

Management's Discussion and Analysis (Continued)

Other (Continued)

Foreign currency exchange rate gains and losses pertain to the Berkshire and BHFC Euro, Great Britain Pound and Japanese Yen denominated debt. Changes in foreign currency exchange rates produce unrealized gains and losses from the periodic revaluation of these liabilities into U.S. Dollars. In 2022, we recorded foreign currency exchange rate gains on these debt issues, due to strengthening of the U.S. Dollar, which reduced the U.S. Dollar carrying value of the debt. The gains and losses recorded in any given period can be significant due to the magnitude of the borrowings and the inherent volatility in foreign currency exchange rates. Other earnings consist primarily of Berkshire parent company investment income and corporate expenses, other intercompany interest income where the interest expense is included in earnings of the operating businesses and other unallocated income and income taxes.

Financial Condition

Our consolidated balance sheet continues to reflect significant liquidity and a very strong capital base. Consolidated shareholders' equity at December 31, 2022 was \$472.4 billion, a decrease of \$33.8 billion since December 31, 2021. Net loss attributable to Berkshire shareholders was \$22.8 billion and included after-tax losses on our investments of approximately \$53.4 billion. Over each of the last three years, investment gains and losses from changes in the market prices of our investments in equity securities produced significant volatility in our earnings.

Berkshire's common stock repurchase program, as amended, permits Berkshire to repurchase its Class A and Class B shares at prices below Berkshire's intrinsic value, as conservatively determined by Warren Buffett, Berkshire's Chairman of the Board and Chief Executive Officer, and Charlie Munger, Vice Chairman of the Board. The program does not specify a maximum number of shares to be repurchased and does not require any specified repurchase amount. The program is expected to continue indefinitely. We will not repurchase our stock if it reduces the total amount of Berkshire's consolidated cash, cash equivalents and U.S. Treasury Bill holdings below \$30 billion. Financial strength and redundant liquidity will always be of paramount importance at Berkshire. Berkshire paid \$7.9 billion during 2022 to repurchase shares of its Class A and Class B common stock.

At December 31, 2022, our insurance and other businesses held cash, cash equivalents and U.S. Treasury Bills of \$125.0 billion, which included \$94.7 billion in U.S. Treasury Bills. Investments in equity and fixed maturity securities (excluding our investments in Kraft Heinz and Occidental common stock) were \$333.9 billion. During 2022, we paid cash of \$67.9 billion to acquire equity securities and we received proceeds of \$33.7 billion from sales of equity securities. On October 19, 2022, we acquired Alleghany Corporation for \$11.5 billion, which held cash and investments of \$19.7 billion as of the acquisition date. On January 31, 2023, we acquired an additional 41.4% interest in Pilot for approximately \$8.2 billion, which was based on Pilot's unaudited earnings in 2022 and its net debt as of December 31, 2022 and is subject to post-closing adjustments following the completion of the audit of Pilot's 2022 consolidated financial statements.

Our consolidated borrowings at December 31, 2022 were \$122.7 billion, of which approximately 94% were by the Berkshire parent company, BHFC, BNSF and BHE and its subsidiaries. During 2022, Berkshire and certain of its subsidiaries issued term debt of approximately \$12.7 billion in the aggregate and paid approximately \$3.9 billion of maturing senior debt. Expected principal and interest payments related to our consolidated borrowings in each of the next five years are (in billions): \$17.4 in 2023; \$10.4 in 2024; \$11.0 in 2025; \$8.7 in 2026; and \$8.1 in 2027.

Berkshire parent company debt outstanding at December 31, 2022 was \$21.4 billion, substantially unchanged from December 31, 2021. In 2022, Berkshire issued an aggregate ¥243.5 billion (approximately \$1.94 billion) of senior notes with maturity dates ranging from 2025 to 2052 and a weighted average interest rate of 0.8%. Berkshire's borrowings decreased \$1.4 billion during 2022 from changes in foreign currency exchange rates on its non-U.S. Dollar denominated debt.

Berkshire's insurance and other subsidiary outstanding borrowings were approximately \$25.1 billion at December 31, 2022, an increase of \$7.3 billion since December 31, 2021. Senior note borrowings of BHFC, a wholly-owned financing subsidiary, were approximately \$17.9 billion at December 31, 2022, an increase of \$4.8 billion since December 31, 2021, reflecting the issuance of debt, repayments of maturing debt (\$775 million) and reductions in the carrying value of non-U.S. denominated debt due to foreign currency exchange rate changes (\$300 million). In 2022, BHFC issued \$4.5 billion of senior notes maturing in 2027, 2032 and 2052 with a weighted average interest rate of 3.4% and €1.25 billion (approximately \$1.4 billion) of senior notes maturing in 2030 and 2034 with a weighted average interest rate of 1.8%. BHFC's borrowings are used to fund a portion of loans originated and acquired by Clayton Homes and equipment held for lease by our railcar leasing business. Berkshire guarantees BHFC's senior notes for the full and timely payment of principal and interest. Subsidiary borrowings as of December 31, 2022 included approximately \$2.3 billion attributable to Alleghany and its subsidiaries.

Management’s Discussion and Analysis (Continued)

Financial Condition (Continued)

BNSF’s outstanding debt was \$23.5 billion as of December 31, 2022, an increase of \$233 million from December 31, 2021. In 2022, BNSF issued \$1.0 billion of 4.45% debentures due in 2053 and repaid approximately \$900 million of term debt. Outstanding borrowings of BHE and its subsidiaries were \$52.8 billion at December 31, 2022, an increase of \$1.0 billion since December 31, 2021. In 2022, BHE issued \$1.0 billion of 4.6% senior notes due in 2053. During 2022, BHE subsidiaries issued approximately \$3.0 billion of term debt with a weighted average interest rate of 5.2% at December 31, 2022 and maturity dates ranging from 2024 to 2053. Berkshire does not guarantee the repayment of debt issued by BNSF, BHE or any of their subsidiaries.

In each of the past three years, our diverse group of businesses generated net operating cash flows between \$37 billion and \$40 billion. Our consolidated capital expenditures for property, plant and equipment and equipment held for lease were \$15.5 billion in 2022, which included capital expenditures by our railroad, utilities and energy businesses (BNSF and BHE) of \$11.0 billion. BNSF and BHE maintain very large investments in capital assets (property, plant and equipment) and will regularly make significant capital expenditures in the normal course of business. We forecast capital expenditures of these two operations will approximate \$13.7 billion in 2023.

On August 16, 2022, the Inflation Reduction Act of 2022 (“the 2022 act”) was signed into law. The 2022 act contains numerous provisions, including a 15% corporate alternative minimum income tax on “adjusted financial statement income”, expanded tax credits for clean energy incentives and a 1% excise tax on corporate stock repurchases. The provisions of the 2022 act become effective for tax years beginning after December 31, 2022. On December 27, 2022, the IRS and Department of Treasury issued initial guidance for taxpayers subject to the corporate alternative minimum tax. The guidance addresses several, but not all, issues that needed clarification. The IRS and Department of Treasury intend to release additional guidance in the future. We will continue to evaluate the impact of the Act as more guidance becomes available. We currently do not expect a material impact on our consolidated financial statements.

Contractual Obligations

We are party to other contracts associated with ongoing business activities, which will result in cash payments to counterparties in future periods. Certain obligations are included in our Consolidated Balance Sheets, such as operating lease liabilities and shared aircraft repurchase liabilities of NetJets. Estimated payments of these liabilities in each of the next five years are (in billions): \$1.8 in 2023; \$1.6 in 2024; \$1.4 in 2025; \$1.3 in 2026; and \$1.5 in 2027.

