Equity Report [1/20/2023]

Berkshire Hathaway Inc.

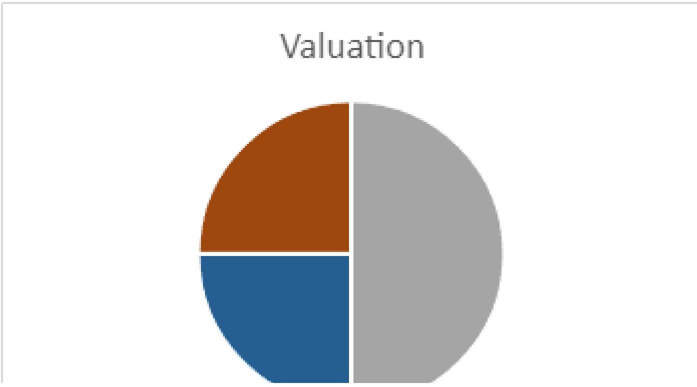
Financial

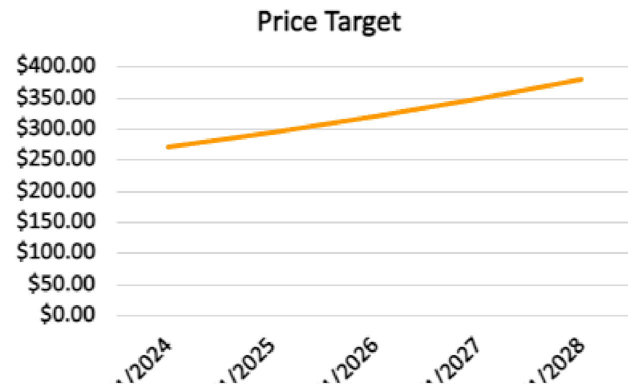
NASDAQ Symbol: BRK.B

Recommendation: SELL

Covering Analysts: Layzell, Peter

Intrinsic Value:





Capital Structure	
Equity	67.7%
Debt	35.3%
CAPM Presumptions	
Beta	.85
Risk Premium	6.0%
Risk-Free Rate	3.7%
Terminal Growth Rate	2.40%
WACC Presumptions	
Cost of Equity	8.8%
Cost of Debt	4.8%
Cost of Capital	7.0%

Intrinsic Value	Margin of safety
$249.55	**(21.7)%**

Source: Company Data, Group Estimates

Executive Summary

This equity report provides an analysis and evaluation of the current and future performance of Berkshire Hathaway Inc. over a future period of five years. My methods of analysis include the **discounted cash flows model (DCF)**, **historical P/S and EV/Sales model**, and **comparable model**, as well as various ratios including but not limited to ROA, ROE, ROIC, liquidity ratios, capital structure ratios.

The results of the data analyzed show that the company volatile within these financial ratios. The company generated swings in ROIC, ROA, and ROEover the past 5 years, meaning that BRK.B is dependent on their investments gains and losses.

My report finds that the prospects of the company in its current position are negative. The primary catalysts for long-term underperformance include:

- The risk of climate change and natural disasters on the insruance indsutry
- Lack of innocation and uncertainity about the future of the CEO
- How much investments have to do with net income
- The reduction of share buybacks.

We conclude that this company's stock is attractively overv, resulting in a margin of safety of **6.8%**. Reasons that the market has placed this stock at value include:

- The market fails to recognize Cognex's upside exposure on changes in trade regulation
- The market fails to take into account uncharacteristically large backlog of orders when projecting Q1 revenue
- The market fails to project future revenues generated by growth in new 3D vision product sales

Key Stock Statistics

52-Wk Range ($)	259.86-362.52	Dividend Yield	N/A	Book Value/Share (mrq)	310K
Beta	0.90	Diluted EPS (ttm)	39.64	Operating Margin (ttm)	-.3%

Market Capitalization ($BN)	694	P/E (ttm)	60.43	S&P Credit Rating	AA+
Forward Annual Dividend	N/A	P/B (mrq)	1.53		

Source: Yahoo! Finance

Recent News & Management Guidance

- Purchase of Allegheny
  - Finalized in October for 11.6 billion

Business Description

Berkshire Hathaway describes itself as a holding company in which they participate in many different business activities. It is based in Omaha Nebraska. Berkshire started as a textile manufacturing company in 1839 but in 1962 Warren Buffett started buying stock in the company. Buffett was offered a tender to buy back his stock but after being undercut he decided to take majority ownership of the company. Buffett maintained the textile business for three years before moving toward the insurance industry and other investment opportunities. Today, Berkshire operates in four main business segments which include, insurance and reinsurance, freight rail transportation, utility, and energy generation and distribution businesses, as well as some manufacturing.

Revenue Drivers

As stated above Berkshire has 4 main business segments in their insurance, freight train, utility and energy, and manufacturing. Insurance makes up most of their revenue while the others are an even part of total revenue. Berkshire reports their revenue in sections so one can determine what revenue is associated with what business segment. Another aspect of their business is their investments. They report their net gains on investments and derivatives in their financial statements but overall, it does not count as a revenue segment. Instead, it is its own section and adds or takes away from their net income.

Insurance – 83% of FY21 Revenue

Berkshire's largest revenue segment is its insurance investments and business. In FY 21 insurance made up p 83 percent of their revenue. This revenue came from sub-segments, insurance premiums, leasing revenue, sales and service, as well as other things like investment, dividend, and interest. Berkshire assumes the risk of loss from a persons or organizations that re covered by their companies. Along with insurance businesses they also participate in reinsurance businesses. Reinsurance is how insurance companies get protection against a large claim that could be made. Berkshire's insurance underwriting includes three main businesses: GEICO, Berkshire Hathaway Primary Group, and Berkshire Hathaway Reinsurance Group.

GEICO headquarters are in Maryland and consist of many subsidiaries including County Mutual, Choice, General, Marine insurance company, and some others. GEICO companies offer private passenger automobile insurance to people across 50 states and the District of Columbia. They also provide insurance for all-terrain vehicles, boats, motorcycles, etc. GEICO also acts as an agent in helping people find homeowners, life, and renters' insurance which GEICO can't specifically provide. The automobile insurance business is highly competitive with companies like State Farm, Allstate, Progressive, and USAA (named in the 10k) which makes marketing and competitive rates an important part of their future.

Berkshire Hathaway Primary Group is a collection of independently managed insurers that provide a wide range of insurance policies. The group consists of Berkshire Hathaway Homestate Companies (BHHC), National Indemnity Company (NICO), Berkshire Hathaway Specialty Insurance (BH Specialty) MedPro Group (MedPro), and Berkshire Hathaway GAURD (GAURD). NICO underwrites commercial motor vehicles and other general liability insurance through insurance agents and brokers, BHHC, focuses on workers' compensations, commercial auto, and commercial property coverages. BH specialty offers a lot of coverages including travel, medical stop loss, homeowners, healthcare professional liability, and causality insurance. MedPro is a leading provider of healthcare liability insurance. They provide healthcare liability insurance for patients' safety and risk solutions to physicians, surgeons, and dentists. GAURD is a group of five insurance companies that provide commercial insurance products and homeowners insurance to about 350 thousand small to mid-sized businesses and homeowners.

Berkshire Hathaway Reinsurance Group is the combination of all Berkshire's reinsurance businesses globally. They offer coverages on property, life and death, and casualty risks to both insurers and reinsurers. They operate in 24 different countries so I won't be going into many specifics. The one thing that should be noted is how reinsurance works. The two main ways I have seen Berkshire conduct their reinsurance businesses in through excess of loss and quota-share basis. Excess-of-loss is when the reinsurer is responsible for either all losses over a certain amount or at a certain percentage. Quota-share is when the insurer and reinsurer share liability, premiums, and losses.

