

BERKSHIRE HATHAWAY INC.

2022
ANNUAL REPORT

BERKSHIRE HATHAWAY INC.

2022 ANNUAL REPORT

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Berkshire's Performance vs. the S&P 500

Year	Annual Percentage Change	
	in Per-Share Market Value of Berkshire	in S&P 500 with Dividends Included
1965	49.5	10.0
1966	(3.4)	(11.7)
1967	13.3	30.9
1968	77.8	11.0
1969	19.4	(8.4)
1970	(4.6)	3.9
1971	80.5	14.6
1972	8.1	18.9
1973	(2.5)	(14.8)
1974	(48.7)	(26.4)
1975	2.5	37.2
1976	129.3	23.6
1977	46.8	(7.4)
1978	14.5	6.4
1979	102.5	18.2
1980	32.8	32.3
1981	31.8	(5.0)
1982	38.4	21.4
1983	69.0	22.4
1984	(2.7)	6.1
1985	93.7	31.6
1986	14.2	18.6
1987	4.6	5.1
1988	59.3	16.6
1989	84.6	31.7
1990	(23.1)	(3.1)
1991	35.6	30.5
1992	29.8	7.6
1993	38.9	10.1
1994	25.0	1.3
1995	57.4	37.6
1996	6.2	23.0
1997	34.9	33.4
1998	52.2	28.6
1999	(19.9)	21.0
2000	26.6	(9.1)
2001	6.5	(11.9)
2002	(3.8)	(22.1)
2003	15.8	28.7
2004	4.3	10.9
2005	0.8	4.9
2006	24.1	15.8
2007	28.7	5.5
2008	(31.8)	(37.0)
2009	2.7	26.5
2010	21.4	15.1
2011	(4.7)	2.1
2012	16.8	16.0
2013	32.7	32.4
2014	27.0	13.7
2015	(12.5)	1.4
2016	23.4	12.0
2017	21.9	21.8
2018	2.8	(4.4)
2019	11.0	31.5
2020	2.4	18.4
2021	29.6	28.7
2022	4.0	(18.1)
Compounded Annual Gain – 1965-2022	19.8%	9.9%
Overall Gain – 1964-2022	3,787,464%	24,708%

Note: Data are for calendar years with these exceptions: 1965 and 1966, year ended 9/30; 1967, 15 months ended 12/31.

BERKSHIRE HATHAWAY INC.

To the Shareholders of Berkshire Hathaway Inc.:

Charlie Munger, my long-time partner, and I have the job of managing the savings of a great number of *individuals*. We are grateful for their enduring trust, a relationship that often spans much of their adult lifetime. It is those dedicated savers that are forefront in my mind as I write this letter.

A common belief is that people choose to save when young, expecting thereby to maintain their living standards after retirement. Any assets that remain at death, this theory says, will usually be left to their families or, possibly, to friends and philanthropy.

Our experience has differed. We believe Berkshire's individual holders largely to be of the once-a-saver, always-a-saver variety. Though these people live well, they eventually dispense most of their funds to philanthropic organizations. These, in turn, redistribute the funds by expenditures intended to improve the lives of a great many people who are unrelated to the original benefactor. Sometimes, the results have been spectacular.

The disposition of money unmask humans. Charlie and I watch with pleasure the vast flow of Berkshire-generated funds to public needs and, alongside, the infrequency with which our shareholders opt for look-at-me assets and dynasty-building.

Who *wouldn't* enjoy working for shareholders like ours?

What We Do

Charlie and I allocate your savings at Berkshire between two related forms of ownership. First, we invest in businesses that we control, usually buying 100% of each. Berkshire directs capital allocation at these subsidiaries and selects the CEOs who make day-by-day operating decisions. When large enterprises are being managed, both trust and rules are essential. Berkshire emphasizes the former to an unusual – some would say extreme – degree. Disappointments are inevitable. We are understanding about *business* mistakes; our tolerance for personal misconduct is zero.

In our second category of ownership, we buy publicly-traded stocks through which we passively own *pieces* of businesses. Holding *these* investments, we have no say in management.

Our goal in both forms of ownership is to make meaningful investments in *businesses* with both long-lasting favorable economic characteristics and trustworthy managers. Please note particularly that we own publicly-traded stocks based on our expectations about their long-term *business* performance, not because we view them as vehicles for adroit purchases and sales. That point is crucial: Charlie and I are *not* stock-pickers; we are business-pickers.

Over the years, I have made many mistakes. Consequently, our extensive collection of businesses currently consists of a few enterprises that have truly extraordinary economics, many that enjoy very good economic characteristics, and a large group that are marginal. Along the way, other businesses in which I have invested have died, their products unwanted by the public. Capitalism has two sides: The system creates an ever-growing pile of losers while concurrently delivering a gusher of improved goods and services. Schumpeter called this phenomenon “creative destruction.”

One advantage of our publicly-traded segment is that – episodically – it becomes easy to buy *pieces* of wonderful businesses at wonderful prices. It’s crucial to understand that stocks often trade at truly foolish prices, both high and low. “Efficient” markets exist only in textbooks. In truth, marketable stocks and bonds are baffling, their behavior usually understandable only in retrospect.

Controlled businesses are a different breed. They sometimes command ridiculously *higher* prices than justified but are almost never available at bargain valuations. Unless under duress, the owner of a controlled business gives no thought to selling at a panic-type valuation.

* * * * *

At this point, a report card from me is appropriate: In 58 years of Berkshire management, most of my capital-allocation decisions have been no better than so-so. In some cases, also, bad moves by me have been rescued by very large doses of luck. (Remember our escapes from near-disasters at USAir and Salomon? I certainly do.)

Our satisfactory results have been the product of about a dozen truly good decisions – that would be about one every five years – *and* a sometimes-forgotten advantage that favors long-term investors such as Berkshire. Let’s take a peek behind the curtain.

The Secret Sauce

In August 1994 – yes, 1994 – Berkshire *completed* its seven-year purchase of the 400 million shares of Coca-Cola we now own. The total cost was \$1.3 billion – then a very meaningful sum at Berkshire.

The cash dividend we received from Coke in 1994 was \$75 million. By 2022, the dividend had increased to \$704 million. Growth occurred every year, just as certain as birthdays. All Charlie and I were required to do was cash Coke’s quarterly dividend checks. We expect that those checks are highly likely to grow.

American Express is much the same story. Berkshire’s purchases of Amex were essentially completed in 1995 and, coincidentally, also cost \$1.3 billion. Annual dividends received from this investment have grown from \$41 million to \$302 million. Those checks, too, seem highly likely to increase.

These dividend gains, though pleasing, are *far* from spectacular. But they bring with them important gains in stock prices. At yearend, our Coke investment was valued at \$25 billion while Amex was recorded at \$22 billion. Each holding now accounts for roughly 5% of Berkshire’s net worth, akin to its weighting long ago.

Assume, for a moment, I had made a similarly-sized investment mistake in the 1990s, one that flat-lined and simply retained its \$1.3 billion value in 2022. (An example would be a high-grade 30-year bond.) That disappointing investment would now represent an insignificant 0.3% of Berkshire’s net worth and would be delivering to us an unchanged \$80 million or so of annual income.