We are also obligated to pay claims arising from our property and casualty insurance companies. Such liabilities, including amounts from retroactive reinsurance, were approximately \$143 billion at December 31, 2022. We currently forecast claim payments in 2023 of approximately \$35 billion with respect to claims occurring prior to 2023. Additionally, we estimate net payments of approximately \$2 billion in 2023 for life, health and annuity benefits under contracts. However, the timing and amount of the payments under insurance and reinsurance contracts are contingent upon the outcome of future events. Actual payments will likely vary, perhaps materially, from the forecasted payments, as well as from the liabilities currently recorded in our Consolidated Balance Sheet. We anticipate that these payments will be funded by operating cash flows.

Other obligations pertaining to the acquisition of goods or services in the future, such as certain purchase obligations, are not currently reflected in the Consolidated Financial Statements and will be recognized in future periods as the goods are delivered or services are provided. As of December 31, 2022, the largest categories of our long-term contractual obligations primarily related to fuel, capacity, transmission and maintenance contracts and capital expenditure commitments of BHE and BNSF, aircraft purchase commitments of NetJets and certain raw materials purchase commitments. We estimate future payments associated with these contracts over the next five years of approximately \$24 billion, including \$12 billion in 2023.

Critical Accounting Policies

Certain accounting policies require us to make estimates and judgments in determining the amounts reflected in our Consolidated Financial Statements. Such estimates and judgments necessarily involve varying and possibly significant degrees of uncertainty. Accordingly, certain amounts currently recorded in our Consolidated Financial Statements will likely be adjusted in the future based on new available information and changes in other facts and circumstances. A discussion of our principal accounting policies that required the application of significant judgments as of December 31, 2022 follows.

Management's Discussion and Analysis (Continued)

Property and casualty insurance unpaid losses

We record liabilities for unpaid losses and loss adjustment expenses (also referred to as “gross unpaid losses” or “claim liabilities”) based upon estimates of the ultimate amounts payable for loss events occurring on or before the balance sheet date. The timing and amount of ultimate loss payments are contingent upon, among other things, the timing of claim reporting from insureds and ceding companies and the final determination of the loss amount through the loss adjustment and settlement process. We use a variety of techniques in establishing claim liabilities, which may require significant judgments and assumptions.

As of the balance sheet date, recorded claim liabilities include estimates for reported claims and for incurred-but-not-reported (“IBNR”) claims. The period between the loss occurrence date and loss settlement date is the “claim-tail.” Property claims usually have relatively short claim-tails, absent litigation. Casualty claims usually have longer claim-tails, occasionally extending for decades. Casualty claims may be more susceptible to litigation and the impact of changing contract interpretations. The legal environment and judicial process further contribute to extending claim-tails.

Our consolidated claim liabilities, including liabilities from retroactive reinsurance contracts, as of December 31, 2022 were approximately \$143 billion, of which 78% related to GEICO and the Berkshire Hathaway Reinsurance Group. Additional information regarding significant uncertainties inherent in the processes and techniques for estimating unpaid losses of these businesses follows.

GEICO

GEICO predominantly writes private passenger automobile insurance. As of December 31, 2022, GEICO’s gross unpaid losses were \$24.8 billion and claim liabilities, net of reinsurance recoverable, were \$23.8 billion. GEICO’s claim reserving methodologies produce liability estimates based upon the individual claims. The key assumptions affecting our liability estimates include projections of ultimate claim counts (“frequency”) and average loss per claim (“severity”). We utilize a combination of several actuarial estimation methods, including Bornhuetter-Ferguson and chain-ladder methodologies.

Claim liability estimates for automobile liability coverages (such as bodily injury (“BI”), uninsured motorists, and personal injury protection) are more uncertain due to the longer claim-tails, so we establish additional case development estimates. As of December 31, 2022, case development liabilities averaged approximately 38% of the case reserves. We select case development factors through analysis of the overall adequacy of historical case liabilities.

IBNR claim liabilities are based on projections of the ultimate number of claims expected (reported and unreported) for each significant coverage. We use historical claim count data to develop age-to-age projections of the ultimate counts by quarterly accident period, from which we deduct reported claims to produce the number of unreported claims. We estimate the average costs per unreported claim and apply such estimates to the unreported claim counts, producing an IBNR liability estimate. We may record additional IBNR estimates when actuarial techniques are difficult to apply.

We test the adequacy of the aggregate claim liabilities using one or more actuarial projections based on claim closure models and paid and incurred loss triangles. Each type of projection analyzes loss occurrence data for claims occurring in a given period and projects the ultimate cost.

Our claim liability estimates recorded at the end of 2021 were reduced by \$653 million during 2022, which produced a corresponding increase to pre-tax earnings. The assumptions used to estimate liabilities at December 31, 2022 reflect the most recent frequency and severity estimates. Future development of recorded liabilities will depend on whether actual frequency and severity of claims are more or less than anticipated.

With respect to liabilities for BI claims, we believe it is reasonably possible that average claims severities will change by at least one percentage point from the projected severities used in establishing the recorded liabilities at December 31, 2022. We estimate that a one percentage point increase or decrease in BI severities would produce a \$245 million increase or decrease in recorded liabilities, with a corresponding decrease or increase in pre-tax earnings. Many of the economic forces that would likely cause BI severity to differ from expectations would likely also cause severities for other injury coverages to differ in the same direction.

Management's Discussion and Analysis (Continued)

Property and casualty insurance unpaid losses (Continued)

Berkshire Hathaway Reinsurance Group

BHRG's liabilities for unpaid losses and loss adjustment expenses derive primarily from reinsurance contracts issued through the NICO, General Re and TransRe Groups. A summary of BHRG's property and casualty unpaid losses and loss adjustment expenses, other than retroactive reinsurance losses and loss adjustment expenses, as of December 31, 2022 follows (in millions).

	Property	Casualty	Total
Reported case liabilities	\$ 8,314	\$ 12,136	\$ 20,450
IBNR liabilities	9,084	21,041	30,125
Gross unpaid losses and loss adjustment expenses	17,398	33,177	50,575
Reinsurance recoverable	787	1,439	2,226
Net unpaid losses and loss adjustment expenses	\$ 16,611	\$ 31,738	\$ 48,349

Gross unpaid losses and loss adjustment expenses consist primarily of traditional property and casualty coverages written primarily under excess-of-loss and quota-share treaties. Under certain contracts, coverage can apply to multiple lines of business written and the ceding company may not report loss data by such lines consistently, if at all. In those instances, we judgmentally allocate losses to property and casualty coverages based on internal estimates.

In connection with reinsurance contracts, the nature, extent, timing and perceived reliability of loss information received from ceding companies varies widely depending on the type of coverage and the contractual reporting terms. Reinsurance contract terms, conditions and coverages also tend to lack standardization and may evolve more rapidly than primary insurance policies.

The nature and extent of loss information provided under many facultative (individual risk) or per occurrence excess contracts may be comparable to the information received under a primary insurance contract. However, loss information with respect to aggregate excess-of-loss and quota-share contracts is often in a summary format rather than on an individual claim basis. Loss data includes currently recoverable paid losses, as well as case loss estimates. Ceding companies infrequently provide reliable IBNR loss estimates.

Loss reporting to reinsurers is typically slower than primary insurers. In the U.S., client reporting is generally required at quarterly intervals ranging from 30 to 90 days after the end of the quarterly period, while outside of the U.S., reinsurance reporting practices may vary further. In certain countries, clients report annually from 90 to 180 days after the end of the annual period. To the extent that reinsurers assume and cede underlying risks from other reinsurers, further delays in claims reporting may occur. The relative impact of reporting delays on the reinsurer may vary depending on the type of coverage, contractual reporting terms, the magnitude of the claim relative to the attachment point of the reinsurance coverage and other reasons.