Railroad – 8.3% of FY21 Revenue

Burlington Northern Santa Fe (BNSF) railway company conducts business as one of the largest railroad systems in North America. Based in Fort Worth, Texas BNSF operates across the US transporting a range of products and commodities in industries like manufacturing and agriculture. Revenues are received through contractual agreements, common carrier published prices, and company quotations. In FY 21 about 38 percent of freight revenue came from consumer products, 24 from industrial products, 23 percent from agricultural products, and another 15 percent from coal. BNSF must be in accordance with many regulatory and environmental regulations. They have promised to decrease their green house gas emission by 30 percent by 2030 (about 80 percent of their greenhouse gas emissions are because of their locomotive diesel consumption.

Utilities and Energy – 6.8% of FY21 Revenue

Berkshire owns a 91 percent stake in Berkshire Hathaway Energy Company which generates, transmits, stores, distributes and supplies, energy. Domestically, BHE is comprised of four utility companies that serve over 5 million customers. One popular one on the west coast is PacifiCorp which operates in Oregon, Utah, Washington, and other west coast states. Other companies that operate as a part of BHE include Nevada Power Company, Sierra Pacific Power Company, an electric utility company in AltaLink, and many others over the world. Utility and Energy for Berkshire are also subject to intense regulation at state, local, and federal levels. The Federal Energy Regulatory Commission regulates the rates at which electricity can be wholesaled for example.

Manufacturing, Service, and Retailing – 2.2% of FY21 Revenue

Berkshire manufacturing businesses are split into industrial products, building products, and consumer products. The industrial products include manufacturing components for aerospace and power generation application, metal cutting tools, and specialty chemicals. Their building products include insulation, roofing, engineered products, prefabricated and site-built residential homes, and many other building products. Their consumer products include manufacturing recreational vehicles, apparel products, and alkaline batteries. Berkshire's service business provides grocery and food service distribution, professional aviation training programs, franchising, and servicing of quick-service restaurants. Their retailing business includes automotive, home furnishing, and other operations. Overall, this segment doesn't constitute a lot of Berkshire total revenues and is very diverse in what it offers to the consumer.

Products or Services

Berkshire is in the financial sector and mostly deals with insurance. This means that along with their revenue segments they also make money through their investment portfolio. I will mention it briefly here, but I won't go into a lot of depth as I believe that focusing more on their revenue is more important and gives a more accurate valuation of the company.

Prices and Fee Structure

Insurance

Berkshire makes their money in their insurance business through two activities – underwriting and investing. The responsibility of underwriting goes to unit managers while the investing is Warren Buffett and his trusted corporate investment managers. I want to put a quote in here from the 10k because I think it sums up why I am going to be looking more at EV/Sales later on. "However, we consider investment gains and losses, whether realized or unrealized, as non-operating. We believe that such gains and losses are not meaningful in understanding the periodic operating results of our insurance businesses (10k)". Berkshire reports certain investment income from their insurance revenues but for the most part, it is in a separate section where it doesn't affect revenue but does affect net earnings. Berkshire earns most of its revenue in their insurance segment through premiums and selling coverages.

Railroad

Berkshire makes money by transporting products and commodities. Although it makes up about 8 percent of total revenue it accounts for nearly a quarter of EBT. This is where Berkshire makes most of its money. In FY 21 BNSF brought in 23 billion dollars in revenue and has costs of about 14 billion, adding 9 billion to EBT. Insurance brings in much more revenue, about 10x railroad, but only brings in 2x EBT.

Utility and Energy and Manufacturing

There are many ways Berkshire makes money in these segments of their business and for the most part, it is relativity simple. They own many different businesses that of certain products and services related to energy like with PacifiCorp or retail and food distribution the McLane Company. Berkshire goes through each company in a lot of depth and there are a lot that Berkshire owns.

Business Strategy

Buffett prides himself on investing in fundamentally sound businesses. In his letter to investors he talks a lot about his Apple stake as well as his top holdings. Berkshire doesn't pay dividends so that means that any retained earnings goes straight into investing and trying to create wealth for the company. Overall, their the line between investing and how berkshire makes money is odd. I will touch on this more in my valuation but I want to put that thought in your head right now. Buffett belives the insurance business to be stable and will growth along with both economic growth and inflation. He belives that it will never be obsolete. In his letter to investors he mentions "Our Four Giants". This is inreference to his top three business segments with insurance, BNSF, and BHE and his Apple holdings.

			12/31/21	
Shares	*Company*	*Percentage of Company Owned*	*Cost**	*Market*
			(in millions)	
151,610,700	American Express Company	19.9	1,287	24,804
907,559,761	Apple Inc.	5.6	31,089	161,155
1,032,852,006	Bank of America Corp.	12.8	14,631	45,952
66,835,615	The Bank of New York Mellon Corp.	8.3	2,918	3,882
225,000,000	BYD Co. Ltd.**	7.7	232	7,693
3,828,941	Charter Communications, Inc.	2.2	643	2,496
38,245,036	Chevron Corporation	2.0	3,420	4,488
400,000,000	The Coca-Cola Company	9.2	1,299	23,684
52,975,000	General Motors Company	3.6	1,616	3,106
89,241,000	ITOCHU Corporation	5.6	2,099	2,728
81,714,800	Mitsubishi Corporation	5.5	2,102	2,593
93,776,200	Mitsui & Co., Ltd.	5.7	1,621	2,219
24,669,778	Moody's Corporation	13.3	248	9,636
143,456,055	U.S. Bancorp	9.7	5,384	8,058
158,824,575	Verizon Communications Inc.	3.8	9,387	8,253
	Others***		26,629	39,972
	Total Equity Investments Carried at Market		$ 104,605	$ 350,719

Top 15 holdings Berkshire has: Source- Letter to Investors

Cost Drivers

Insurance Underwriting and Other Costs Related to Insurance

Berkshire's insurance segments deals with varies expenses some minor relating to the cost of underwriting and health insurance benifts for their employees and some major where they lose money paying out funds for people that have their coverage. Berkshire claims that any claim exceeding 100 million is significant which in FY 21 including events like Hurricane Ida and floods around Europe. In general, most of their costs are associated with paying out claims made buy their clients. Another cost that may not is recognized as much is the amount of unpaid premiums they may have. Berkshire estimates unpaid losses to be at 125 billion which as a major affect on periodic underwriting results. Also mentioned is the significance of losses of value of non-US based currency. Any gains or losses for this aspect of their business would be found in selling, genral, and adminstrative.

Railroad

Berkshire reports everything combined in some places and not in others. In the financial statements one can see expenses in the railroad section but they are not broken down and one cannot see specifclly. Berkshire goes more in depth with their expenses in their 10k. This also goes for later cost drivers as well. The BNSF consists of mainly conpensation and benefits, fuel, purchased services, D&A, and equipment expenses. All of this is pretty typical and overall can be more consistent than insurance expenses excluding any major changes to fuel prices.

Utility and Energy

In this segment of their business the expenses are realtivlty straight foreward. Berkshire has operating expense for both energy and real estate. They also have energy cost of sales as a major cost driver in this segment. I don't belive these costs to drasticly change I expect them to continue to grow at the rate the segment grows.

Manufacturing, Service, and Retailing

As stated above this segment is split into industrail, building, and consumer products. This means that overall there are many different types of expenses that go into these different businesses. I will layout some examples here but to read more about each company I would recommend reading through pages K-46 through until K-55. For some context lots of these costs have to do with manufacting, interest, supply chain, operations, and raw materials to name a few.

Industry Overview

Throughout this section I will be going over the industry trends in each of Berkshire's major business segments which will include insruance, railroad, and utility and energy.