The lesson for investors: The weeds wither away in significance as the flowers bloom. Over time, it takes just a few winners to work wonders. And, yes, it helps to start early and live into your 90s as well.

The Past Year in Brief

Berkshire had a good year in 2022. The company’s *operating earnings* – our term for income calculated using Generally Accepted Accounting Principles (“GAAP”), *exclusive* of capital gains or losses from equity holdings – set a record at \$30.8 billion. Charlie and I focus on this operational figure and urge you to do so as well. The GAAP figure, *absent our adjustment*, fluctuates wildly and capriciously at every reporting date. Note its acrobatic behavior in 2022, which is in no way unusual:

<u>2022 Quarter</u>	<u>Earnings in \$ billions</u>	
	<u>“Operating Earnings”</u>	<u>GAAP Earnings We are Required to Report</u>
1	7.0	5.5
2	9.3	(43.8)
3	7.8	(2.7)
4	6.7	18.2

The GAAP earnings are 100% misleading when viewed quarterly or even annually. Capital gains, to be sure, have been hugely important to Berkshire over past decades, and we expect them to be meaningfully positive in future decades. But their quarter-by-quarter gyrations, regularly and mindlessly headlined by media, totally misinform investors.

A second positive development for Berkshire last year was our purchase of Alleghany Corporation, a property-casualty insurer captained by Joe Brandon. I've worked with Joe in the past, and he understands both Berkshire and insurance. Alleghany delivers special value to us because Berkshire's unmatched financial strength allows its insurance subsidiaries to follow valuable and enduring investment strategies unavailable to virtually all competitors.

Aided by Alleghany, our insurance float increased during 2022 from \$147 billion to \$164 billion. With disciplined underwriting, these funds have a decent chance of being *cost-free* over time. Since purchasing our first property-casualty insurer in 1967, Berkshire's float has increased 8,000-fold through acquisitions, operations and innovations. Though *not* recognized in our financial statements, this float has been an extraordinary asset for Berkshire. New shareholders can get an understanding of its value by reading our annually updated explanation of float on page A-2.

* * * * *

A *very* minor gain in per-share intrinsic value took place in 2022 through Berkshire share repurchases as well as similar moves at Apple and American Express, both significant investees of ours. At Berkshire, we directly increased your interest in our unique collection of businesses by repurchasing 1.2% of the company's outstanding shares. At Apple and Amex, repurchases increased Berkshire's ownership a bit without any cost to us.

The math isn't complicated: When the share count goes down, *your* interest in our many businesses goes *up*. Every small bit helps *if repurchases are made at value-accretive prices*. Just as surely, when a company overpays for repurchases, the continuing shareholders *lose*. At such times, gains flow only to the *selling* shareholders and to the friendly, but expensive, investment banker who recommended the foolish purchases.

Gains from value-accretive repurchases, it should be emphasized, benefit *all* owners – in *every* respect. Imagine, if you will, three fully-informed shareholders of a local auto dealership, one of whom manages the business. Imagine, further, that one of the passive owners wishes to sell his interest back to the company at a price attractive to the two continuing shareholders. When completed, has this transaction harmed anyone? Is the manager somehow favored over the continuing passive owners? Has the public been hurt?

When you are told that *all* repurchases are harmful to shareholders *or* to the country, *or* particularly beneficial to CEOs, you are listening to either an economic illiterate or a silver-tongued demagogue (characters that are *not* mutually exclusive).

Almost endless details of Berkshire’s 2022 operations are laid out on pages K-33 – K-66. Charlie and I, along with many Berkshire shareholders, enjoy poring over the many facts and figures laid out in that section. These pages are *not*, however, required reading. There are many Berkshire centimillionaires and, yes, billionaires who have never studied our financial figures. They simply know that Charlie and I – along with our families and close friends – continue to have very significant investments in Berkshire, and they trust us to treat their money as we do our own.

And *that* is a promise we can make.

* * * * *

Finally, an important warning: Even the *operating* earnings figure that we favor can easily be manipulated by managers who wish to do so. Such tampering is often thought of as sophisticated by CEOs, directors and their advisors. Reporters and analysts embrace its existence as well. Beating “expectations” is heralded as a managerial triumph.

That activity is disgusting. It requires no talent to manipulate numbers: Only a deep desire to deceive is required. “Bold imaginative accounting,” as a CEO once described his deception to me, has become one of the shames of capitalism.

58 Years – and a Few Figures

In 1965, Berkshire was a one-trick pony, the owner of a venerable – but doomed – New England textile operation. With that business on a death march, Berkshire needed an immediate fresh start. Looking back, I was slow to recognize the severity of its problems.

And then came a stroke of good luck: National Indemnity became available in 1967, and we shifted our resources toward insurance and other non-textile operations.

Thus began our journey to 2023, a bumpy road involving a combination of *continuous* savings by our owners (that is, by their retaining earnings), the power of compounding, our avoidance of *major* mistakes and – most important of all – the American Tailwind. America would have done fine without Berkshire. The reverse is *not* true.

Berkshire now enjoys major ownership in an unmatched collection of huge and diversified businesses. Let’s first look at the 5,000 or so publicly-held companies that trade daily on NASDAQ, the NYSE and related venues. Within this group is housed the members of the S&P 500 Index, an elite collection of large and well-known American companies.

In aggregate, the 500 earned \$1.8 trillion in 2021. I don’t yet have the final results for 2022. Using, therefore, the 2021 figures, only 128 of the 500 (including Berkshire itself) earned \$3 billion or more. Indeed, 23 lost money.

At yearend 2022, Berkshire was the largest owner of *eight* of these giants: American Express, Bank of America, Chevron, Coca-Cola, HP Inc., Moody's, Occidental Petroleum and Paramount Global.

In addition to those eight investees, Berkshire owns 100% of BNSF and 92% of BH Energy, each with earnings that exceed the \$3 billion mark noted above (\$5.9 billion at BNSF and \$4.3 billion at BHE). Were these companies publicly-owned, they would replace two present members of the 500. All told, our ten controlled and non-controlled behemoths leave Berkshire more broadly aligned with the country's economic future than is the case at any other U.S. company. (This calculation leaves aside "fiduciary" operations such as pension funds and investment companies.) In addition, Berkshire's insurance operation, though conducted through many individually-managed subsidiaries, has a value comparable to BNSF or BHE.

As for the future, Berkshire will always hold a boatload of cash and U.S. Treasury bills along with a wide array of businesses. We will also avoid behavior that could result in *any* uncomfortable cash needs at inconvenient times, including financial panics and unprecedented insurance losses. Our CEO will always be the Chief Risk Officer – a task it is irresponsible to delegate. Additionally, our future CEOs will have a significant part of their net worth in Berkshire shares, bought with their own money. *And* yes, our shareholders will continue to save and prosper by retaining earnings.

At Berkshire, there will be no finish line.

Some Surprising Facts About Federal Taxes

During the decade ending in 2021, the United States Treasury received about \$32.3 trillion in taxes while it spent \$43.9 trillion.