As reinsurers, the premium and loss data we receive is at least one level removed from the underlying claimant, so there is a risk that the loss data reported is incomplete, inaccurate or the claim is outside the coverage terms. We maintain certain internal procedures to determine that the information is complete and in compliance with the contract terms. Generally, our reinsurance contracts permit us to access the ceding company's records with respect to the subject business, thus providing the ability to audit the reported information. In the normal course of business, disputes occasionally arise concerning whether claims are covered by our reinsurance policies. We resolve most coverage disputes through negotiation with the client. If disputes cannot be resolved, our contracts generally provide arbitration or alternative dispute resolution processes. We believe there are no coverage disputes at this time for which an adverse resolution would likely have a material impact on our consolidated results of operations or financial condition.

Establishing claim liability estimates for reinsurance assumed requires evaluation of loss information received from our clients. We generally rely on the ceding companies' reported case loss estimates. We independently evaluate certain reported case losses and if appropriate, we use our own case liability estimate. For instance, as of December 31, 2022, our case loss estimates exceeded ceding company estimates by approximately \$650 million for certain legacy workers' compensation claims occurring over 10 years ago. We also periodically conduct detailed reviews of individual client claims, which may cause us to adjust our case estimates.

Management's Discussion and Analysis (Continued)

Property and casualty insurance unpaid losses (Continued)

Berkshire Hathaway Reinsurance Group (Continued)

Although liabilities for losses are initially determined based on pricing and underwriting analysis, we use a variety of actuarial methodologies that place reliance on the extrapolation of historical data, loss development patterns, industry data and other benchmarks. The estimate of the IBNR liabilities also requires judgment by actuaries and management to reflect the impact of additional factors like change in business mix, volume, claim reporting and handling practices, inflation, social and legal environment and the terms and conditions of the contracts. The methodologies generally fall into or are hybrids of one or more of the following categories:

Paid and incurred loss development methods – These methods consider expected case loss emergence and development patterns, together with expected loss ratios by year. Factors affecting our loss development analysis include, but are not limited to, changes in the following: client claims reporting and settlement practices, the frequency of client company claim reviews, policy terms and coverage (such as loss retention levels and occurrence and aggregate policy limits), loss trends and legal trends that result in unanticipated losses. Collectively, these factors influence our selections of expected case loss emergence patterns.

Incurred and paid loss Bornhuetter-Ferguson methods – These methods consider actual paid and incurred losses and expected patterns of paid and incurred losses, taking the initial expected ultimate losses into account to determine an estimate of the expected unpaid or unreported losses.

Frequency and severity methods – These methods commonly focus on a review of the number of anticipated claims and the anticipated claims severity and may also rely on development patterns to derive such estimates. However, our processes and techniques for estimating liabilities in such analyses generally rely more on a per-policy assessment of the ultimate cost associated with the individual loss rather than with an analysis of historical development patterns of past losses.

Additional analysis – In some cases we have established reinsurance claim liabilities on a contract-by-contract basis, determined from case loss estimates reported by the ceding company and IBNR liabilities that are primarily a function of an anticipated loss ratio for the contract and the reported case loss estimate. Liabilities are adjusted upward or downward over time to reflect case losses reported versus expected case losses, which we use to form revised judgment on the adequacy of the expected loss ratio and the level of IBNR liabilities required for unreported claims. Anticipated loss ratios are also revised to include estimates of known major catastrophe events.

Our claim liability estimation process for short-tail lines, primarily property exposures, utilizes a combination of the paid and incurred loss development methods and the incurred and paid loss Bornhuetter-Ferguson methods. Certain catastrophe, individual risk and aviation excess-of-loss contracts tend to generate low frequency/high severity losses. Our processes and techniques for estimating liabilities under such contracts generally rely more on a per contract assessment of the ultimate cost associated with the individual loss event rather than with an analysis of the historical development patterns of past losses.

For our long-tail lines, primarily casualty exposures, we may rely on different methods depending on the maturity of the business, with estimates for the most recent years being based on priced loss expectations and more mature years reflecting the paid or incurred development pattern indications.

In 2022, certain workers' compensation claims reported losses were less than expected. As a result, we reduced estimated ultimate losses for prior years' loss events by \$114 million. We estimate that increases of ten percent in the tail of the expected loss emergence pattern and in the expected loss ratios would produce a net increase of approximately \$1.1 billion in IBNR liabilities, producing a corresponding decrease in pre-tax earnings. We believe it is reasonably possible for these assumptions to increase at these rates.

For other casualty losses, other than asbestos, environmental and other latent injury claims, we reduced estimated ultimate liabilities for prior years' events by approximately \$650 million in 2022. For certain significant casualty and general liability portfolios, we estimate that increases of five percent in the claim-tails of the expected loss emergence patterns and in the expected loss ratios would produce a net increase in our nominal IBNR liabilities and a corresponding reduction in pre-tax earnings of approximately \$980 million, although outcomes of greater than or less than \$980 million are possible given the diversification in worldwide business.

The change in estimated ultimate liabilities for asbestos, environmental and other latent injury claims, excluding amounts assumed under retroactive reinsurance contracts was not significant in 2022. Net liabilities for such claims were approximately \$2.1 billion at December 31, 2022. Loss estimations for these exposures are difficult to determine due to the changing legal environment and increases may be required in the future if new exposures or claimants are identified, new claims are reported or new theories of liability emerge.

Management's Discussion and Analysis (Continued)

Property and casualty insurance unpaid losses (Continued)

Retroactive reinsurance

Our retroactive reinsurance contracts cover loss events occurring before the contract inception dates. Claim liabilities associated with our retroactive reinsurance contracts predominately pertain to casualty or liability exposures. We expect the claim-tails to be very long. At December 31, 2022, gross unpaid losses were \$35.4 billion and deferred charges were \$9.9 billion.

Our contracts are generally subject to maximum limits of indemnifications and, as such, we currently expect that maximum remaining gross losses payable under our retroactive policies will not exceed \$52 billion. Absent significant judicial or legislative changes affecting asbestos, environmental or latent injury exposures, we also currently believe it unlikely that losses will develop upward to the maximum losses payable or downward by more than 15% of our estimated gross liability.

We establish liability estimates by individual contract, considering exposure and development trends. In establishing our liability estimates, we often analyze historical aggregate loss payment patterns and project expected ultimate losses under various scenarios. We assign judgmental probability factors to these scenarios and an expected outcome is determined. We then monitor subsequent loss payment activity and review ceding company reports and other available information concerning the underlying losses. We re-estimate the expected ultimate losses when significant events or significant deviations from expectations are revealed.

Certain of our retroactive reinsurance contracts include asbestos, environmental and other latent injury claims. Our estimated liabilities for such claims were approximately \$12.1 billion at December 31, 2022. We do not consistently receive reliable detailed data regarding asbestos, environmental and latent injury claims from all ceding companies, particularly with respect to multi-line or aggregate excess-of-loss policies. When possible, we conduct a detailed analysis of the underlying loss data to make an estimate of ultimate reinsured losses. When detailed loss information is unavailable, we develop estimates by applying recent industry trends and projections to aggregate client data. Judgments in these areas necessarily consider the stability of the legal and regulatory environment under which we expect claims will be adjudicated. Legal reform and legislation could also have a significant impact on our ultimate liabilities.

We increased estimated ultimate liabilities for prior years' retroactive reinsurance contracts by \$86 million in 2022. In 2022, we paid losses and loss adjustment expenses of \$2.4 billion with respect to our retroactive reinsurance contracts.

In connection with our retroactive reinsurance contracts, we also record deferred charges, which at contract inception represents the excess, if any, of the estimated ultimate liability for unpaid losses over premiums received. We amortize deferred charges, which produces charges to pre-tax earnings in future periods based on the expected timing and amount of loss payments. We adjust deferred charge balances due to changes in the expected timing and ultimate amount of claim payments and the effects of the adjustments are included in pre-tax earnings. Significant changes in such estimates may have a significant effect on unamortized deferred charge balances. Based on the contracts in effect as of December 31, 2022, we estimate that amortization expense in 2023 will approximate \$860 million.