Industry Growth

Insurance

The insurance market is calculated using the Global General Insurance Market which includes different types of insurance. The main types that they focus on are motor, travel, home, health, and commercial. In 2022 the global general insurance market revenue totaled 7 trillion dollars and is expected to reach 8.5 trillion by 2028. Using these numbers one can find that the CAGR for this industry is 3.3 percent over the next 6 years. There are three main factors for this growth to occur: 1. government mandates 2. rising healthcare costs, and 3. the growing need for people to protect their homes from natural disasters. There is expected to be an increase in healthcare purchases and with more advancing technology that helps the insurance companies gauge your health risk to potentially give clients incentives for lower premiums. There is also expected to be an increase in government mandates for motor insurance with road accidents being a major concern around the world. Travel insurance is expected to accelerate with restrictions continuing to be lifted as well. AI will be a factor in automating the claims process making it easier for people to make claims which will increase customer satisfaction.

Railroad

In 2021 the market size for the global railroad market reached 291 billion and is currently expected to reach 378 billion by 2027. This means that it is expected to have a CAGR of 4.5 percent bearing any post-pandemic problems. Globalization and industrialization are two major factors in the projected rapid growth of this industry. There is a rising number of cross-border movements of both travelers and commodities that are creating growth. Advancement of technology and AI assisted driving are also major factors in the future of the railroad industry.

Utility and Energy

As one may expect investment into renewable energy and how companies navigate their way to clean energy is something to look out for in the future. The global utilities market is expected to have a CAGR of about 8 percent over the next 3-5 years. Currently, the market holds about 6 trillion dollars and is expected to reach 8.1 trillion by 2026. The future this industry is clean energy which is why governments around the work are incentivizing solar powered energy companies. The renewable energy market on its own is expected to have a CAGR of 8.5 percent through 2030

Industry Disruptors

I believe that this section is an important one to look at when evaluating Berkshire. There are some major disruptors that I believe will be an issue for certain industries in the future.

Insurance

Natural disasters are a huge issue that faces the insurance industry. First off, from around 1980 to 2021 the United State averaged 7-8 natural disasters each year. That figure doubled in 2022 alone. These disasters are creating big challenges for insurance companies that have to deal with the costs. Natural disasters are becoming more expensive not only because of the intensifying effects of climate change but also because of how the population is moving towards areas that are affected the most like Florida, Texas, Georgia, etc. All this will lead to a lot of problems financially for these insurance companies. Many have moved out of these areas to avoid incurring these costs. Others have leaned towards raising premium rates. Premiums are expected to be rising at 5.3 percent a year because property loss due to disaster could increase by 60 percent over the next 20 years. Overall, it is going to be a mess for insurance companies. They will either have to pay up and honor coverage plans or find a way not to cover these big storms leading to lower customer morale and people stranded. The U.S government has tried to help but they are now 20 billion dollars in debt.

Railroad

Costs are going to be a major issue for this industry. I believe that companies like Berkshire could handle improving their railroad, but it will still cost them. Moving toward more high-speed railways that don't have massive amounts of maintenance, in the long run, will be good but lots of RD&A will have to go into something like this. Not only this but a transition to an eco-friendlier means of transportation will take a lot of time and effort.

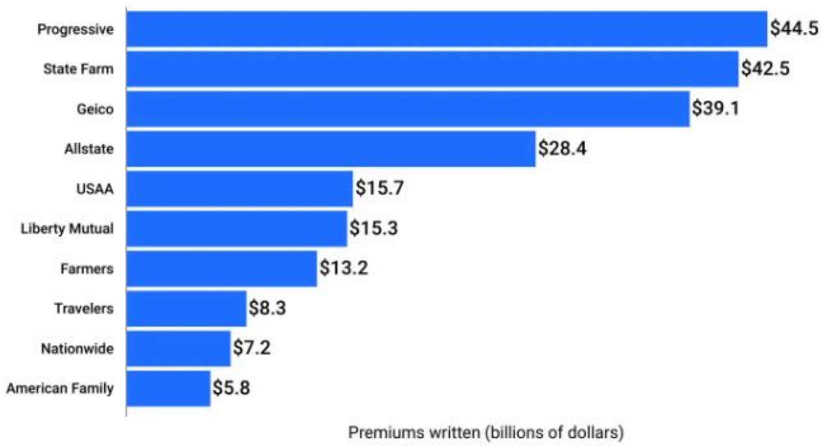
Utility and Energy

We are in an interesting time when it comes to energy. As a society, we need to be focusing on saving the planet and moving towards cleaner energy sources. Like the railroad industry, I believe that the major disruptor for this industry will be the cost to innovate to a better society.

- This should be a multi-paragraph section, with a paragraph covering each industry growth driver you identify.
- Look on IBISWorld for industry market research and statistics, this is a good resource for detailed reports on the state of the industry and recent growth trends.

Market Share

Berkshire owns so many companies that it is hard to find a market share number that is sufficient. According to csimarket, Berkshire has and 11.3 percent market share compared to its competitor. Listed are many different companies around the different business segments they operate in. Since insurance is their largest revenue segment I also looked at how one of their largest holding, GEICO, is doing in that market. Comparing GEICO to competitors like State Farm, Progressive, and All State they have an 12.5 percent market share which is third in the industry.



Competitive Analysis

The Porters and SWOT analysis allows investors to see the strengths and weaknesses of the company internally, externally, customer loyalty, brand awareness, and competitive outlook.

SWOT Analysis

Strengths

- Berkshire has very strong brand recognition given that Buffett is the CEO.
- They have high customer satisfdaciton. BRK is good at maintaining strong relationship with customers across their business segments.

Weaknesses

- They lack innovation. Their investments into new technologies and R&D and below industry standards.
- Berkshire has had some trouble in integrating newer companies their their culture.

Opportunities

- New environmental policies can allow Berkshire to capitalize on their energy sector and invest more into it.
- They also can start to use their investment into online platforms to their advantage. The more data they have on their customers the better they can conncet and offer their customers what they need.

Threats

- Governemnt regultion is a threat to the companies policy and energy companies. There is a lot of new rules that may come out and hurt them.
- Climate change is a big threat to many but it can negativelyt impact Berkshrie's main revenue segment with their insurance.

Porter's Five Forces

Rivalry Amongst Sellers | High

Berkshire owns so many businesses in many different sectors that they are very competitive. In the insurance business one has companies like GEICO, ALL State, Farmers, State Farm, etc. competing.

Threat of Substitutes | Low

The threat of substitutes is low. In the insurance industry and the financial sector, there are not many substitutes for the products that are provided.

Pressure from Supplier Bargaining Power | Low

The bargaining power of suppliers is low due to the high competition. This part of porters analysis is mostly relevant toward its retail and manufacturing segment as it is hard to determine this for its insurance company.

Threat of New Entrants | Low

The threat of new entrants is low for Berkshire. This is due to the high barriers to entry in the financial industry. The costs overall are very high because one must consider distribution channels and sunk costs. If one wants to break this down even more then the threat of new entrants would be high considering what individual businesses they own throughout many different segments.

Pressure from Buyer Bargaining Power | High

The pressure from buyers is low in their insurance segment and higher in their other segments. Given that most of their revenue is based on insurance I will stick with it being low. Customer satisfaction and loyalty have a lot to do with the insurance industry so they will most likely be willing to pay within reason whatever Berkshire thinks is best.

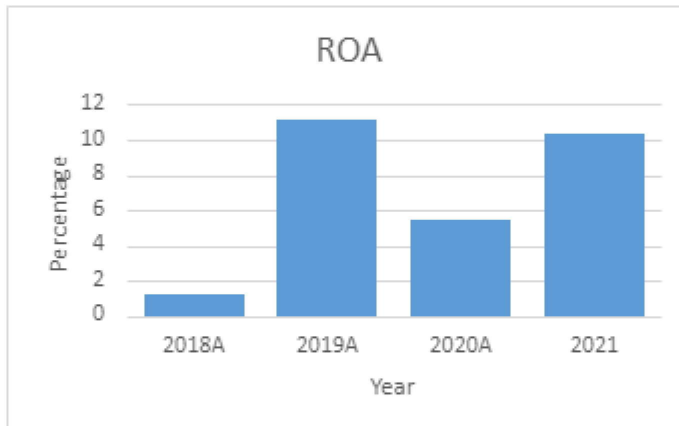
Financial Analysis

The DuPont analysis is not as great of a representation of Berkshire because it is much different from ordinary companies that buy materials, make goods, and sell them. Since Berkshire owns so many companies in many different business sectors, there is no telling what especially to point at when analyzing a specific section of the Dupont. Because of this, it may seem shorter than previous pitches.