Though economists, politicians and many of the public have opinions about the consequences of that huge imbalance, Charlie and I plead ignorance and firmly believe that near-term economic and market forecasts are worse than useless. Our job is to manage Berkshire's operations and finances in a manner that will achieve an acceptable result over time and that will preserve the company's unmatched staying power when financial panics or severe worldwide recessions occur. Berkshire also offers some modest protection from runaway inflation, but this attribute is *far* from perfect. Huge and entrenched fiscal deficits have consequences.

The \$32 trillion of revenue was garnered by the Treasury through individual income taxes (48%), social security and related receipts (34½%), corporate income tax payments (8½%) and a wide variety of lesser levies. Berkshire's contribution via the corporate income tax was \$32 billion during the decade, almost exactly a tenth of 1% of *all* money that the Treasury collected.

And that means – brace yourself – had there been roughly 1,000 taxpayers in the U.S. matching Berkshire’s payments, no other businesses nor any of the country’s 131 million households would have needed to pay *any* taxes to the federal government. Not a dime.

* * * * *

Millions, billions, trillions – we all know the words, but the sums involved are almost impossible to comprehend. Let’s put physical dimensions to the numbers:

- If you convert \$1 million into newly-printed \$100 bills, you will have a stack that reaches your chest.
- Perform the same exercise with \$1 *billion* – this is getting exciting! – and the stack reaches about $\frac{3}{4}$ of a mile into the sky.
- Finally, imagine piling up \$32 billion, the total of Berkshire’s 2012-21 federal income tax payments. Now the stack grows to more than 21 miles in height, about three times the level at which commercial airplanes usually cruise.

When it comes to federal taxes, individuals who own Berkshire can unequivocally state “I gave at the office.”

* * * * *

At Berkshire we hope *and expect* to pay much more in taxes during the next decade. We owe the country no less: America’s dynamism has made a huge contribution to whatever success Berkshire has achieved – a contribution Berkshire will always need. We *count* on the American Tailwind and, though it has been becalmed from time to time, its propelling force has always returned.

I have been investing for 80 years – more than one-third of our country’s lifetime. Despite our citizens’ penchant – almost enthusiasm – for self-criticism and self-doubt, I have yet to see a time when it made sense to make a long-term bet against America. And I doubt very much that any reader of this letter will have a different experience in the future.

Nothing Beats Having a Great Partner

Charlie and I think pretty much alike. But what it takes me a page to explain, he sums up in a sentence. His version, moreover, is always more clearly reasoned and also more artfully – some might add bluntly – stated.

Here are a few of his thoughts, many lifted from a very recent podcast:

- The world is full of foolish gamblers, and they will not do as well as the patient investor.
- If you don’t see the world the way it is, it’s like judging something through a distorted lens.
- All I want to know is where I’m going to die, so I’ll never go there. And a related thought: Early on, write your desired obituary – and then behave accordingly.
- If you don’t care whether you are rational or not, you won’t work on it. Then you will stay irrational and get lousy results.

- Patience can be learned. Having a long attention span and the ability to concentrate on one thing for a long time is a huge advantage.
- You can learn a lot from dead people. Read of the deceased you admire and detest.
- Don't bail away in a sinking boat if you can swim to one that is seaworthy.
- A great company keeps working after you are not; a mediocre company won't do that.
- Warren and I don't focus on the froth of the market. We seek out good long-term investments and stubbornly hold them for a long time.
- Ben Graham said, "Day to day, the stock market is a voting machine; in the long term it's a weighing machine." If you keep making something more valuable, then some wise person is going to notice it and start buying.
- There is no such thing as a 100% sure thing when investing. Thus, the use of leverage is dangerous. A string of wonderful numbers times zero will always equal zero. Don't count on getting rich twice.
- You don't, however, need to own a lot of things in order to get rich.
- You have to keep learning if you want to become a great investor. When the world changes, *you* must change.
- Warren and I hated railroad stocks for decades, but the world changed and finally the country had four huge railroads of vital importance to the American economy. We were slow to recognize the change, but better late than never.
- Finally, *I* will add two short sentences by Charlie that have been his decision-clinchers for decades: "Warren, think more about it. You're smart and I'm right."

And so it goes. I never have a phone call with Charlie without learning something. And, while he makes me think, he also makes me laugh.

* * * * *

I will add to Charlie's list a rule of my own: Find a very smart high-grade partner – preferably slightly older than you – and then listen *very* carefully to what he says.

A Family Gathering in Omaha

Charlie and I are shameless. Last year, at our first shareholder get-together in three years, we greeted you with our usual commercial hustle.

From the opening bell, we went straight for your wallet. In short order, our See's kiosk sold you *eleven tons* of nourishing peanut brittle and chocolates. In our P.T. Barnum pitch, we promised you longevity. After all, what else but candy from See's could account for Charlie and me making it to 99 and 92?

I know you can't wait to hear the specifics of last year's hustle.

On Friday, the doors were open from noon until 5 p.m., and our candy counters rang up 2,690 individual sales. On Saturday, See's registered an additional 3,931 transactions between 7 a.m. and 4:30 p.m., despite the fact that 6½ of the 9½ operating hours occurred while our movie and the question-and-answer session were limiting commercial traffic.

Do the math: See's rang up about 10 sales per minute during its prime operating time (racking up \$400,309 of volume during the two days), with all the goods purchased at a single location selling products that haven't been materially altered in 101 years. What worked for See's in the days of Henry Ford's model T works now.

* * * * *

Charlie, I, and the entire Berkshire bunch look forward to seeing you in Omaha on May 5-6. We will have a good time and so will you.

February 25, 2023

Warren E. Buffett
Chairman of the Board

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-K**

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2022

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission file number 001-14905

BERKSHIRE HATHAWAY INC.

(Exact name of Registrant as specified in its charter)

Delaware
State or other jurisdiction of
incorporation or organization
3555 Farnam Street, Omaha, Nebraska
(Address of principal executive office)

47-0813844
(I.R.S. Employer
Identification No.)
68131
(Zip Code)

Registrant's telephone number, including area code (402) 346-1400

Securities registered pursuant to Section 12(b) of the Act:

<u>Title of each class</u>	<u>Trading Symbols</u>	<u>Name of each exchange on which registered</u>
Class A Common Stock	BRK.A	New York Stock Exchange
Class B Common Stock	BRK.B	New York Stock Exchange
0.750% Senior Notes due 2023	BRK23	New York Stock Exchange
1.300% Senior Notes due 2024	BRK24	New York Stock Exchange
0.000% Senior Notes due 2025	BRK25	New York Stock Exchange
1.125% Senior Notes due 2027	BRK27	New York Stock Exchange
2.150% Senior Notes due 2028	BRK28	New York Stock Exchange
1.500% Senior Notes due 2030	BRK30	New York Stock Exchange
2.000% Senior Notes due 2034	BRK34	New York Stock Exchange
1.625% Senior Notes due 2035	BRK35	New York Stock Exchange
2.375% Senior Notes due 2039	BRK39	New York Stock Exchange
0.500% Senior Notes due 2041	BRK41	New York Stock Exchange
2.625% Senior Notes due 2059	BRK59	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: NONE

Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the Registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act. Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company Emerging growth company

If an emerging growth company, indicate by check mark if the Registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements.

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b).