Other Critical Accounting Policies

Our Consolidated Balance Sheet at December 31, 2022 includes goodwill of acquired businesses of \$78.1 billion and other indefinite-lived intangible assets of \$18.3 billion. We evaluate these assets for impairment annually in the fourth quarter and on an interim basis if the facts and circumstances lead us to believe that more likely than not there has been an impairment.

Goodwill and indefinite-lived intangible asset impairment reviews include determining the estimated fair values of our reporting units and indefinite-lived intangible assets. The key assumptions and inputs used in such determinations may include forecasting revenues and expenses, cash flows and capital expenditures, as well as an appropriate discount rate and other inputs. Significant judgment by management is required in estimating the fair value of a reporting unit and in performing impairment reviews. Due to the inherent subjectivity and uncertainty in forecasting future cash flows and earnings over long periods of time, actual results may differ materially from the forecasts. If the carrying value of the indefinite-lived intangible asset exceeds fair value, the excess is charged to earnings as an impairment loss. If the carrying value of a reporting unit exceeds the estimated fair value of the reporting unit, then the excess, limited to the carrying amount of goodwill, will be charged to earnings as an impairment loss.

Management's Discussion and Analysis (Continued)

Other Critical Accounting Policies (Continued)

As of December 31, 2022, we concluded it was more likely than not that goodwill recorded in our Consolidated Balance Sheet was not impaired. The fair value estimates of reporting units are and will likely be significantly affected by assumptions on the long-term effects of the COVID-19 pandemic on the reporting units businesses, as well as other assumptions concerning the long-term economic performance of the reporting units, which we cannot reliably predict. Consequently, any fair value estimates can be subject to wide variations.

We primarily use discounted projected future earnings or cash flow methods in determining fair values. The key assumptions and inputs used in such methods may include forecasting revenues and expenses, cash flows and capital expenditures, as well as an appropriate discount rate and other inputs. A significant amount of judgment is required in estimating the fair value of a reporting unit and in performing goodwill impairment tests.

In connection with the annual goodwill impairment review conducted in the fourth quarter of 2022, the estimated fair values of six reporting units did not exceed our carrying values by at least 20%. The most significant of these reporting units was Precision Castparts Corp. ("PCC"). Our estimated fair value of PCC was approximately \$31.5 billion, exceeding our carrying value of approximately \$30.3 billion by 4.0%. Our carrying value of PCC included goodwill of approximately \$7.5 billion. For the five other reporting units, our aggregate estimated fair value was approximately \$4.5 billion, which exceeded our aggregate carrying value of approximately \$4.1 billion by 9.9%. Our carrying value of these units included goodwill of approximately \$1.4 billion.

In the second quarter of 2020, we quantitatively reevaluated goodwill for impairment for certain reporting units, and most significantly for PCC. As a result of our reviews, we recorded pre-tax goodwill impairment charges of \$10 billion and indefinite-lived intangible asset impairment charges of \$638 million, of which approximately \$10 billion related to PCC. Prior to the reevaluation, the carrying value of PCC-related goodwill was approximately \$17 billion. Additionally, the carrying value of PCC-related indefinite-lived intangible assets was approximately \$14 billion. Substantially all of these amounts were recorded in connection with Berkshire's acquisition of PCC in 2016. The initial effects of the COVID-19 pandemic on commercial airlines and aircraft manufacturers were particularly severe. At that time, we considered several factors in our reevaluation, including but not limited to the announcements by airlines concerning potential future demand, employment levels and aircraft orders, announcements by manufacturers of reduced aircraft production and the actions we were taking to restructure operations. Consequently, we deemed it prudent under the prevailing circumstances to increase discount rates and reduce prior long-term forecasts of future cash flows for purposes of reviewing for impairments.

Market Risk Disclosures

Our Consolidated Balance Sheets include substantial amounts of assets and liabilities whose fair values are subject to market risks. Our significant market risks are primarily associated with equity prices, interest rates, foreign currency exchange rates and commodity prices. The fair values of our investment portfolios remain subject to considerable volatility. The following sections address the significant market risks associated with our business activities.

Equity Price Risk

Equity securities represent the most significant portion of our consolidated investment portfolio. Strategically, we strive to invest in businesses that possess excellent economics and able and honest management, and we prefer to invest a meaningful amount in each company. Historically, equity investments have been concentrated in relatively few issuers. At December 31, 2022, approximately 75% of the total fair value of equity securities was concentrated in five companies.

We often hold our equity securities for long periods and short-term price volatility has occurred in the past and will occur in the future. We also strive to maintain significant levels of shareholder capital and ample liquidity to provide a margin of safety against short-term price volatility.

Management's Discussion and Analysis (Continued)

Equity Price Risk (Continued)

For the past several years, we were also subject to equity price risk with respect to our equity index put option contracts. However, substantially all of the contracts written to date have expired.

The following table summarizes our significant assets and liabilities as of December 31, 2022 and 2021 and the estimated effects of a hypothetical 30% increase and a 30% decrease in market prices as of those dates. The selected 30% hypothetical increase and decrease does not reflect the best or worst case scenario. Indeed, results from declines could be far worse due both to the nature of equity markets and the aforementioned concentrations existing in our equity investment portfolio. Dollar amounts are in millions.

	<u>Fair Value</u>	<u>Hypothetical Price Change</u>	<u>Estimated Fair Value After Hypothetical Change in Prices</u>	<u>Estimated Increase (Decrease) in Net Earnings ⁽¹⁾</u>
<i>December 31, 2022</i>				
Investments in equity securities	\$ 308,793	30% increase	\$ 399,087	\$ 71,344
		30% decrease	218,688	(71,195)
<i>December 31, 2021</i>				
Investments in equity securities	\$ 350,719	30% increase	\$ 452,936	\$ 81,136
		30% decrease	248,606	(81,053)
Equity index put option contract liabilities	99	30% increase	5	74
		30% decrease	1,088	(781)

⁽¹⁾ The estimated increase (decrease) is after income taxes.

Interest Rate Risk

We may also invest in bonds, loans or other interest rate sensitive instruments. Our strategy is to acquire or originate such instruments at prices considered appropriate relative to the perceived credit risk. We also issue debt in the ordinary course of business to fund business operations, business acquisitions and for other general purposes. We attempt to maintain high credit ratings in order to minimize the cost of our debt. We infrequently utilize derivative products, such as interest rate swaps, to manage interest rate risks and we do not attempt to match maturities of assets and liabilities.

The fair values of our fixed maturity investments, loans and finance receivables and notes payable and other borrowings will fluctuate in response to changes in market interest rates. Increases and decreases in interest rates generally translate into decreases and increases in fair values of these instruments. Additionally, fair values of interest rate sensitive instruments may be affected by the creditworthiness of the issuer, prepayment options, relative values of alternative investments, the liquidity of the instrument and other general market conditions.

Management's Discussion and Analysis (Continued)

Interest Rate Risk (Continued)

The following table summarizes the estimated effects of hypothetical changes in interest rates on our significant assets and liabilities that are subject to significant interest rate risk at December 31, 2022 and 2021. We assumed that the interest rate changes occur immediately and uniformly to each category of instrument and that there were no significant changes to other factors used to determine the value of the instrument. The hypothetical changes in interest rates do not reflect the best or worst case scenarios. Actual results may differ from those reflected in the table. Dollars are in millions.