DuPont Analysis

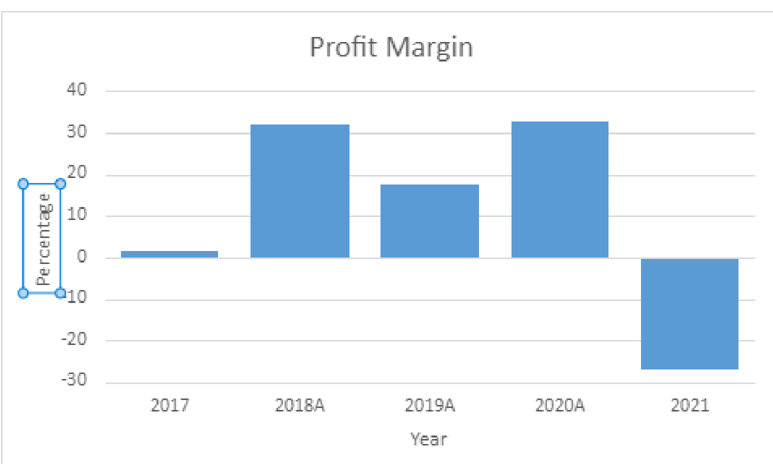
Return on Assets (ROA)

Return on Assets is a figure that is good to know because it helps investors of Berkshire see how well they can convert the money it invests into net earnings. Generally, it is calculated by dividing net income by total assets. ROA has fluctuated over the years mainly due to the changes in EBIT that the company occurs. This is related to how the company has to report its investment gains or losses. So, looking that the trends one can assume that Berkshire's ROA will increase in a good year for the market and be lower in bad years. This can be shown by the correlation between the investments line item and the ROA.



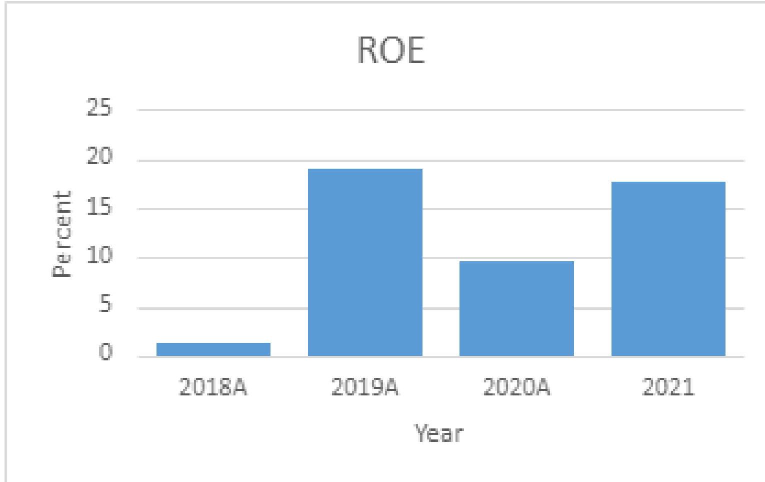
- Profit Margin

  Berkshire's profit margin will give investors an ideal of how fiscally healthy it may be. This is a tough ratio to look at with a company like Berkshire because it doesn't really take into account its core business. It is very volitaile because of how their investments affect net earnings.

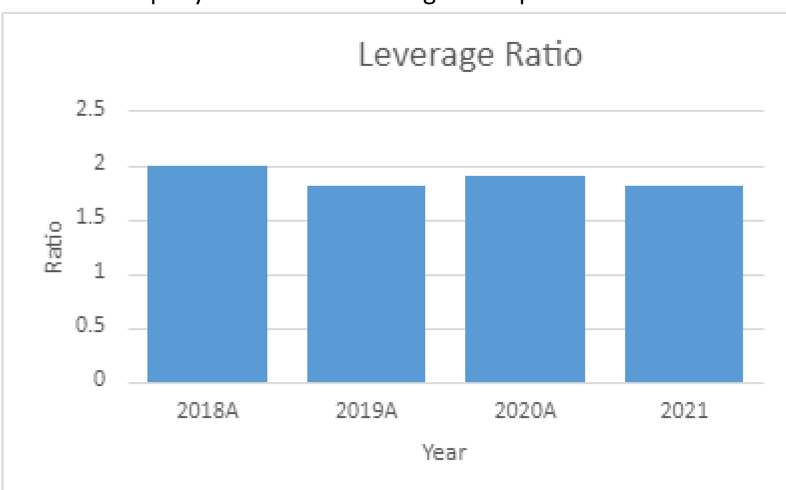


Return on Equity (ROE)

The return on equity of Berkshire lets investors understand how profitable the company is and how efficient it is in any given year. So, looking at the graph, the higher the number is the better Berkshire was at generating profits from their equity financing. ROE has a similar trend to ROA as investment gains are good the ROE is good but as investment gains start to be lower than normal, the ROE is also lowered.

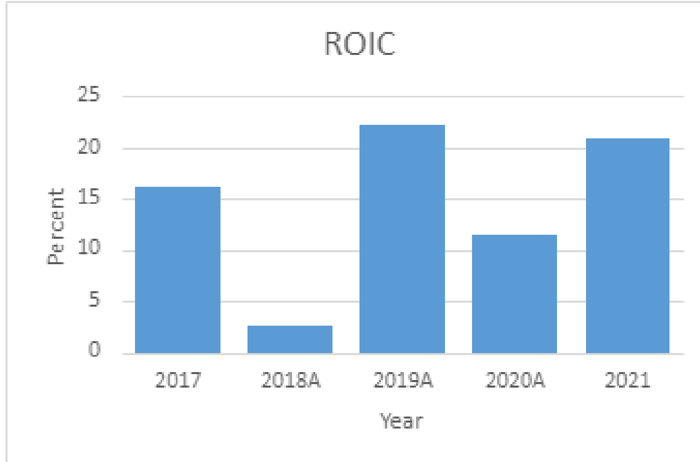


- Leverage Ratio
  - Leverage ratios are important for understanding the state of debt and equity financing for Berkshire and whether they can pay it off. Berkshire's leverage ratios have been consistently between 1.8 and 2.0. This is relativity high compared to what is thought as good but there should not be too much to worry about given that this company thrives off investing in companies.



Return on Invested Capital (ROIC)

Return on invested capital gives investors an idea of how well Berkshire can allocate capital to profitable investments. The trend in ROIC is similar to the ones in ROA and ROE. As Berkshire's investments do well so does ROIC and vice versa.



Things to Recognize.

DuPont is very important for determining the Financial health of a company but with these financial companies, it is difficult to get a good sense of the health because of how much investment gains/losses affect them. This is something to keep in minds throughout my report and my pitch so one can understand why I use certain metrics to do my valuation.

Valuation

Discounted Cash Flow (DCF) - 50 percent – 248.12 (22.1) % MOS

In this section, I will go over my reasoning for major aspects of my forecasts as well as my reasoning for choosing EV/sales instead of EV/EBITDA.