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes No

State the aggregate market value of the voting stock held by non-affiliates of the Registrant as of June 30, 2022: \$500,000,000,000

Indicate the number of shares outstanding of each of the Registrant's classes of common stock:

February 13, 2023—Class A common stock, \$5 par value 590,835 shares
February 13, 2023—Class B common stock, \$0.0033 par value 1,301,100,243 shares

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Proxy Statement for the Registrant's Annual Meeting to be held May 6, 2023 are incorporated in Part III.

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Part I

Item 1. Business Description

Berkshire Hathaway Inc. (“Berkshire,” “Company” or “Registrant”) is a holding company owning subsidiaries engaged in numerous diverse business activities. The most important of these are insurance businesses conducted on both a primary basis and a reinsurance basis, a freight rail transportation business and a group of utility and energy generation and distribution businesses. Berkshire also owns and operates numerous other businesses engaged in a variety of manufacturing, services, retailing and other activities. Berkshire is domiciled in the state of Delaware, and its corporate headquarters is in Omaha, Nebraska.

Berkshire’s operating businesses are managed on an unusually decentralized basis. There are few centralized or integrated business functions. Berkshire’s corporate senior management team participates in and is ultimately responsible for significant capital allocation decisions, investment activities and the selection of the Chief Executive to head each of the operating businesses.

Berkshire’s senior management is also responsible for establishing and monitoring Berkshire’s corporate governance practices, including monitoring governance efforts, including those at the operating businesses, and participating in the resolution of governance-related issues as needed. Berkshire’s Board of Directors is responsible for assuring an appropriate successor to the Chief Executive Officer. The Berkshire Code of Business Conduct and Ethics emphasizes, among other things, the commitment to ethics and compliance with government laws and regulations and provides basic standards for ethical and legal behavior of its employees.

Human capital and resources are an integral and essential component of Berkshire’s businesses. Berkshire and its consolidated subsidiaries employed approximately 383,000 people worldwide at the end of 2022, of which approximately 78% were in the United States (“U.S.”) and 20% were represented by unions. Employees engage in a wide variety of occupations. Consistent with Berkshire’s decentralized management philosophy, Berkshire’s operating businesses individually establish specific policies and practices concerning the attraction and retention of personnel within their organizations. Given the wide variations in the nature and size of business activities, specific policies and practices may vary widely among Berkshire’s operating subsidiaries. Policies and practices commonly address, among other things: maintaining a safe work environment and minimizing or eliminating workplace injuries; offering competitive compensation, which includes various health insurance and retirement benefits, as well as incentives to recognize and reward performance; wellness programs; training, learning and career advancement opportunities; and hiring practices intended to identify qualified candidates and promote diversity and inclusion in the workforce. Berkshire’s consolidated U.S. workforce demographics, based on U.S. Equal Employment Opportunity Commission guidelines, are available on its website (<https://www.berkshirehathaway.com>), under sustainability.

Insurance and Reinsurance Businesses

Berkshire’s insurance and reinsurance business activities are conducted through numerous domestic and foreign-based insurance subsidiaries. Berkshire’s insurance subsidiaries provide insurance and reinsurance of property and casualty risks and reinsurance of life and health risks worldwide. Berkshire’s insurance subsidiaries employed approximately 50,000 people at the end of 2022. For purposes of this discussion, entities that provide insurance or reinsurance are referred to as insurers.

In direct or primary insurance activities, the insurer assumes the risk of loss from persons or organizations that are directly subject to the risks. Such risks may relate to property, casualty (or liability), life, accident, health, financial or other perils that may arise from an insurable event. In reinsurance activities, the insurer assumes defined portions of risks that other direct insurers or reinsurers assumed in their own insuring activities.

Reinsurance contracts are normally classified as treaty or facultative contracts. Treaty reinsurance refers to reinsurance coverage for all or a portion of a specified group or class of risks ceded by a direct insurer or reinsurer, while facultative reinsurance involves coverage of specific individual underlying risks. Reinsurance contracts are further classified as quota-share or excess. Under quota-share (proportional or pro-rata) reinsurance, the reinsurer shares proportionally in the original premiums and losses of the direct insurer or reinsurer. Excess (or non-proportional) reinsurance provides for the indemnification of the direct insurer or reinsurer for all or a portion of the loss in excess of an agreed upon amount or “retention.” Both quota-share and excess reinsurance contracts may provide for aggregate limits of indemnification.

Insurance and reinsurance are generally subject to regulatory oversight throughout the world. Except for regulatory considerations, there are virtually no barriers to entry into the insurance and reinsurance industry. Competitors may be domestic or foreign, as well as licensed or unlicensed. The number of competitors within the industry is not known. Insurers compete on the basis of reliability, financial strength and stability, financial ratings, underwriting consistency, service, business ethics, price, performance, capacity, policy terms and coverage conditions.

Insurers based in the U.S. are subject to regulation by their states of domicile and by those states in which they are licensed to write policies on an admitted basis. The primary focus of regulation is to assure that insurers are financially solvent and that policyholder interests are otherwise protected. States establish minimum capital levels for insurance companies and establish guidelines for permissible business and investment activities. States have the authority to suspend or revoke a company's authority to do business as conditions warrant. States regulate the payment of dividends by insurance companies to their shareholders and other transactions with affiliates. Dividends, capital distributions and other transactions of extraordinary amounts are subject to prior regulatory approval.

Insurers may market, sell and service insurance policies in the states where they are licensed. These insurers are referred to as admitted insurers. Admitted insurers are generally required to obtain regulatory approval of their policy forms and premium rates. Non-admitted insurance markets have developed to provide insurance that is otherwise unavailable through admitted insurers. Non-admitted insurance, often referred to as "excess and surplus" lines, is procured by either state-licensed surplus lines brokers who place risks with insurers not licensed in that state or by the insured party's direct procurement from non-admitted insurers. Non-admitted insurance is subject to considerably less regulation with respect to policy rates and forms. Reinsurers are normally not required to obtain regulatory approval of premium rates or reinsurance contracts.

The insurance regulators of every state participate in the National Association of Insurance Commissioners ("NAIC"). The NAIC adopts forms, instructions and accounting procedures for use by U.S. insurers in preparing and filing annual statutory financial statements. However, an insurer's state of domicile has ultimate authority over these matters. In addition to its activities relating to the annual statement, the NAIC develops or adopts statutory accounting principles, model laws, regulations and programs for use by its members. Such matters deal with regulatory oversight of solvency, risk management, compliance with financial regulation standards and risk-based capital reporting requirements.