	Fair Value	Estimated Fair Value After Hypothetical Change in Interest Rates (bp=basis points)			
		100 bp decrease	100 bp increase	200 bp increase	300 bp increase
<i>December 31, 2022</i>					
Assets:					
Investments in fixed maturity securities	\$ 25,128	\$ 25,619	\$ 24,659	\$ 24,215	\$ 23,794
Investments in equity securities*	9,964	10,434	9,523	9,109	8,719
Loans and finance receivables	23,428	24,249	22,633	21,907	21,228
Liabilities:					
Notes payable and other borrowings:					
Insurance and other	41,961	45,535	38,941	36,367	34,157
Railroad, utilities and energy	67,651	74,698	61,725	56,710	52,430
<i>December 31, 2021</i>					
Assets:					
Investments in fixed maturity securities	\$ 16,434	\$ 16,624	\$ 16,231	\$ 16,036	\$ 15,847
Investments in equity securities*	10,864	11,457	10,313	9,798	9,319
Loans and finance receivables	22,174	22,982	21,417	20,714	20,054
Liabilities:					
Notes payable and other borrowings:					
Insurance and other	42,339	46,559	38,724	35,683	33,104
Railroad, utilities and energy	87,065	97,474	78,472	71,289	65,246

* Includes Cumulative Perpetual Preferred Stocks

Foreign Currency Risk

Certain of our subsidiaries operate in foreign jurisdictions and we transact business in foreign currencies. In addition, we hold investments in common stocks of major multinational companies, who have significant foreign business and foreign currency risk of their own. We generally do not attempt to match assets and liabilities by currency and do not use derivative contracts to manage foreign currency risks in a meaningful way.

Management's Discussion and Analysis (Continued)

Foreign Currency Risk (Continued)

Our net assets subject to financial statement translation into U.S. Dollars are primarily in our insurance, utilities and energy and certain manufacturing and service subsidiaries. A portion of our financial statement translation-related impact from changes in foreign currency rates is recorded in other comprehensive income. In addition, we include gains or losses from changes in foreign currency exchange rates in net earnings related to non-U.S. Dollar denominated assets and liabilities of Berkshire and its U.S.-based subsidiaries. A summary of these gains (losses), after-tax, for each of the years ending December 31, 2022 and 2021 follows (in millions).

	2022	2021
Non-U.S. denominated debt included in net earnings	\$ 1,263	\$ 955
Net liabilities under certain reinsurance contracts included in net earnings	263	58
Foreign currency translation included in other comprehensive income	(2,045)	(1,021)

Commodity Price Risk

Our subsidiaries use commodities in various ways in manufacturing and providing services. As such, we are subject to price risks related to various commodities. In most instances, we attempt to manage these risks through the pricing of our products and services to customers. To the extent that we are unable to sustain price increases in response to commodity price increases, our operating results will likely be adversely affected. We generally do not utilize derivative contracts to manage commodity price risks to any significant degree.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

See "Market Risk Disclosures" contained in Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations."

Management's Report on Internal Control Over Financial Reporting

Management of Berkshire Hathaway Inc. is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in the Securities Exchange Act of 1934 Rule 13a-15(f). Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of the effectiveness of the Company's internal control over financial reporting as of December 31, 2022, as required by the Securities Exchange Act of 1934 Rule 13a-15(c). In making this assessment, we used the criteria set forth in the framework in *Internal Control—Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on our evaluation under the framework in *Internal Control—Integrated Framework* (2013), our management concluded that our internal control over financial reporting was effective as of December 31, 2022.

The effectiveness of our internal control over financial reporting as of December 31, 2022 has been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report which appears on page K-67.

Berkshire Hathaway Inc.
February 25, 2023

Item 8. Financial Statements and Supplementary Data

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of
Berkshire Hathaway Inc.
Omaha, Nebraska

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Berkshire Hathaway Inc. and subsidiaries (the “Company”) as of December 31, 2022 and 2021, the related consolidated statements of earnings, comprehensive income, changes in shareholders’ equity, and cash flows, for each of the three years in the period ended December 31, 2022, and the related notes (collectively referred to as the “financial statements”). We also have audited the Company’s internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2022, in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control — Integrated Framework (2013) issued by COSO.

Basis for Opinions

The Company’s management is responsible for these financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management’s Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on these financial statements and an opinion on the Company’s internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the US federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the financial statements included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures to respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM (Continued)

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current-period audit of the financial statements that were communicated or required to be communicated to the audit committee and that (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Unpaid Losses and Loss Adjustment Expenses— Refer to Notes 1 and 16 to the financial statements

Critical Audit Matter Description

The Company's unpaid losses and loss adjustment expenses ("claim liabilities") under short duration property and casualty insurance and reinsurance contracts are \$107,472 million as of December 31, 2022. The key assumptions affecting certain claim liabilities include expected loss and expense ("loss") ratios, expected claim count emergence patterns, expected loss payment emergence patterns, and expected loss reporting emergence patterns.

Given the subjectivity of estimating these key assumptions, performing audit procedures to evaluate whether claim liabilities were appropriately recorded as of December 31, 2022, required a high degree of auditor judgment and an increased extent of effort, including the need to involve our actuarial specialists.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the key assumptions affecting certain claim liabilities included the following, among others:

- We tested the operating effectiveness of controls over claim liabilities, including those over the key assumptions.
- We evaluated the methods and assumptions used by management to estimate the claim liabilities by:
 - Testing the underlying data that served as the basis for the actuarial analysis, such as historical claims and earned premium, to test that the inputs to the actuarial estimate were reasonable.
 - Comparing management's prior-year claim liabilities to actual development during the current year to identify potential bias in the determination of the claim liabilities.
- With the assistance of our actuarial specialists:
 - We developed independent estimates of the claim liabilities, including loss data and industry claim development factors as needed, and compared our estimates to management's estimates.
 - We compared management's change in ultimate loss and loss adjustment expense to prior year estimates to test the reasonableness of the prior year estimates and assessed unexpected development.

Unpaid Losses and Loss Adjustment Expenses Under Retroactive Reinsurance Contracts — Refer to Notes 1 and 17 to the financial statements

Critical Audit Matter Description

The Company's unpaid losses and loss adjustment expenses ("claim liabilities") for property and casualty retroactive reinsurance contracts are \$35,415 million as of December 31, 2022. The key assumptions affecting certain claim liabilities and related deferred charge reinsurance assumed assets ("related assets") include expected loss and expense ("loss") ratios, expected loss payment emergence patterns, and expected loss reporting emergence.

Given the subjectivity of estimating these key assumptions, performing audit procedures to evaluate whether claim liabilities were appropriately recorded as of December 31, 2022, required a high degree of auditor judgment and an increased extent of effort, including the need to involve our actuarial specialists.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the key assumptions affecting claim liabilities and related assets included the following, among others:

- We tested the operating effectiveness of controls over claim liabilities and related assets, including those over the key assumptions.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM (Continued)

- We evaluated the methods and assumptions used by management to estimate the claim liabilities and related assets by:
 - Testing the underlying data that served as the basis for the actuarial analysis, including historical claims, to test that the inputs to the actuarial estimate were reasonable.
 - Comparing management’s prior-year claim liabilities to actual development during the current year to identify potential bias in the determination of the claim liabilities and related assets.
- With the assistance of our actuarial specialists:
 - We developed independent claim liability estimates for certain retroactive reinsurance contracts and compared our estimates to management’s estimates. For other retroactive reinsurance contracts and related assets, we evaluated the process used by management to develop the estimated claim liabilities and related assets.
 - We compared management’s change in ultimate loss and loss adjustment expense to prior year estimates, assessed unexpected development and assessed internal rates of return.