Revenue

For forecasting my revenue, I considered the overall business and how Warren Buffett invests, industry trends and disruptors, as well as overall historical growth rates. In FY 22 there was already three-quarters of the data so those growth rates for each business segment are just the average of the three quarters spread into a fiscal year. In FY 23 and beyond I expect some regression to the mean and am forecasting 7.5 and 5 percent growth in FY 23 for premiums and sales revenue for insurance before tapering down to 6 and 5 percent respectively. Buffett claims insurance is something that will never go away and with limited ability for innovation I expect the growth rates to hover around or just below historical averages. I am more optimistic about the future of their railroad business. Their year-over-year growth has been volatile over the past 5 years but they have had some good years. In FY 22, based on the yearly trend, it looks like they will have around 10 percent growth. Over the next 4 years or so I have tapered it down to about 7 percent to account for some of those swings. Berkshire has a good market presence and I expect solid growth for this business segment. For the remaining segments, I trust that Berkshire will invest in good business and continue to grow at historical averages. I see nothing huge that will be a major impact on their revenue in the manufacturing and retail segment and given that this is only 2-4 percent of their revenue I felt this was a fair valuation.

Cost of Goods Sold (COGS)

I forecasted costs of goods sold or costs of sales and services as it is noted in the financial statements as a percentage of revenue. COGS has been the biggest expense in the all of the business segments of Berkshire and I will expect it to continue to be about 41.5 percent of revenue over the next 5 years.

Selling, General and Administrative

I am expecting SG&A to continue to be about 7.5 percent of revenue like it has been historically. There are not been any major discrepancies over the past five years and I don’t expect any in the next 5. SG&A has stayed between 18-19 billion and I expect that to continue.

Provision for Income Taxes

Berkshire tax rate has hovered around the corporate rate with expectations being in FY 17 and 18 as they received some tax benefits. I expect the tax rate to be 20 percent on average over the next 5 years.

Capital Expenditures

Berkshire capex consists of property, plant, and equipment. Over the last 5 years it has been consistent between 12 and 15 billion with no constant growth. With no major investments into capex I expect it to continue growing slightly over the next five years.

Beta

Berkshire's beta is low averaging .85 on the weekly 5 year. Almost all my betas I calculated were below 1 and the weekly 5-year had the highest R- squared at 65.7 percent.

Terminal Value Calculations

The terminal growth rate I calculated was 2.4 percent for EV/Sales. I believe this to be accurate because of how this company has grown in the past and how limited it can be to innovation. I have chosen to use P/S and EV/Sales throughout my valuation because first I believe it gives the best outlook for the business segments Berkshire represents. Second, due to a new accounting rule in 2018, Berkshire had to report its gains and losses from investments in their net earnings. This meant that net earnings fluctuated from lows of 4 billion to highs of 81 billion with investments gains or losses being a huge factor. This for one negatively affected EV/EBITDA because there was no way to accurately come to an intrinsic value with that much fluctuation. The investment gains and losses also have a huge affect on the FCF. With the trends of the first three quarters of 2022, BRK is expected to lose nearly 80 billion which is its largest loss. I have forecasted about 35 billion in gains for FY23 to FY26 because that is the average of the past 5 years and d believe that it is best to no try and predict the market that far into the future.

PGM	EV/EBITDA	EV/Sales
104,836	104,836	104,836
20.0 %	20.0 %	20.0 %
3.0 %	4.2 %	2.4 %
n/a	20.3 x	3.1 x
887,990	1,291,352	771,809
992,827	1,396,188	876,645
88,184	88,184	88,184
	-	-
394,042	394,042	394,042
8,731	8,731	8,731
-	-	-
678,238	1,081,599	562,056
2,265	2,265	2,265
299.41	**477.47**	**248.12**

Capital Asset Pricing Model (CAPM) & Weighted Average Cost of Capital (WACC) Presumptions

Capital Structure		
MV of Equity	64.7 %	721,919
Preferred Shares	0.0 %	
BV of Debt	35.3 %	394,042
Operating Leases	0.5 %	5,988
Long-term debt	34.8 %	388,054

CAPM Assumptions	mrkt
Beta	0.85
Equity Risk Premium	6.0 %
Risk Free Rate for Local Currency	3.7 %

WACC Assumptions	CAPM
Cost of Equity	8.8 %
Cost of Preferred Shares	
Cost of Debt	4.8 %
Credit Rating	AA+
Default Spread	1.1 %
LT Credit Yield	4.8 %
Cost of Capital	***7.0 %***

Berkshire overall CAPM and WACC are relativity standard. I have included a picture of it so it can be understood clearly.

Historical Model – 25% - 241.53 (24.2)% MOS

Sales/Share	97.26	100.51	103.89	102.65	121.88	125.72
EBITDA/Share	15.17	7.15	47.62	29.42	55.88	41.35
Minority Interest/Share	0.17	0.12	0.15	0.31	0.45	0.38
EPS	18.38	1.75	33.37	18.08	40.09	41.35
LT Debt/Share	124.82	122.29	135.35	151.66	171.31	187.14
C&CE/Share	12.80	12.31	26.18	20.07	38.93	36.09
BV/Share	141.19	141.42	173.32	185.29	223.46	271.14

I believe this graphic represents why P/S is better than P/E for Berkshire because it illustrates the volatility of EPS vs Sales/Share. This is much more consistent growth in sales than in EPS which makes it a better way of looking at Berkshire overall. I chose to evaluate Berkshire over the past 5 years to fully grasp the intrinsic value of this historical model. In the end the intrinsic value of the historical model came to 241.53 with a margin of safety of negative 10.7 percent.

Comparable Model – 25% - 260.42 (18.29) MOS

All State – 35%

All State is one of GEICO's biggest competitors along with Progressive, State Farm, and USAA. I weighed All-State at 35 percent in my relative model because I wanted to give it exposure to the insurance industry through a big company. I believe that any company in the big four would have been good but I chose All-State for my model.

J.P Morgan - 35%

I used JP Morgan for many different reasons. One was because they are one of the leaders in assets under management at 2.6 trillion and is very well respected in the financial industry. One issue with them is how little insurance they have in their AUM but overall, I think that including such a company considers the importance of Berkshire being in the financial industry.

Blackrock - 15%

I chose Blackrock to gain exposure to the financial industry and their assets under management. Blackrock manages about 400 billion dollars for insurers. I was deciding between Blackstone and Blackrock but chose Blackrock because of their larger AUM so we could gain more exposure to companies with a stake in the insurance industry and the financial industry.

Prudential Financial – 15%

Prudential Financial provides insurance, retirement planning, and investment strategies. They have about 1.6 million in assets under management. Unlike companies like Blackrock, JP Morgan, and Blackstone Prudential has a much larger stake in the insurance industry which is why I believe it is important to be a part of the relative model.

I used the relative model because I believe it is a good way to consider how well different companies in the financial sector are doing in comparison to Berkshire. The profitability of these companies with assets under management is an important factor in arriving at a proper intrinsic value for Berkshire. In the end, I found an intrinsic value of 260.42 dollars with a margin of safety of (18.29).

Catalysts for Long-Term Underperformance

In my research, I have identified several catalysts for long-term underperformance

My first catalyst is climate change and natural disasters. Natural disasters are causing some panic in the insurance industry. The costs that come with trying to rebuild cities are astronomical and when insurance companies are responsible it can get tough for these companies to grow. I agree with Warren Buffets' analysis that the insurance industry will not die out and should be a good business venture but with how much risk that can come with it, especially in the coming decades BRK.B is currently overvalued. As I stated in the revenue segments Berkshire says that any claim over 100 million is significant. Such claims came from Hurricane Ida, floods in Europe, and Winter Storm Uri. Insurance makes up 83 percent of Berkshire revenue and historically has grown at 5-7 percent. My forecast reflects the lower end of these historical growth rates to take into account these risks and it has shown itself to be overvalued at this point in time.

