://investors.progressive.com/pdf/mreport-1209.pdf

GEICO vs. Progressive: 1999 to 2009

[90] Warren Buffett's account of Berkshire's purchase of GEICO in his 1995 shareholder letter is well worth reviewing for those interested in a more complete history.

The following exhibit provides key summary statistics regarding GEICO and Progressive's performance:

1999 to 2009	GEICO	Progressive
Avg Annual Growth in Premiums Earned	11.1%	9.4%
Avg Loss Ratio	75.9%	71.4%
Avg Expense Ratio	17.8%	20.9%
Avg Combined Ratio	93.8%	92.2%

GEICO and Progressive Key Statistics

Both Progressive and GEICO have shown strong results by nearly any measure during this timeframe. GEICO's compounded annual growth rate in premiums earned over the ten year period was 11.1% while Progressive grew at a 9.4% rate. GEICO's average underwriting loss ratio was 75.9% while Progressive's average loss ratio was better at 71.4%. GEICO had the distinct advantage when it came to underwriting expenses with a ten year average of 17.8% versus 20.9% for Progressive.

In 2007 and 2008 in particular, we can conclusively see the benefits of GEICO's low cost model. Despite having higher underwriting loss ratios in both years as well as lower levels of earned premiums, GEICO ended up with higher pre-tax underwriting profits due to significantly lower underwriting expenses compared to Progressive. This did not persist in 2009 when GEICO's combined ratio rose to 95.2 percent, materially above Progressive's ratio of 91.6 percent.

One way to look at the competitive picture is that GEICO has historically been able to accept premiums that realized a higher level of losses than Progressive while being more profitable in many years due to tighter expense controls. This presumably translated into lower premiums for policyholders and higher market share.

Advertising Campaigns

It's a war on the television screen. On one side you have GEICO's Gecko and the famously maligned Caveman. On the other side is Flo, the hyper enthusiastic Progressive sales clerk. It's hard to escape these characters during sporting events or prime time as they try to win market share through a combination of amusing brand building characters and claims of lower prices.

While some observers may dismiss these advertising campaigns as silly, both GEICO and Progressive are attempting to attach brand loyalty to auto insurance which has traditionally been known as a commodity product. The advertising campaigns rely on claims of price advantages but have also attracted a "cult following". Progressive was recently able to attract a large number of participants who competed in the "Help Flo" campaign to appear in a Progressive advertisement with Flo. If nothing else,

GEICO and Progressive's marketing efforts are a fascinating case study in how a commodity product might be differentiated. In our own highly unscientific survey on The Rational Walk, we asked readers to answer the following question: "Who is the most effective television personality selling auto insurance?" Here are the results of the survey[91] taken over a four week period in January and February 2010:

Flo (48%, 88 Votes)
The Gecko (36%, 66 Votes)
The Caveman (10%, 19 Votes)
The former President from "24" who does Allstate commercials (6%, 12 Votes)

Total Voters: 185

[91] See http://www.rationalwalk.com/?p=4593 for the full survey results.

Appendix 4: Berkshire's Misunderstood Derivatives

Berkshire Hathaway's derivatives exposure has attracted a great deal of attention in recent years. In 2008, Warren Buffett devoted several pages of his letter to shareholders to explain the company's exposure in great detail. While some minor aspects of Berkshire's exposure changed in 2009, the basic message of Mr. Buffett's explanation in 2008 still holds true. While the requirement to mark the derivatives to market has caused significant volatility in Berkshire's results in recent years, the ultimate impact on the company's intrinsic value will depend on the value of certain market indices at the expiration date of the options.

The points outlined below should be considered when analyzing the ultimate impact of Berkshire's derivatives exposure.

Absence of Counter-Party Risk

Typical derivatives contracts carry substantial counter-party risk. For a derivatives contract to serve any purpose, one must hope that the counter-party will be good to make payment if the terms of the contract call for it. Sometimes the terms of the contract may reach far into the future. One of the main reasons for the government bailout of AIG was that AIG was a counter-party for derivatives entered into with many important financial institutions worldwide. If AIG defaulted on these derivatives, suddenly all of their counter-parties could have faced solvency issues.

With Berkshire's derivatives, there is no counter party risk because payment is made in advance when the contracts are initiated. This has two benefits. First, the counter-party cannot default because they have put up their obligations ahead of time. Second, Berkshire has use of the funds provided by the counter-party for the life of the contract. This is much like insurance float. The funds are available for Berkshire to use for investment purposes throughout the lifespan of the derivatives contract. At the end of 2009, Berkshire held $6.3 billion of "derivatives float", as Mr. Buffett calls it[92], that can be used for investment purposes. It should be noted that we have not included this "derivatives float" in our float based valuation model of the insurance business.

Minimal Collateral Requirements

Berkshire has very minimal collateral requirements when the market moves against the company's derivatives positions. Most contracts do not require posting any collateral whatsoever. The contracts that require posting collateral are minimal. Even when Berkshire posts securities as collateral, the company continues to earn income from the posted collateral. At the low point in the stock and credit

[92] See Warren Buffett's 2009 Letter to Shareholders, page 15.

markets in 2009, Berkshire only had to post $1.7 billion[93] of collateral which is a small percentage of the derivatives related float held by the company.

European Style Options

Berkshire's equity put option contracts are "European" options[94] and can only be exercised by the counter-party at the date of expiration of the contract. In contrast "American" options can be exercised by the counter-party at any time. Since Berkshire's options are European options, the company has no cash flow liability because the counter-parties cannot exercise the options until expiration which will not occur for nearly a decade. If these options were American options, the counter-parties could decide to exercise today and Berkshire would have to put up the cash. This is a key difference all but ignored in the media. It means that the paper gains and losses on the equity puts are just that – paper gains or losses. No cash flow is going to occur for nearly a decade, and only then if the index value remains at depressed levels. In the meantime, Berkshire has full use of the premium received for writing the index puts.

To summarize, Berkshire's derivatives holdings are not without risk of loss but important features of the contracts minimize the need to pay undue attention to short term swings in market indices which cause volatility in Berkshire's quarterly and annual results. For this reason, Berkshire management separates derivatives gains and losses from investment gains and losses to ensure that shareholders will have access to the relevant information.

[93] See Warren Buffett's 2009 Letter to Shareholders, page 15.
[94] For a brief description of European vs. American style options, see this Wikipedia entry: http://en.wikipedia.org/wiki/European_option.