U.S. states, through the NAIC, and international insurance regulators through the International Association of Insurance Supervisors ("IAIS") have been developing standards and best practices focused on establishing a common set of principles ("Insurance Core Principles") and framework ("ComFrame") for the regulation of large multi-national insurance groups. The IAIS is developing capital standards for internationally active insurance groups (the "Insurance Capital Standard") based on a consolidated group approach and is also evaluating a potentially comparable group capital standard based on the aggregation of regulated entities and their underlying local capital requirements (the "Aggregation Method"). The IAIS standards address a variety of topics regarding supervision, coordination of regulators, insurance capital standards, risk management and governance. While the IAIS standards do not have legal effect, U.S. state insurance departments and the NAIC are implementing various group supervision regulatory tools and mandates that are responsive to certain IAIS standards. U.S. state regulators have formed supervisory colleges intended to promote communication and cooperation amongst the various domestic and international insurance regulators. The Nebraska Department of Insurance acts as the lead supervisor for our group of insurance companies and chairs the Berkshire supervisory college. U.S. state regulators require insurance groups to file an annual report and an Own Risk Solvency Assessment or ORSA, with the group's lead supervisor. The NAIC recently adopted a group capital calculation based on methodology similar to the Aggregation Method, which leverages the NAIC's existing Risk Based Capital standards. The NAIC's group capital calculation is a tool designed to help the lead supervisor understand the capital adequacy across an insurance group. The NAIC is also developing further tools, including various liquidity assessments, that will likely be imposed on insurance groups in the future.

Berkshire's insurance companies maintain capital strength at exceptionally high levels, which differentiates them from their competitors. The combined statutory surplus of Berkshire's U.S.-based insurers was approximately \$272 billion at December 31, 2022. Berkshire's major insurance subsidiaries are rated AA+ by Standard & Poor's and A++ (superior) by A.M. Best with respect to their financial condition and claims paying ability.

The Terrorism Risk Insurance Act of 2002 established within the Department of the Treasury a Terrorism Insurance Program ("Program") for commercial property and casualty insurers by providing federal reinsurance of insured terrorism losses. The Program currently extends to December 31, 2027 through other Acts, most recently the Terrorism Risk Insurance Program Reauthorization Act of 2019. Hereinafter these Acts are collectively referred to as TRIA. Under TRIA, the Department of the Treasury is charged with certifying "acts of terrorism." Coverage under TRIA occurs if the industry insured loss for certified events occurring during the calendar year exceeds \$200 million in any calendar year.

To be eligible for federal reinsurance, insurers must make available insurance coverage for acts of terrorism, by providing policyholders with clear and conspicuous notice of the amount of premium that will be charged for this coverage and of the federal share of any insured losses resulting from any act of terrorism. Assumed reinsurance is specifically excluded from TRIA participation. TRIA currently also excludes certain forms of direct insurance (such as personal and commercial auto, burglary, theft, surety and certain professional liability lines). Reinsurers are not required to offer terrorism coverage and are not eligible for federal reinsurance of terrorism losses.

In the event of a certified act of terrorism, the federal government will reimburse insurers (conditioned on their satisfaction of policyholder notification requirements) for 80% of their insured losses in excess of an insurance group's deductible. Under the Program, the deductible is 20% of the aggregate direct subject earned premium for relevant commercial lines of business in the immediately preceding calendar year. The aggregate deductible in 2023 for Berkshire's insurance group is expected to approximate \$2.25 billion. There is also an aggregate program limit of \$100 billion on the amount of the federal government coverage for each TRIA year.

The extent of insurance regulation varies significantly among the countries in which our non-U.S. operations conduct business. While each country imposes licensing, solvency, auditing and financial reporting requirements, the type and extent of the requirements differ substantially. For example:

- in some countries, insurers are required to prepare and file monthly and/or quarterly financial reports, and in others, only annual reports;
- some regulators require intermediaries to be involved in the sale of insurance products, whereas other regulators permit direct sales contact between the insurer and the customer;
- the extent of restrictions imposed upon an insurer's use of local and offshore reinsurance vary;
- policy form filing and rate regulation vary by country;
- the frequency of contact and periodic on-site examinations by insurance authorities differ by country;
- the scope and prescriptive requirements of an insurer's risk management and governance framework vary significantly by country; and
- regulatory requirements relating to insurer dividend policies vary by country.

Significant variations can also be found in the size, structure and resources of the local regulatory departments that oversee insurance activities. Certain regulators prefer close relationships with all subject insurers and others operate a risk-based approach.

Berkshire's insurance group operates in some countries through subsidiaries and in some countries through branches of subsidiaries. Berkshire insurance subsidiaries are located in several countries, including Germany, the United Kingdom ("U.K."), Ireland, Australia and South Africa, and also maintain branches in several other countries. Most of these foreign jurisdictions impose local capital requirements. Other legal requirements include discretionary licensing procedures, local retention of funds and records, and data privacy and protection program requirements. Berkshire's international insurance companies are also subject to multinational application of certain U.S. laws.

There are various regulatory bodies and initiatives that impact Berkshire in multiple international jurisdictions and the potential for significant effect on the Berkshire insurance group could be heightened as a result of recent industry and economic developments. In 2016, the U.K. voted in a national referendum to withdraw from the European Union ("EU") ("Brexit"), which resulted in the U.K.'s withdrawal from the EU on January 31, 2020. In anticipation of the U.K. leaving the EU, Berkshire Hathaway European Insurance DAC in Ireland was established to permit property and casualty insurance and reinsurance businesses to continue to operate in the EU. Berkshire also continues to maintain a substantial presence in London following Brexit.

Alleghany Corporation ("Alleghany"), based in New York, New York, was acquired by Berkshire on October 19, 2022. Alleghany's operating subsidiaries include property and casualty reinsurance and insurance, as well as a portfolio of non-financial businesses. Information regarding Alleghany's primary insurance and reinsurance activities is provided in the Berkshire Hathaway Primary Group and Berkshire Hathaway Reinsurance Group sections and its non-insurance businesses are included in the manufacturing and services sections.

Berkshire's insurance underwriting operations include the following groups: (1) GEICO, (2) Berkshire Hathaway Primary Group and (3) Berkshire Hathaway Reinsurance Group. Except for retroactive reinsurance and periodic payment annuity products, which generate significant amounts of up-front premiums along with estimated claims expected to be paid over long time periods (creating "float," see Investments section), Berkshire expects to achieve an underwriting profit over time and that its managers will reject inadequately priced risks. Underwriting profit is defined as earned premiums less associated incurred losses, loss adjustment expenses and underwriting and policy acquisition expenses. Underwriting profit does not include income earned from investments. Additional information related to each of Berkshire's underwriting groups follows.

GEICO—GEICO is headquartered in Chevy Chase, Maryland. GEICO’s insurance subsidiaries consist of Government Employees Insurance Company, GEICO General Insurance Company, GEICO Indemnity Company, GEICO Casualty Company, GEICO Advantage Insurance Company, GEICO Choice Insurance Company, GEICO Secure Insurance Company, GEICO County Mutual Insurance Company, GEICO Texas County Mutual Insurance Company and GEICO Marine Insurance Company. The GEICO companies primarily offer private passenger automobile insurance to individuals in all 50 states and the District of Columbia. GEICO also provides insurance for motorcycles, all-terrain vehicles, recreational vehicles, boats and small commercial fleets and acts as an agent for other insurers who offer homeowners, renters, life and identity management insurance to individuals desiring insurance coverages other than those offered by GEICO.

GEICO’s marketing is primarily through direct response methods in which applications for insurance are submitted directly to the companies via the Internet or by telephone, and to a lesser extent, through captive agents. GEICO conducts business through regional service centers and claims adjustment and other facilities in 39 states.