I have been avoiding looking into Berkshire investments because I believe that generally, we know what we are going to get out of Warren Buffett and his trusted colleagues. There will be good years and bad years and is reflected in the investments gains and losses line item. Again, due to an accounting rule change in 2018, Berkshire had to report this and count it towards their net earnings. That is why I am using sales to analyze the company and haven't talked much about investments. Buffett is famous for his investment advice and I believe we should take it when he talks about his own stock. Over the past 5 years Berkshire has consistently bought back 5-7 billon dollars worth of shares every time they do buybacks. Recently that number has changes to 1-2 billion. I have included a screenshot from a letter to investors that he wrote and I think it tells the story that he believes the stock is overvalued at this moment as well.

> I want to underscore that for Berkshire repurchases to make sense, our shares *must* offer appropriate value. We don't want to overpay for the shares of other companies, and it would be *value-destroying* if we were to overpay when we are buying Berkshire. As of February 23, 2022, since yearend we repurchased additional shares at a cost of $1.2 billion. Our appetite remains large but will always remain price-dependent.

My third catalyst is their lack of innovation overall and questions about the future. This can be attributed to different aspects of the business. Berkshire owns a lot of different businesses in different segments and that will continue to be true for years to come. But it isn't going to be special from what I can see. They will continue to invest in solid fundamentally sound companies but are very limited in potential, especially with 83 percent of their revenue coming from insurance. With the price being where it is there is not a lot of room for growth potential. Warren Buffett is 92 years. At some point, one has to look and say this guy is not the future so what do we have to replace it? He has a plan of course but with how the market can react to sudden news I expect there to be some rough waters out of the gate. Greg Abel is who Buffet has named to be a successor. Only time will tell.

My final catalyst is Berkshire's investments. Everyone knows Buffett for being one of the greatest investors but even the greatest have swings. Throughout my research process I have found that depending on the year the amount of gains or losses that occur for Berkshire's investments greatly effects EBIT and the terminal growth rate of the stock. These fluctuations can give investors a false sense of satisfaction with the company. Berkshire invests the money they take in with their premiums they charge in their insurance segment. They don't charge any fees to counter act any losses. I want to draw a comparison with Blackstone a company I pitched last term. They had massive fluctuations in realized and unrealized gains which effected their earnings. Unlike Berkshire, Blackstone had increasing AUM which increased their management fees and overall could withstand negative years. Berkshire does not have that luxury. They will always be able to increase their premiums but that means they are liable for any claims that new customers make. They don't have a safety net like other financial companies. This is why I wanted to focus more on their business segments to gain a better understanding of if the company is creating growth opportunities.

Risks to Projections and Expectations

- I could be wrong in my thoughts about Buffett. I have been mostly basing my argument on the business side of things because I find it more important. Investors may not. People may have complete trust in Buffett than when he dies they won't care.
- Berkshire may only be slowing down share buybacks in the short term and in the long run it won't matter to the intrinsic value of the company
- I may not fully understand how the insurance industry is going to combat the rising number of natural disasters.

I don't see many risks to my projection. I think that if one looks at the historical data on the revenues and where the world is headed one will see that the most likely scenario is that Berkshire maintains growth on the lower end of historical rates which means that currently the stock is overvalued even with the Buffett effect.

Portfolio Recommendation

We currently have BRK.B as 2.65 percent of our total portfolio and it makes up 17.3% of our financial sector. I am recommending that we full sell this asset because I believe BRK to be overvalued at the moment and the industry that Berkshire is heavily invested in is limited in growth. Our financial sector makes up 15.33 percent of our portfolio compared to the 11.5% in the S&P500. If we want to try and mirror the S&P I think a full sell will help. If we want to stay above the S&P I believe that investing in more companies with a focus on assets under management could give us a exposure to more growth opportunities than Berkshire.

Corporate Governance

- They have 14 Board Members

Executive Members

- Warren Buffet – CEO
- Greg Abel – Vice Chairman
- Howard Buffett – CEO of Howard BUffet Foundation
- Stephen Burke – Chairman at NBC
- Kenneth Chenault- CEO of American Express
- David Gottesman – Principal of First Manhattan Co.
- Charlotte Guyman – Co-Founder of BoardReady
- Ajit Jain – Vice Chairman
- Charles T. Munger – Vice Chairman of the Board of Directors
- Thomas S. Murphy – CEO of Capital Cities currently retired
- Ronald L. Olson – Partner in the law firm of Munger, Tolles, and Olson LLP
- Walter Scott – Director of Valmont Industries
- Meryl Witmer – Managing member if the General Oartner of Eagle Capital Partners

Environmental, Social, and Governance (ESG) Observations

Environmental

Berkshire has to comply with a lot of regulation that the government provides given the indsutry they are in. There are many environmental factors involved with their energy and railroad business segments that they take very seriously. In their 10K they go over how much the environment matters in their different business segements.

Social

There are been pressure from investors for more ESG involvment by Berkshire. Investors want Berkshire to disclose more of what they are doing for diversity,climate, and greenhouse emmisions.

Governance

Berkshire's Board of directors consists of 14 members. Buffett follows the guidence of the Governance. Compensation and nominating committee that indivuials that will serve on the board have high intergrity, business savvy, an owner oreiented and deep genuine interest in Berkshrie.

Investment Summary

My analysis has led me to conclude that Berkshire Hathaway is currently overvalued. The company has a big stake in the insurance industry which from research does not have enough moment to grow at rates that justfiy the current price of the stock. I also have come to the conclusion that there is a lot of risk in Warren Buffett being 92 years old because there is so much uncertainity in that aspect. I have also come to the conclusion that the effect of investments gains and losses is very high on net earning and free cash flow which hurts the consistency of the company. I arrived at an intrinsic value of 244.55 dollars per share and an margin of safety of negatigve 21.7 percent. This means that I believe that Berkshire is currently overvalued and as a group we should initate a complete sell of the stock and find a better financials company.

***Disclosure**: We have no positions in any stocks mentioned, and no plans to initiate any positions within the next 72 hours.*

We wrote this report ourselves, and it expresses our own opinions. We are not receiving compensation for it. We have no business relationship with any company whose stock is mentioned in this equity report. This report is written explicitly for the Oregon State Investment Group; however, we hold the right to distribute this document to potential employers or for other educational purposes as a sample of our work.

Signed:

Peter Layzell

1/18/2023

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Appendix

# of Years Discounted						0.25	1.25	2.25	3.25	4.25		Underlying Assumptions				
Period Ending:	2017A	2018A	2019A	2020A	2021A	2022E	2023E	2024E	2025E	2026E	Growth	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
Segments Growth Rates																
Total revenues	239,933	247,837	254,616	245,510	276,094	276,806	292,630	306,808	321,720	337,407	Revenue Growth	0.26 %	5.72 %	4.84 %	4.86 %	4.88 %
Insurance premiums earned	60,597	57,418	61,078	63,401	69,478	68,422	73,554	77,967	82,645	87,603		(1.52)%	7.50 %	6.00 %	6.00 %	6.00 %
Sales and service revenues	130,343	133,336	134,989	127,044	145,043	142,896	150,041	156,043	162,285	168,776		(1.48)%	5.00 %	4.00 %	4.00 %	4.00 %
Leasing revenues	2,452	5,732	5,856	5,209	5,988	5,781	5,897	6,015	6,135	6,258		(3.45)%	2.00 %	2.00 %	2.00 %	2.00 %
Interest, dividend and other investment income	6,536	7,678	9,240	8,092	7,465	7,392	7,540	7,691	7,845	8,001		(0.98)%	2.00 %	2.00 %	2.00 %	2.00 %
Total revenues (insurance)	199,928	204,164	211,163	203,746	227,974	224,492	237,032	247,715	258,909	270,639						
Total revenues (railroad)	21,080	23,703	23,357	20,750	23,177	25,624	27,418	29,337	31,391	33,588		10.56 %	7.00 %	7.00 %	7.00 %	7.00 %
Sales and service revenues (U&E revenue)	15,155	15,555	15,353	15,540	18,891	21,124	22,391	23,735	25,159	26,668		11.82 %	6.00 %	6.00 %	6.00 %	6.00 %
Service revenues and other income	3,770	4,415	4,743	5,474	6,052	5,566	5,789	6,020	6,261	6,511		(8.03)%	4.00 %	4.00 %	4.00 %	4.00 %
Total revenues (Rail,U&E, other)	40,005	43,673	43,453	41,764	48,120	52,314	55,598	59,093	62,811	66,768						