Goodwill and Indefinite-Lived Intangible Assets — Refer to Notes 1 and 13 to the financial statements

Critical Audit Matter Description

The Company’s evaluation of goodwill and indefinite-lived intangible assets for impairment involves the comparison of the fair value of each reporting unit or asset to its carrying value. The Company evaluates goodwill and indefinite-lived intangible assets for impairment at least annually. When evaluating goodwill and indefinite-lived intangible assets for impairment, the fair value of each reporting unit or asset is estimated. Significant judgment is required in estimating fair values and performing impairment tests. The Company primarily uses discounted projected future net earnings or net cash flows and multiples of earnings to estimate fair value, which requires management to make significant estimates and assumptions related to forecasts of future revenue, earnings before interest and taxes (“EBIT”), and discount rates. Changes in these assumptions could have a significant impact on the fair value of reporting units and indefinite-lived intangible assets.

The Precision Castparts Corp. (“PCC”) reporting unit reported approximately \$8 billion of goodwill and approximately \$13 billion of indefinite-lived intangible assets as of December 31, 2022. Given the significant judgments made by management to estimate the fair value of the PCC reporting unit and certain customer relationships with indefinite lives along with the difference between their fair values and carrying values, performing audit procedures to evaluate the reasonableness of management’s estimates and assumptions related to forecasts of future revenue and EBIT and the selection of the discount rate required a high degree of auditor judgment and an increased extent of effort, including the need to involve our fair value specialists.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to forecasts of future revenue and EBIT and the selection of the discount rate for the PCC reporting unit and certain customer relationships included the following, among others:

- We tested the effectiveness of controls over goodwill and indefinite-lived intangible assets, including those over the forecasts of future revenue and EBIT and the selection of the discount rate.
- We evaluated management’s ability to accurately forecast future revenue and EBIT by comparing prior year forecasts to actual results in the respective years.
- We evaluated the reasonableness of management’s current revenue and EBIT forecasts by comparing the forecasts to historical results, newly executed long-term contracts, customer demand and build schedules, forecasted information included in analyst and industry reports and certain peer companies’ disclosures.
- With the assistance of our fair value specialists, we evaluated the valuation methodologies, the terminal growth rates and discount rate, including testing the underlying source information and the mathematical accuracy of the calculations, and developed a range of independent estimates and compared those to the terminal growth rates and discount rate selected by management.

/s/ Deloitte & Touche LLP

Omaha, Nebraska

February 25, 2023

We have served as the Company’s auditor since 1985.

BERKSHIRE HATHAWAY INC.
and Subsidiaries
CONSOLIDATED BALANCE SHEETS
(dollars in millions)

	December 31,	
	2022	2021
ASSETS		
<i>Insurance and Other:</i>		
Cash and cash equivalents*	\$ 32,260	\$ 85,319
Short-term investments in U.S. Treasury Bills	92,774	58,535
Investments in fixed maturity securities	25,128	16,434
Investments in equity securities	308,793	350,719
Equity method investments	28,050	16,045
Loans and finance receivables	23,208	20,751
Other receivables	43,506	35,388
Inventories	25,366	20,954
Property, plant and equipment	21,113	20,834
Equipment held for lease	15,584	14,918
Goodwill	51,522	47,117
Other intangible assets	29,187	28,486
Deferred charges - retroactive reinsurance	9,870	10,639
Other	19,628	15,854
	725,989	741,993
<i>Railroad, Utilities and Energy:</i>		
Cash and cash equivalents*	3,551	2,865
Receivables	4,795	4,177
Property, plant and equipment	160,268	155,530
Goodwill	26,597	26,758
Regulatory assets	5,062	3,963
Other	22,190	23,498
	222,463	216,791
	\$ 948,452	\$ 958,784

* Includes U.S. Treasury Bills with maturities of three months or less when purchased of \$2.6 billion at December 31, 2022 and \$61.7 billion at December 31, 2021.

See accompanying Notes to Consolidated Financial Statements

BERKSHIRE HATHAWAY INC.
and Subsidiaries
CONSOLIDATED BALANCE SHEETS
(dollars in millions)

	December 31,	
	2022	2021
LIABILITIES AND SHAREHOLDERS' EQUITY		
<i>Insurance and Other:</i>		
Unpaid losses and loss adjustment expenses	\$ 107,472	\$ 86,664
Unpaid losses and loss adjustment expenses under retroactive reinsurance contracts	35,415	37,855
Unearned premiums	28,657	23,512
Life, annuity and health insurance benefits	22,421	22,282
Other policyholder liabilities	10,101	9,901
Accounts payable, accruals and other liabilities	33,201	30,376
Aircraft repurchase liabilities and unearned lease revenues	6,820	5,849
Notes payable and other borrowings	46,538	39,272
	<u>290,625</u>	<u>255,711</u>
<i>Railroad, Utilities and Energy:</i>		
Accounts payable, accruals and other liabilities	16,615	15,696
Regulatory liabilities	7,369	7,214
Notes payable and other borrowings	76,206	74,990
	<u>100,190</u>	<u>97,900</u>
Income taxes, principally deferred	77,020	90,243
Total liabilities	<u>467,835</u>	<u>443,854</u>
Shareholders' equity:		
Common stock	8	8
Capital in excess of par value	35,167	35,592
Accumulated other comprehensive income	(6,591)	(4,027)
Retained earnings	511,602	534,421
Treasury stock, at cost	(67,826)	(59,795)
Berkshire Hathaway shareholders' equity	<u>472,360</u>	<u>506,199</u>
Noncontrolling interests	8,257	8,731
Total shareholders' equity	<u>480,617</u>	<u>514,930</u>
	<u>\$ 948,452</u>	<u>\$ 958,784</u>

See accompanying Notes to Consolidated Financial Statements

BERKSHIRE HATHAWAY INC.
and Subsidiaries
CONSOLIDATED STATEMENTS OF EARNINGS
(dollars in millions except per share amounts)

	Year Ended December 31,		
	2022	2021	2020
Revenues:			
<i>Insurance and Other:</i>			
Insurance premiums earned	\$ 74,645	\$ 69,478	\$ 63,401
Sales and service revenues	157,518	145,043	127,044
Leasing revenues	7,514	5,988	5,209
Interest, dividend and other investment income	10,263	7,465	8,092
	<u>249,940</u>	<u>227,974</u>	<u>203,746</u>
<i>Railroad, Utilities and Energy:</i>			
Freight rail transportation revenues	25,802	23,177	20,750
Energy operating revenues	21,023	18,891	15,540
Service revenues and other income	5,324	6,161	5,543
	<u>52,149</u>	<u>48,229</u>	<u>41,833</u>
Total revenues	<u>302,089</u>	<u>276,203</u>	<u>245,579</u>
Investment and derivative contract gains (losses)	<u>(67,899)</u>	<u>78,542</u>	<u>40,746</u>
Costs and expenses:			
<i>Insurance and Other:</i>			
Insurance losses and loss adjustment expenses	57,646	49,964	43,951
Life, annuity and health insurance benefits	5,152	6,007	5,812
Insurance underwriting expenses	11,942	12,569	12,798
Cost of sales and services	124,319	114,138	101,091
Cost of leasing	5,550	4,201	3,520
Selling, general and administrative expenses	19,506	18,843	19,809
Goodwill and intangible asset impairments	—	—	10,671
Interest expense	1,187	1,086	1,105
	<u>225,302</u>	<u>206,808</u>	<u>198,757</u>
<i>Railroad, Utilities and Energy:</i>			
Freight rail transportation expenses	17,282	14,477	13,120
Utilities and energy cost of sales and other expenses	15,896	13,959	11,638
Other expenses	4,984	5,615	4,796
Interest expense	3,165	3,086	2,978
	<u>41,327</u>	<u>37,137</u>	<u>32,532</u>
Total costs and expenses	<u>266,629</u>	<u>243,945</u>	<u>231,289</u>
Earnings (loss) before income taxes and equity method earnings	<u>(32,439)</u>	<u>110,800</u>	<u>55,036</u>
Equity method earnings	1,863	886	657
Earnings (loss) before income taxes	<u>(30,576)</u>	<u>111,686</u>	<u>55,693</u>
Income tax expense (benefit)	(8,518)	20,879	12,440
Net earnings (loss)	<u>(22,058)</u>	<u>90,807</u>	<u>43,253</u>
Earnings (loss) attributable to noncontrolling interests	761	1,012	732
Net earnings (loss) attributable to Berkshire Hathaway shareholders	<u>\$ (22,819)</u>	<u>\$ 89,795</u>	<u>\$ 42,521</u>
Net earnings (loss) per average equivalent Class A share	<u>\$ (15,535)</u>	<u>\$ 59,460</u>	<u>\$ 26,668</u>
Net earnings (loss) per average equivalent Class B share*	<u>\$ (10.36)</u>	<u>\$ 39.64</u>	<u>\$ 17.78</u>
Average equivalent Class A shares outstanding	1,468,876	1,510,180	1,594,469
Average equivalent Class B shares outstanding	2,203,313,642	2,265,269,867	2,391,703,454