The automobile insurance business is highly competitive in the areas of price and service. GEICO competes for private passenger automobile insurance customers in the preferred, standard and non-standard risk markets with other companies that sell directly to the customer and with companies that use agency sales forces, including State Farm, Allstate, Progressive and USAA. GEICO’s advertising campaigns and competitive rates contributed to a cumulative increase in voluntary policies-in-force of approximately 4.0% over the past five years. During 2022, GEICO experienced a reduction of 1.7 million voluntary policies-in-force after flat year-over-year growth from 2020 to 2021. According to the most recently published A.M. Best data for 2021, the five largest automobile insurers had a combined market share in 2021 of approximately 60.5% based on written premiums, with GEICO’s market share being the second largest at approximately 14.4%. GEICO’s management estimates its current market share is approximately 13.9%. The COVID-19 pandemic and subsequent supply chain disruptions affecting automobile manufacturers have impacted GEICO’s business and underwriting results in 2020 and thereafter. Seasonal variations in GEICO’s insurance business are not significant. However, extraordinary weather conditions or other factors may have a significant effect upon the frequency or severity of automobile claims.

State insurance departments stringently regulate private passenger auto insurance. As a result, it is difficult for insurance companies to differentiate their products. Competition for private passenger automobile insurance tends to focus on price and level of customer service provided. GEICO’s cost-efficient direct response marketing methods and emphasis on customer satisfaction enable it to offer competitive rates and value to its customers. GEICO primarily uses its own claims staff to manage and settle claims. The name and reputation of GEICO are material assets and management protects those and other service marks through appropriate registrations.

Berkshire Hathaway Primary Group—The Berkshire Hathaway Primary Group (“BH Primary”) is a collection of independently managed insurers that provide a wide variety of insurance coverages to policyholders located principally in the U.S. These various operations are discussed below.

National Indemnity Company (“NICO”), domiciled in Nebraska, and certain affiliates (“NICO Primary”) underwrite commercial motor vehicle and general liability insurance on an admitted basis and on an excess and surplus basis. Insurance coverages are offered nationwide primarily through insurance agents and brokers.

The Berkshire Hathaway Homestate Companies (“BHHC”) is a group of insurers offering workers’ compensation, commercial automobile and commercial property coverages to a diverse client base. BHHC has a national reach, with the ability to provide first-dollar and small to large deductible workers’ compensation coverage to employers in all states, except those where coverage is available only through state-operated workers’ compensation funds. NICO Primary and BHHC are each based in Omaha, Nebraska.

Berkshire Hathaway Specialty Insurance (“BH Specialty”) offers commercial property, casualty, healthcare professional liability, executive and professional, surety, travel, medical stop loss and homeowner’s insurance through Berkshire Hathaway Specialty Insurance Company and other Berkshire insurance affiliates. BH Specialty writes primary and excess and surplus policies on an admitted and non-admitted basis in the U.S., and on a local or foreign non-admitted basis outside the U.S. BH Specialty is based in Boston, Massachusetts, with regional offices in several U.S. cities. BH Specialty also maintains international offices and branches located in Australia, New Zealand, Canada and several countries in Asia, Europe and the Middle East. BH Specialty writes business through wholesale and retail insurance brokers, as well as managing general agents.

Alleghany’s property and casualty insurance business is conducted in the U.S. on both an admitted and non-admitted basis through RSUI Group, Inc. and its subsidiaries (“RSUI”) and CapSpecialty, Inc. and its subsidiaries (“CapSpecialty”). RSUI and CapSpecialty primarily write specialty insurance in the property, umbrella/excess liability, professional liability, directors’ and officers’ liability, and general liability lines of business. Insurance is written through independent wholesale insurance brokers, retail agents and managing general agents.

MedPro Group (“MedPro”) is a leading provider of healthcare liability (“HCL”) insurance based on premiums written. MedPro provides customized HCL insurance, claims, patient safety and risk solutions to physicians, surgeons, dentists and other healthcare professionals, as well as hospitals, senior care and other healthcare facilities. Additionally, MedPro provides HCL insurance solutions to international markets through other Berkshire insurance affiliates, delivers liability insurance to other professionals, and offers specialized accident and health insurance solutions to colleges and other customers through its subsidiaries and other Berkshire insurance affiliates. MedPro is based in Fort Wayne, Indiana.

U.S. Liability Insurance Company (“USLI”) includes a group of five specialty insurers that underwrite commercial, professional and personal lines of insurance on an admitted basis, as well as on an excess and surplus basis. USLI markets policies in all 50 states, the District of Columbia and Canada through wholesale and retail insurance agents. USLI companies also underwrite and market a wide variety of specialty insurance products. USLI is based in Wayne, Pennsylvania. Berkshire Hathaway GUARD Insurance Companies (“GUARD”) is a group of five insurance companies that provide a full suite of commercial insurance products, as well as homeowners policies to over 350,000 small to mid-sized businesses and homeowners. These offerings are made through independent agents and retail and wholesale brokers. GUARD is based in Wilkes-Barre, Pennsylvania.

Berkshire Hathaway Direct Insurance Company and its affiliates (“BH Direct”) offer commercial insurance products (including workers’ compensation, property, auto, general and professional liability) to small business customers. BH Direct’s products are primarily sold through two internet-based distribution platforms, biBERK.com and Threeinsurance.com. BH Direct writes policies on an admitted basis and is based in Stamford, Connecticut. MLMIC Insurance Company (“MLMIC”) is a leading writer of medical professional liability insurance in New York State. MLMIC distributes the majority of its policies on a direct basis to medical and dental professionals, health care providers and hospitals.

Berkshire Hathaway Reinsurance Group—Berkshire’s combined global reinsurance business, referred to as the Berkshire Hathaway Reinsurance Group (“BHRG”), offers a wide range of coverages on property, casualty, life and health risks to insurers and reinsurers worldwide. BHRG conducts business activities in 27 countries. Reinsurance business is written through NICO and several other Berkshire insurance subsidiaries (“NICO Group”), General Re Corporation, and its subsidiaries (“General Re Group”) and Alleghany’s Transatlantic Reinsurance Company and affiliates (“TransRe Group”). The NICO Group and Gen Re Group underwriting operations in the U.S. are based in Stamford, Connecticut and the TransRe Group is based in New York, New York.

The type and volume of business written is dependent on market conditions, including prevailing premium rates and coverage terms. The level of underwriting activities often fluctuates significantly from year to year depending on the perceived level of price adequacy in specific insurance and reinsurance markets as well as from the timing of particularly large reinsurance transactions.

Property/casualty

The NICO Group offers traditional property/casualty reinsurance on both an excess-of-loss and a quota-share basis, catastrophe excess-of-loss treaty and facultative reinsurance, and primary insurance on an excess-of-loss basis for large or unusual risks. The type and volume of business written by the NICO Group may vary significantly from period to period resulting from changes in perceived premium rate adequacy and from unique or large transactions. A significant portion of NICO Group’s annual reinsurance premium volume currently derives from a 20% quota-share agreement with Insurance Australia Group Limited (“IAG”) that incepted in 2015. The agreement was renewed, and extended, effective January 1, 2023, with an expiration of December 31, 2029. IAG is a multi-line insurer in Australia, New Zealand and other Asia-Pacific countries.