ASSETS					
Investments in fixed maturity securities	$ 21,353	$ 19,898	$ 18,685	$ 20,410	$ 16,434
Investments in equity securities	170,540	172,757	248,027	281,170	350,719
Loans and finance receivables	13,748	16,280	17,527	19,201	20,751
Inventories	17,366	19,069	19,852	19,208	20,954
Goodwill	81,258	81,025	81,882	73,734	73,875
Equipment held for lease		14,298	15,065	14,601	14,918
Deferred charges under retroactive reinsurance contracts	15,278	14,104	13,747	12,441	10,639
Total Cash and Cash equivalant	31,583	30,361	64,175	47,990	88,184
Total Short Term Investments (treasury bills)	84,371	81,506	63,822	90,300	58,535
Total Current assets	179,991	182,446	201,211	212,551	227,989
Total assets	702,095	707,794	817,729	873,729	958,784
LIABILITIES					
Income taxes, principally deferred	56,607	51,375	66,799	74,098	90,243
Unpaid losses and loss adjustment expenses	61,122	68,458	73,019	79,854	86,664
Unpaid losses and loss adjustment expenses under retroactive reinsurance contracts	42,937	41,834	42,441	40,966	38,256
Accounts payable	35,903	37,186	42,319	45,568	46,072
Short term debt+ current portion of LT debt	6,320	16,585	15,106	14,088	9,728
Total Current Liabilities	42,223	53,771	57,425	59,656	55,800
Total long term debt	307,918	301,523	331,741	362,737	388,054
Total liabilities	350,141	355,294	389,166	422,393	443,854
Shareholders' equity:					
Common stock	8	8	8	8	8
Capital in excess of par value	35,694	35,707	35,658	35,626	35,592
Accumulated other comprehensive income	58,571	(5,015)	(5,243)	(4,243)	(4,027)
Retained earnings	255,786	321,112	402,493	444,626	534,421
Treasury stock, at cost	(1,763)	(3,109)	(8,125)	(32,853)	(59,795)

Other	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Changes in operating assets and liabilities:					
Losses and loss adjustment expenses	25,027	3,449	6,087	4,819	4,595
Deferred charges reinsurance assumed	(7,231)	1,174	357	1,307	1,802
Unearned premiums	1,761	1,794	1,707	1,587	2,306
Receivables and originated loans	(1,990)	(3,443)	(2,303)	(1,609)	(5,834)
Other assets	(1,665)	(1,832)	(2,011)	(1,109)	(1,686)
Other liabilities	1,194	2,002	190	3,376	2,389
Income taxes	(24,957)	(4,957)	15,181	7,195	15,297
Net cash flows from operating activities	45,728	37,400	38,687	39,773	39,421
Cash flows from investing activities:					
Purchases of U.S. Treasury Bills and fixed maturity securities	(158,492)	(141,844)	(136,123)	(208,429)	(152,637)
Purchases of equity securities	(20,326)	(43,210)	(18,642)	(30,161)	(8,448)
Sales of U.S. Treasury Bills and fixed maturity securities	49,327	39,693	15,929	31,873	27,188
Redemptions and maturities of U.S. Treasury Bills and fixed maturity securities	86,727	113,045	137,767	149,709	160,402
Sales and redemptions of equity securities	19,512	18,783	14,336	38,756	15,849
Purchases of loans and finance receivables	(1,435)	(1,771)	(75)	(772)	(88)
Collections of loans and finance receivables	1,702	342	345	393	561
Acquisitions of businesses, net of cash acquired	(2,708)	(3,279)	(1,683)	(2,532)	(456)
Purchases of property, plant and equipment and equipment held for lease	(11,708)	(14,537)	(15,979)	(13,012)	(13,276)
Other	(3,608)	(71)	(1,496)	(3,582)	297
Net cash flows from investing activities	(41,009)	(32,849)	(5,621)	(37,757)	29,392
Cash flows from financing activities:					
Changes in short term borrowings, net	2,079	(1,943)	266	(1,118)	(624)
Acquisition of treasury stock		(1,346)	(4,850)	(24,706)	(27,061)
Other	(121)	(343)	(497)	(429)	(695)
Net cash flows from financing activities	(1,398)	(5,812)	730	(18,344)	(28,508)
Effects of foreign currency exchange rate changes	248	(140)	25	92	5
Increase (decrease) in cash and cash equivalents and restricted cash	3,569	(1,401)	33,821	(16,236)	40,310

# of Years Discounted						0.25	1.25	2.25	3.25	4.25	Underlying Assumptions					
Period Ending:	2017A	2018A	2019A	2020A	2021A	2022E	2023E	2024E	2025E	2026E	Growth	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
Income Statement:																
Total revenues	239,933	247,837	254,616	245,510	276,094	276,806	292,630	306,808	321,720	337,407	Revenue Growth	0.26 %	5.72 %	4.84 %	4.86 %	4.88 %
Investment and derivative contract gains (losses):																
Investment gains (losses)	1,410	(22,155)	71,123	-	-											
Derivative contract gains (losses)	718	(300)	1,484	-	-											
Investment and derivative gains/losses	2,128	(22,455)	72,607	40,746	78,542	(82,362)	34,314	34,314	34,314	34,314	% YOY	5.00 %	5.00 %	5.00 %	5.00 %	5.00 %
Costs and expenses:					34,314											
EBIT	28,224	7,854	106,657	59,776	115,858	(51,083)	67,381	68,983	70,668	72,441						
Interest expense	4,386	3,853	3,961	4,083	4,172	4,152	4,389	4,602	4,826	5,061	% Revenue	1.50 %	1.50 %	1.50 %	1.50 %	1.50 %
Total costs and expenses	221,237	219,214	225,703	231,289	243,945	250,786	265,123	277,968	291,478	305,691		90.60 %	90.60 %	90.60 %	90.60 %	90.60 %
Earnings before income taxes and equity method earnings (losses)	20,824	6,168	101,520	54,967	110,691	(56,342)	61,821	63,154	64,555	66,030		27.00 %	27.00 %	27.00 %	27.00 %	27.00 %
Equity method earnings (losses)	3,014	(2,167)	1,176	726	995	1,107	1,171	1,227	1,287	1,350		0.40 %	0.40 %	0.40 %	0.40 %	0.40 %
Earnings before income taxes	23,838	4,001	102,696	55,693	111,686	(55,235)	62,991	64,381	65,842	67,380		34.50 %	34.50 %	34.50 %	34.50 %	34.50 %
Effective Tax Rate	(90.3)%	(8.0)%	20.4 %	22.3 %	18.7 %	20%	20%	20%	20%	20%						
Income tax expense (benefit)	(21,515)	(321)	20,904	12,440	20,879	19,100	20,191	21,170	22,199	23,281		6.90 %	6.90 %	6.90 %	6.90 %	6.90 %
Net earnings	45,353	4,322	81,792	43,253	90,807	(74,335)	42,800	43,211	43,643	44,098		(181.86)%	(157.58)%	0.96 %	1.00 %	1.04 %
Earnings attributable to noncontrolling interests	413	301	375	732	1,012	830	878	920	965	1,012		0.30 %	0.30 %	0.30 %	0.30 %	0.30 %
Net earnings attributable to Berkshire Hathaway shareholders	44,940	4,021	81,417	42,521	89,795	(75,165)	41,922	42,291	42,678	43,086		(183.71)%	(155.77)%	0.88 %	0.92 %	0.96 %
Equivalent Class A [Member]																
Costs and expenses:																
Net earnings per average equivalent share	27,326	2,446	49,828	26,668	59,460											
Average equivalent shares outstanding	1,644,615	1,643,795	1,633,946	1,594,469	1,510,180											
Equivalent Class B [Member]																
Costs and expenses:																
Net earnings per average equivalent share	18	2	33	18	40	(34)	20	21	22	22						
Average equivalent shares outstanding	2,466,923,163	2,465,692,368	2,450,919,020	2,391,703,454	2,265,269,867	2,201,842,311	2,140,190,726	2,080,265,386	2,022,017,955	1,965,401,452	% YOY	(2.80)%	(2.80)%	(2.80)%	(2.80)%	(2.80)%
Diluted	2,467	2,466	2,451	2,392	2,265	2,202	2,140	2,080	2,022	1,965						
Insurance and Other [Member]																
Revenues:																
Insurance premiums earned	60,597	57,418	61,078	63,401	69,478	68,422	73,554	77,967	82,645	87,603	% Revenue Growth	(1.52)%	7.50 %	6.00 %	6.00 %	6.00 %
Sales and service revenues	130,343	133,336	134,989	127,044	145,043	142,896	150,041	156,043	162,285	168,776		(1.48)%	5.00 %	4.00 %	4.00 %	4.00 %
Leasing revenues	2,452	5,732	5,856	5,209	5,988	5,781	5,897	6,015	6,135	6,258		(3.45)%	2.00 %	2.00 %	2.00 %	2.00 %
Interest, dividend and other investment income	6,536	7,678	9,240	8,092	7,465	7,392	7,540	7,691	7,845	8,001		(0.98)%	2.00 %	2.00 %	2.00 %	2.00 %
Total revenues (insurance)	199,928	204,164	211,163	203,746	227,974	224,492	237,032	247,715	258,909	270,639		(1.53)%	5.59 %	4.51 %	4.52 %	4.53 %
Costs and expenses:																