* Class B shares are economically equivalent to one-fifteen-hundredth of a Class A share. Accordingly, net earnings per average equivalent Class B share outstanding is equal to one-fifteen-hundredth of the equivalent Class A amount. See Note 21.

See accompanying Notes to Consolidated Financial Statements

BERKSHIRE HATHAWAY INC.
and Subsidiaries
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(dollars in millions)

	Year Ended December 31,		
	2022	2021	2020
Net earnings (loss)	\$ (22,058)	\$ 90,807	\$ 43,253
Other comprehensive income:			
Unrealized gains (losses) on investments	(713)	(217)	74
Applicable income taxes	158	50	(19)
Foreign currency translation	(2,136)	(1,011)	1,284
Applicable income taxes	22	(6)	3
Defined benefit pension plans	(253)	1,775	(355)
Applicable income taxes	47	(457)	74
Other, net	250	100	(42)
Other comprehensive income, net	(2,625)	234	1,019
Comprehensive income	(24,683)	91,041	44,272
Comprehensive income attributable to noncontrolling interests	700	1,030	751
Comprehensive income attributable to Berkshire Hathaway shareholders	<u>\$ (25,383)</u>	<u>\$ 90,011</u>	<u>\$ 43,521</u>

BERKSHIRE HATHAWAY INC.
and Subsidiaries
CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY
(dollars in millions)

	Berkshire Hathaway shareholders' equity					
	Common stock and capital in excess of par value	Accumulated other comprehensive income	Retained earnings	Treasury stock	Non- controlling interests	Total
Balance December 31, 2019	\$ 35,666	\$ (5,243)	\$ 402,493	\$ (8,125)	\$ 3,772	\$ 428,563
Net earnings	—	—	42,521	—	732	43,253
Adoption of new accounting pronouncement	—	—	(388)	—	—	(388)
Other comprehensive income, net	—	1,000	—	—	19	1,019
Acquisition of common stock	—	—	—	(24,728)	—	(24,728)
Transactions with noncontrolling interests	(32)	—	—	—	3,649	3,617
Balance December 31, 2020	35,634	(4,243)	444,626	(32,853)	8,172	451,336
Net earnings	—	—	89,795	—	1,012	90,807
Other comprehensive income, net	—	216	—	—	18	234
Acquisition of common stock	—	—	—	(26,942)	—	(26,942)
Transactions with noncontrolling interests	(34)	—	—	—	(471)	(505)
Balance December 31, 2021	35,600	(4,027)	534,421	(59,795)	8,731	514,930
Net earnings (loss)	—	—	(22,819)	—	761	(22,058)
Other comprehensive income, net	—	(2,564)	—	—	(61)	(2,625)
Acquisition of common stock	—	—	—	(8,031)	—	(8,031)
Transactions with noncontrolling interests	(425)	—	—	—	(1,174)	(1,599)
Balance December 31, 2022	<u>\$ 35,175</u>	<u>\$ (6,591)</u>	<u>\$ 511,602</u>	<u>\$ (67,826)</u>	<u>\$ 8,257</u>	<u>\$ 480,617</u>

See accompanying Notes to Consolidated Financial Statements

BERKSHIRE HATHAWAY INC.
and Subsidiaries
CONSOLIDATED STATEMENTS OF CASH FLOWS
(dollars in millions)

	Year Ended December 31,		
	2022	2021	2020
Cash flows from operating activities:			
Net earnings (loss)	\$ (22,058)	\$ 90,807	\$ 43,253
Adjustments to reconcile net earnings (loss) to operating cash flows:			
Investment (gains) losses	67,623	(77,576)	(40,905)
Depreciation and amortization	10,899	10,718	10,596
Other	(4,324)	(3,397)	11,263
Changes in operating assets and liabilities:			
Unpaid losses and loss adjustment expenses	4,057	4,194	4,476
Deferred charges - retroactive reinsurance	769	1,802	1,307
Unearned premiums	1,861	2,306	1,587
Receivables and originated loans	(5,592)	(5,834)	(1,609)
Inventories	(4,779)	(1,862)	681
Other assets	(373)	176	(1,790)
Other liabilities	2,033	2,790	3,719
Income taxes	(12,892)	15,297	7,195
Net cash flows from operating activities	<u>37,224</u>	<u>39,421</u>	<u>39,773</u>
Cash flows from investing activities:			
Purchases of equity securities	(67,930)	(8,448)	(30,161)
Sales of equity securities	33,664	15,849	38,756
Purchases of U.S. Treasury Bills and fixed maturity securities	(183,922)	(152,637)	(208,429)
Sales of U.S. Treasury Bills and fixed maturity securities	90,088	27,188	31,873
Redemptions and maturities of U.S. Treasury Bills and fixed maturity securities	66,318	160,402	149,709
Acquisitions of businesses, net of cash acquired	(10,594)	(456)	(2,532)
Purchases of property, plant and equipment and equipment held for lease	(15,464)	(13,276)	(13,012)
Other	239	770	(3,961)
Net cash flows from investing activities	<u>(87,601)</u>	<u>29,392</u>	<u>(37,757)</u>
Cash flows from financing activities:			
Proceeds from borrowings of insurance and other businesses	7,822	2,961	5,925
Repayments of borrowings of insurance and other businesses	(1,502)	(3,032)	(2,700)
Proceeds from borrowings of railroad, utilities and energy businesses	4,873	3,959	8,445
Repayments of borrowings of railroad, utilities and energy businesses	(2,426)	(4,016)	(3,761)
Changes in short term borrowings, net	(596)	(624)	(1,118)
Acquisition of treasury stock	(7,854)	(27,061)	(24,706)
Other, principally transactions with noncontrolling interests	(1,979)	(695)	(429)
Net cash flows from financing activities	<u>(1,662)</u>	<u>(28,508)</u>	<u>(18,344)</u>
Effects of foreign currency exchange rate changes	(268)	5	92
Increase (decrease) in cash and cash equivalents and restricted cash	(52,307)	40,310	(16,236)
Cash and cash equivalents and restricted cash at beginning of year	88,706	48,396	64,632
Cash and cash equivalents and restricted cash at end of year*	<u>\$ 36,399</u>	<u>\$ 88,706</u>	<u>\$ 48,396</u>
* Cash and cash equivalents and restricted cash at end of year are comprised of:			
Insurance and Other	\$ 32,260	\$ 85,319	\$ 44,714
Railroad, Utilities and Energy	3,551	2,865	3,276
Restricted cash included in other assets	588	522	406
	<u>\$ 36,399</u>	<u>\$ 88,706</u>	<u>\$ 48,396</u>

See accompanying Notes to Consolidated Financial Statements

BERKSHIRE HATHAWAY INC.
and Subsidiaries
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
December 31, 2022

(1) Significant accounting policies and practices

(a) Nature of operations and basis of consolidation

Berkshire Hathaway Inc. (“Berkshire”) is a holding company owning subsidiaries engaged in numerous diverse business activities, including insurance and reinsurance, freight rail transportation, utilities and energy, manufacturing, service and retailing. In these notes the terms “us,” “we,” or “our” refer to Berkshire and its consolidated subsidiaries. Further information regarding our reportable business segments is contained in Note 25. Information concerning significant business acquisitions completed over the past three years appears in Note 2. We believe that reporting the Railroad, Utilities and Energy subsidiaries separately is appropriate given the relative significance of their long-lived assets, capital expenditures and debt, which is not guaranteed by Berkshire.