The General Re Group conducts a global property and casualty reinsurance business. Reinsurance contracts are written on both a quota-share and excess basis for multiple lines of business. Contracts are primarily in the form of treaties, and to a lesser degree, on a facultative basis. General Re Group conducts business in North America, primarily marketed on a direct basis through General Reinsurance Corporation (“GRC”), which is licensed in the District of Columbia and all states, except Hawaii, where it is an accredited reinsurer. GRC also conducts operations in North America through 11 branch offices in the U.S. and Canada.

In North America, the General Re Group includes General Star National Insurance Company, General Star Indemnity Company and Genesis Insurance Company, which offer a broad array of specialty and surplus lines and property, casualty and professional liability coverages. Such business is marketed through a select group of wholesale brokers, managing general underwriters and program administrators, and offers solutions for the unique needs of public entity, commercial and captive customers.

General Re Group’s international reinsurance business is conducted on a direct basis through General Reinsurance AG, based in Cologne, Germany, and through subsidiaries and branches in numerous other countries. International business is also written through brokers, including Faraday Underwriting Limited (“Faraday”), a subsidiary. Faraday owns the managing agent of Syndicate 435 at Lloyd’s of London and provides capacity and participates in 100% of the results of Syndicate 435.

The TransRe Group provides pro-rata and excess-of-loss reinsurance across various property and casualty lines of business. Contracts are written on both a treaty and facultative basis to insurance and other reinsurance companies in the U.S. and in foreign markets through subsidiaries and branches in numerous countries. Business is written primarily through brokers, and to a lesser extent on a direct basis.

Life/health

The General Re Group conducts a global life and health reinsurance business. In the U.S. and internationally, the General Re Group writes life, disability, supplemental health, critical illness and long-term care coverages. The life/health business is marketed on a direct basis. Life/health net premiums written by the General Re Group in 2022 were primarily in the Asia Pacific, U.S. and Western Europe.

Berkshire Hathaway Life Insurance Company of Nebraska (“BHLN”) and its affiliates write reinsurance covering various forms of traditional life insurance exposures. BHLN and affiliates are parties to contracts that reinsure certain guaranteed minimum death, income and similar benefit risks on closed-blocks of variable annuity risks under reinsurance contracts, with the most recent contract incepting in 2014.

Retroactive reinsurance

NICO also occasionally writes retroactive reinsurance contracts. Retroactive reinsurance contracts indemnify ceding companies against the adverse development of claims arising from loss events that have already occurred under property and casualty policies issued in prior years. Premiums from such contracts may be exceptionally large in amount. Coverages under such contracts are provided on an excess basis (above a stated retention) or for losses payable after the inception of the contract with no additional ceding company retention. Contracts are normally subject to aggregate limits of indemnification, which can be exceptionally large in amount. Significant amounts of asbestos, environmental and latent injury claims may arise under these contracts.

The concept of time-value-of-money is an important element in establishing retroactive reinsurance contract prices and terms since loss payments may occur over decades. Normally, expected ultimate losses payable under these policies are expected to exceed premiums, thus producing underwriting losses. Nevertheless, this business is written, in part, because of the large amounts of policyholder funds generated for investment, the economic benefit of which will be reflected through investment results in future periods.

Periodic payment annuity

BHLN writes periodic payment annuity insurance policies and reinsures annuity-like obligations. Under these policies, BHLN receives upfront consideration and agrees in the future to make periodic payments that often extend for decades. These policies generally relate to the settlement of underlying personal injury or workers’ compensation claims of other insurers, known as structured settlements. Consistent with retroactive reinsurance contracts, time-value-of-money is an important factor in establishing annuity premiums, and underwriting losses are expected from the periodic accretion of time-value discounted liabilities.

Investments of insurance businesses—Berkshire’s insurance subsidiaries hold significant levels of invested assets. Investment portfolios are managed by Berkshire’s Chief Executive Officer and Berkshire’s other investment managers. Investments include a very large portfolio of publicly traded equity securities, which is unusually concentrated in relatively few issuers, as well as fixed maturity securities and cash and short-term investments. Generally, there are no targeted allocations by investment type or attempts to match investment asset and insurance liability durations. However, investment portfolios have historically included a much greater proportion of equity securities than is customary in the insurance industry.

Invested assets derive from shareholder capital as well as funds provided from policyholders through insurance and reinsurance business (“float”). Float is an approximation of the net policyholder funds generated through underwriting activities that is held for investment. The major components of float are unpaid losses and loss adjustment expenses, life, annuity and health benefit liabilities, unearned premiums and other policyholder liabilities less premium and reinsurance receivables, deferred policy acquisition costs and deferred charges on assumed retroactive reinsurance contracts. On a consolidated basis, float has grown from approximately \$114 billion at the end of 2017 to approximately \$164 billion at the end of 2022. The cost of float can be measured as the net pre-tax underwriting loss as a percentage of average float. The cost of float was nominal in 2022, reflecting a small underwriting loss. In 2021 and 2020, the cost of float was negative, reflecting underwriting earnings in each of those years.

Railroad Business—Burlington Northern Santa Fe

Burlington Northern Santa Fe, LLC (“BNSF”) is based in Fort Worth, Texas, and through BNSF Railway Company (“BNSF Railway”) operates one of the largest railroad systems in North America. BNSF Railway had approximately 36,000 employees at the end of 2022, of whom approximately 31,000 were members of a labor union. BNSF also operates a relatively smaller third-party logistics services business.

In serving the Midwest, Pacific Northwest, Western, Southwestern and Southeastern regions and ports of the U.S., BNSF transports a range of products and commodities derived from manufacturing, agricultural and natural resource industries. Freight revenues are covered by contractual agreements of varying durations or common carrier published prices or company quotations. BNSF's financial performance is influenced by, among other things, general and industry economic conditions at the international, national and regional levels.

BNSF's primary routes, including trackage rights, allow it to access major cities and ports in the western and southern U.S. as well as parts of Canada and Mexico. In addition to major cities and ports, BNSF Railway efficiently serves many smaller markets by working closely with approximately 200 shortline railroads. BNSF Railway has also entered into marketing agreements with other rail carriers, expanding the marketing reach for each railroad and their customers. For the year ending December 31, 2022, 38% of freight revenues were derived from consumer products, 23% from industrial products, 23% from agricultural products and 16% from coal.

Regulatory Matters

BNSF is subject to federal, state and local laws and regulations generally applicable to its businesses. Rail operations are subject to the regulatory jurisdiction of the Surface Transportation Board ("STB"), the Federal Railroad Administration of the United States Department of Transportation ("DOT"), the Occupational Safety and Health Administration ("OSHA"), the Environmental Protection Agency ("EPA"), as well as other federal and state regulatory agencies and Canadian regulatory agencies for operations in Canada. The STB has jurisdiction over disputes and complaints involving certain rates, routes and services, the sale or abandonment of rail lines, applications for line extensions and construction, and the merger with or acquisition of control of rail common carriers. The outcome of STB proceedings can affect the profitability of BNSF Railway's business.