Used in Average?	No	Yes				
Average Period	**3 Years**	**5 Years**	**Value**	**Discounted**	**MoS**	**Weight**
P/S	2.04	2.00	251.02	245.80	(22.87)%	50.0 %
P/E	7.93	30.02	(1,013.63)	(992.55)	(411.45)%	
P/B	1.15	1.23	334.64	327.68	2.82 %	
EV/EBITDA	8.33	17.64	(472.09)	(462.27)	(245.05)%	
EV/Sales	3.18	3.13	242.30	237.26	(25.55)%	50.0 %
			Intrinsic Value Per Share	**241.53**	**(24.21)%**	***100.0 %***

Relative Model Inputs	
Discount Period	0.25
Sales (ntm)	########
EPS (ntm)	(32.81)
Book Value (ntm)	########
EPS Growth (5 yr exp.)	########
EBITDA (ntm)	(40,033)
Cost of Equity	8.8 %
Cost of Capital	7.0 %
Custom Ratio	
C&CE (mrq)	88,184
Investments & Other (mrq)	-
LT Debt (mrq)	388,054
Minority Interest (mrq)	8,731
Preferred shares (mrq)	-
Diluted Shares (mrq)	2,265

Relative Model																
Ticker	BRK-B	ALL	BLK	PRU	JPM						Multiple	Value	Discounted	MoS	Weight
P/E (ttm)	7.4 x	40.4 x	20.4 x	129.5 x	11.6 x						40.7 x	(1,335.93)	(1,308.14)	(510.47)%	
P/S (ttm)	2.8 x	0.8 x	6.1 x	0.6 x	3.3 x						2.4 x	296.51	290.34	(8.90)%	50.0 %
P/BV (mrq)	1.5 x	2.2 x	3.0 x	2.3 x	1.6 x						2.1 x	557.27	545.68	71.23 %	
PEG (5 yr expected)	9.64	2.11	14.42	71.31	1.37						14.1 x	46,195.19	45,234.35	14093.84 %	
EV/EBITDA (ttm)	36.2 x	36.4 x	15.2 x	19.7 x	6.6 x						20.3 x	(494.82)	(488.79)	(253.37)%	
EV/Sales (ttm)	3.1 x	3.1 x	6.0 x	0.8 x	2.7 x						3.1 x	236.77	230.49	(27.67)%	50.0 %
Custom Ratio											0.0 x	-	-	(100.00)%	
Weight		35.0 %	15.0 %	15.0 %	35.0 %						Intrinsic Value Per Share		260.42	(18.29)%	*100.0 %*

Additional Information										
Ticker	BRK-B	ALL	BLK	PRU	JPM	0	0	0	0	0
Beta	0.85	0.64	1.28	1.42	1.11					
Debt/Equity (mrq)	86.2 %	45.4 %	21.9 %	203.6 %	2.0 %					
Return on Equity	17.6 %	0.2 %	13.9 %	0.8 %	12.2 %					
Return on Assets	10.3 %	0.2 %	3.1 %	(0.0)%	0.9 %					

Capital Structure		
MV of Equity	64.7 %	721,919
Preferred Shares	0.0 %	
BV of Debt	35.3 %	394,042
Operating Leases	0.5 %	5,988
Long-term debt	34.8 %	388,054

CAPM Assumptions	mrkt
Beta	0.85
Equity Risk Premium	6.0 %
Risk Free Rate for Local Currency	3.7 %

WACC Assumptions	CAPM
Cost of Equity	8.8 %
Cost of Preferred Shares	
Cost of Debt	4.8 %
Credit Rating	AA+
Default Spread	1.1 %
LT Credit Yield	4.8 %
Cost of Capital	7.0 %

Valuation		PGM	EV/EBITDA	EV/Sales
∑ of PV of Future Cash Flows		104,836	104,836	104,836
Terminal Tax Rate		20.0 %	20.0 %	20.0 %
Terminal Growth Rate		3.0 %	4.2 %	2.4 %
Exit Multiple	n/a		20.3 x	3.1 x
PV of Terminal Value		887,990	1,291,352	771,809
Enterprise Value		992,827	1,396,188	876,645
+ C&CE		88,184	88,184	88,184
+ Investments & Other			-	-
- Debt		394,042	394,042	394,042
- Minority Interests		8,731	8,731	8,731
- Preferred Shares		-	-	-
Equity Value		678,238	1,081,599	562,056
Shares Outstanding (Diluted)		2,265	2,265	2,265
Intrinsic Value Per Share		299.41	477.47	248.12

Valuation

Valuation Method	Value	MoS	Weight
PGM	299.41	(6.1)%	0.0 %
EV/EBITDA	477.47	49.8 %	0.0 %
EV/Sales	248.12	(22.1)%	50.0 %
RIM	94.71	(70.3)%	0.0 %
DDM	-	(100.0)%	0.0 %
GGM	-	(100.0)%	0.0 %
Relative	260.42	(18.3)%	25.0 %
Historical	241.53	(24.2)%	25.0 %
Intrinsic Value Per Share	249.55	(21.7)%	100.0 %
Market Price	318.69		
Cost of Capital	7.02 %		

Current Price	Intrinsic Value
288.69	-
298.69	-
308.69	-
318.69	-
328.69	-
338.69	-
348.69	-

Price Target	
1/20/2024	271.43
1/20/2025	295.24
1/20/2026	321.14
1/20/2027	349.30
1/20/2028	379.94

Recommedation	
Porfolio	Global
Date of Pitch	1/20/2023
Analyst	
Coverage Type	Update
Buy/Hold/Sell	Sell
Update Frequency	
Next Earnings Date (Q?)	

Summary

With a price target of $249.55 per share, I am recommending a Sell