The DOT, OSHA, and EPA have jurisdiction under several federal statutes over a number of safety, health, and environmental aspects of rail operations, including the transportation of hazardous materials. BNSF Railway is required to transport these materials to the extent of its common carrier obligation. State agencies regulate some health, safety, and environmental aspects of rail operations in areas not otherwise preempted by federal law.

Environmental Matters

BNSF's rail operations, as well as those of its competitors, are also subject to extensive federal, state and local environmental regulations covering discharges to the ground or waters, air emissions, toxic substances and the generation, handling, storage, transportation and disposal of waste and hazardous materials. Such regulations effectively increase the costs and liabilities associated with rail operations. Environmental risks are also inherent in rail operations, which frequently involve transporting chemicals and other hazardous materials.

Many of BNSF's land holdings are or have been used for industrial or transportation-related purposes or leased to commercial or industrial companies whose activities may have resulted in discharges onto the property. Under federal (in particular, the Comprehensive Environmental Response, Compensation and Liability Act) and state statutes, BNSF may be held jointly and severally liable for cleanup and enforcement costs associated with a particular site without regard to fault or the legality of the original conduct. BNSF may also be subject to claims by third parties for investigation, cleanup, restoration or other environmental costs under environmental statutes or common law with respect to properties they own that have been impacted by BNSF operations.

Consumption of diesel fuel by locomotives accounted for approximately 80% of BNSF's greenhouse gas ("GHG") emissions in its baseline year of 2018. BNSF management has committed to a broad sustainability model, applying science based approaches, that will provide a 30% reduction in BNSF's GHG-emissions by 2030 from its baseline year of 2018. BNSF intends to continue improvements in fuel efficiency and increased utilization of renewable diesel fuel. Long-term solutions, such as battery-electric and hydrogen locomotives, are also being evaluated and field-tested.

Competition

The business environment in which BNSF operates is highly competitive. Depending on the specific market, deregulated motor carriers and other railroads, as well as river barges, ships and pipelines, may exert pressure on price and service levels. The presence of advanced, high service truck lines with expedited delivery, subsidized infrastructure and minimal empty mileage continues to affect the market for non-bulk, time-sensitive freight. The potential expansion of longer combination vehicles could further encroach upon markets traditionally served by railroads. In order to remain competitive, BNSF Railway and other railroads seek to develop and implement operating efficiencies to improve productivity.

As railroads streamline, rationalize and otherwise enhance their franchises, competition among rail carriers intensifies. BNSF Railway's primary rail competitor in the Western region of the U.S. is the Union Pacific Railroad Company. Other Class I railroads and numerous regional railroads and motor carriers also operate in parts of the same territories served by BNSF Railway.

Utilities and Energy Businesses—Berkshire Hathaway Energy

Berkshire currently holds a 92% ownership interest in Berkshire Hathaway Energy Company (“BHE”), based in Des Moines, Iowa. BHE is a global energy company with subsidiaries and affiliates that generate, transmit, store, distribute and supply energy. BHE’s domestic regulated energy interests are comprised of four regulated U.S. utility companies (collectively, “U.S. utilities”) serving approximately 5.2 million retail customers and five U.S. interstate natural gas pipeline companies with approximately 21,200 miles of operated pipeline having a design capacity of approximately 21 billion cubic feet of natural gas per day. Other energy businesses include electric transmission and distribution operations in Great Britain and Canada, a diversified portfolio of mostly renewable independent power projects and investments, and a liquefied natural gas export, import and storage facility. BHE also owns a residential real estate brokerage firm in the U.S. and a large network of residential real estate brokerage franchises in the U.S. BHE employs approximately 24,000 people in connection with its various operations.

General Matters

BHE’s U.S. utilities include PacifiCorp, MidAmerican Energy Company (“MEC”) and NV Energy, Inc.’s (“NV Energy”) two regulated utility subsidiaries, Nevada Power Company (“Nevada Power”) and Sierra Pacific Power Company (“Sierra Pacific”). PacifiCorp is a regulated electric utility company headquartered in Oregon, serving electric customers in portions of Utah, Oregon, Wyoming, Washington, Idaho and California. The combined service territory’s diverse regional economy ranges from rural, agricultural and mining areas to urban, manufacturing and government service centers. No single segment of the economy dominates the combined service territory, which helps mitigate PacifiCorp’s exposure to economic fluctuations. In addition to retail sales, PacifiCorp sells electricity on a wholesale basis.

MEC is a regulated electric and natural gas utility company headquartered in Iowa, serving electric and natural gas customers primarily in Iowa and also in portions of Illinois, South Dakota and Nebraska. MEC has a diverse retail customer base consisting of urban and rural residential customers and a variety of commercial and industrial customers. In addition to retail sales and natural gas transportation, MEC sells electricity and natural gas on a wholesale basis.

Nevada Power serves retail electric customers in southern Nevada and Sierra Pacific serves retail electric and natural gas customers in northern Nevada. The combined Nevada Power/Sierra Pacific service territory economy includes gaming, mining, recreation, warehousing, manufacturing and governmental services. In addition to retail sales and natural gas transportation, these utilities sell electricity and natural gas on a wholesale basis.

As vertically integrated utilities, BHE’s U.S. utilities collectively own approximately 29,500 net megawatts of generation capacity in operation and under construction. The U.S. utilities’ business is subject to seasonal variations principally related to the use of electricity for air conditioning and natural gas for heating. Typically, regulated electric revenues are higher in the summer months, while regulated natural gas revenues are higher in the winter months.

The natural gas pipelines consist of BHE GT&S, LLC (“BHE GT&S”), Northern Natural Gas Company (“Northern Natural”) and Kern River Gas Transmission Company (“Kern River”). BHE GT&S was acquired on November 1, 2020.

BHE GT&S, based in Virginia, operates three interstate natural gas pipeline systems that consist of approximately 5,400 miles of natural gas transmission, gathering and storage pipelines and operates seventeen underground natural gas storage fields in the eastern region of the U.S. BHE GT&S’s large underground natural gas storage assets and pipeline systems are part of an interconnected gas transmission network that provides transportation services to utilities and numerous other customers. BHE GT&S is also an industry leader in liquefied natural gas solutions through its investments in and ownership of several liquefied natural gas facilities located throughout the eastern region of the U.S.

Northern Natural, based in Nebraska, operates the largest interstate natural gas pipeline system in the U.S., as measured by pipeline miles, reaching from west Texas to Michigan’s Upper Peninsula. Northern Natural’s pipeline system consists of approximately 14,400 miles of natural gas pipelines. Northern Natural’s extensive pipeline system, which is interconnected with many interstate and intrastate pipelines in the national grid system, has access to supplies from multiple major supply basins and provides transportation services to utilities and numerous other customers. Northern Natural also operates three underground natural gas storage facilities and two liquefied natural gas storage peaking units. Northern Natural’s pipeline system experiences significant seasonal swings in demand and revenue, with the highest demand typically occurring during the months of November through March.

Kern River, based in Utah, operates an interstate natural gas pipeline system that consists of approximately 1,400 miles and extends from supply areas in the Rocky Mountains to consuming markets in Utah, Nevada and California. Kern River transports natural gas for electric and natural gas distribution utilities, major oil and natural gas companies or affiliates of such companies, electric generating companies, energy marketing and trading companies, and financial institutions.