The accompanying Consolidated Financial Statements include the accounts of Berkshire consolidated with the accounts of all subsidiaries and affiliates in which we hold a controlling financial interest as of the financial statement date. Normally a controlling financial interest reflects ownership of a majority of the voting interests. We consolidate variable interest entities (“VIE”) when we possess both the power to direct the activities of the VIE that most significantly affect its economic performance, and we (a) are obligated to absorb the losses that could be significant to the VIE or (b) hold the right to receive benefits from the VIE that could be significant to the VIE. Intercompany accounts and transactions have been eliminated. Certain immaterial balances in the Consolidated Financial Statements have been reclassified in prior years to conform to current year presentations.

(b) Use of estimates in preparation of financial statements

We prepare our Consolidated Financial Statements in conformity with accounting principles generally accepted in the United States (“GAAP”) which requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities at the balance sheet date and the reported amounts of revenues and expenses during the period. Our estimates of unpaid losses and loss adjustment expenses are subject to considerable estimation error due to the inherent uncertainty in projecting ultimate claim costs. In addition, estimates and assumptions associated with the amortization of deferred charges on retroactive reinsurance contracts, determinations of fair values of certain financial instruments and evaluations of goodwill and indefinite-lived intangible assets for impairment require considerable judgment. Actual results may differ from the estimates used in preparing our Consolidated Financial Statements.

To varying degrees the COVID-19 pandemic and its consequences continues to affect our operating businesses. Significant government and private sector actions have been taken since 2020 to control the spread and mitigate the economic effects of the virus and its variants. Such actions in 2022 included temporary business closures or restrictions of business activities in various parts of the world. In addition, significant disruptions of supply chains and higher costs emerged in 2021 and persisted in 2022. The development of geopolitical conflicts in 2022 contributed to disruptions of supply chains, resulting in cost increases for commodities, goods and services in many parts of the world. In the U.S. and elsewhere, governments are implementing actions intended to slow price inflation. The economic effects from these events over longer terms cannot be reasonably estimated at this time. Accordingly, significant estimates used in the preparation of our financial statements, including those associated with evaluations of certain long-lived assets, goodwill and other intangible assets for impairment, expected credit losses on amounts owed to us and the estimations of certain losses assumed under insurance and reinsurance contracts, may be subject to significant adjustments in future periods.

(c) Cash and cash equivalents and short-term investments in U.S. Treasury Bills

Cash equivalents consist of demand deposit and money market accounts and investments with maturities of three months or less when purchased. Short-term investments in U.S. Treasury Bills have maturities exceeding three months and less than one year at the time of purchase.

(d) Investments in fixed maturity securities

We classify investments in fixed maturity securities on the acquisition date and at each balance sheet date. Securities classified as held-to-maturity are carried at amortized cost, reflecting the ability and intent to hold the securities to maturity. Securities classified as trading are acquired with the intent to sell in the near term and are carried at fair value with changes in fair value reported in earnings. All other securities are classified as available-for-sale and are carried at fair value. Substantially all of our investments in fixed maturity securities are classified as available-for-sale. We amortize the difference between the original cost and maturity value of a fixed maturity security to earnings using the interest method.

Notes to Consolidated Financial Statements (Continued)

(1) Significant accounting policies and practices (Continued)

(d) Investments in fixed maturity securities (Continued)

We record investment gains and losses on available-for-sale fixed maturity securities when the securities are sold, determined on a specific identification basis. For securities in an unrealized loss position, we recognize a loss in earnings for the excess of amortized cost over fair value if we intend to sell before the price recovers. As of the balance sheet date, we evaluate whether the other unrealized losses are attributable to credit losses or other factors. We consider the severity of the decline in value, creditworthiness of the issuer and other relevant factors. We record an allowance for credit losses, limited to the excess of amortized cost over fair value, with a corresponding charge to earnings if the present value of estimated cash flows is less than the present value of contractual cash flows. The allowance may be subsequently increased or decreased based on the prevailing facts and circumstances. The portion of the unrealized loss that we believe is not related to a credit loss is recognized in other comprehensive income.

(e) Investments in equity securities

We carry substantially all investments in equity securities at fair value and record the subsequent changes in fair values in the Consolidated Statements of Earnings as a component of investment gains or losses.

(f) Investments under the equity method

We utilize the equity method to account for investments when we possess the ability to exercise significant influence, but not control, over the operating and financial policies of the investee. The ability to exercise significant influence is presumed when the investor possesses more than 20% of the voting interests of the investee. This presumption may be overcome based on specific facts and circumstances that demonstrate that the ability to exercise significant influence is restricted. We apply the equity method to investments in common stock and other investments when such investments possess substantially identical subordinated interests to common stock, and do not apply the equity method to investments that are not in-substance common stock as defined by GAAP.

In applying the equity method, we record the investment at cost and subsequently increase or decrease the carrying amount of the investment by our proportionate share of the net earnings or losses and other comprehensive income of the investee. We record dividends or other equity distributions as reductions in the carrying value of the investment. If net losses reduce our carrying amount to zero, additional net losses may be recorded if other investments in the investee are at-risk, even if we have not committed to provide financial support to the investee. Such additional equity method losses, if any, are based upon the change in our claim on the investee's book value.

(g) Loans and finance receivables

Loans and finance receivables are primarily manufactured home loans, and to a lesser extent, commercial loans and site-built home loans. We carry substantially all loans and finance receivables at amortized cost, net of allowances for expected credit losses, based on our ability and intent to hold such loans to maturity. Acquisition costs and loan origination and commitment costs paid and fees received, as well as acquisition premiums or discounts, are amortized as yield adjustments over the lives of the loans.

Measurements of expected credit losses include provisions for non-collection, whether the risk is probable or remote. Expected credit losses on manufactured home loans are based on the net present value of future principal payments less estimated expenses related to the charge-off and foreclosure of expected uncollectible loans and include provisions for loans that are not in foreclosure. Our principal credit quality indicator is whether the loans are performing. Expected credit loss estimates consider historical default rates, collateral recovery rates, historical runoff rates, interest rates, reductions of future cash flows for modified loans and the historical time elapsed from last payment until foreclosure, among other factors. In addition, our estimates consider current conditions and reasonable and supportable forecasts.

Notes to Consolidated Financial Statements (Continued)

(1) Significant accounting policies and practices (Continued)

(g) Loans and finance receivables (Continued)

Loans are considered delinquent when payments are more than 30 days past due. We place loans over 90 days past due on nonaccrual status and accrued but uncollected interest is reversed. Subsequent collections on the loans are first applied to the principal and interest owed for the most delinquent amount. We resume interest income accrual once a loan is less than 90 days delinquent.

Loans are considered non-performing when the foreclosure process has started. Once a loan is in the process of foreclosure, interest income is not recognized until the foreclosure is cured or the loan is modified. Once a modification is complete, interest income is recognized based on the terms of the new loan. Foreclosed loans are charged off when the collateral is sold. Loans not in foreclosure are evaluated for charge-off based on individual circumstances concerning the future collectability of the loan and the condition of the collateral securing the loan.

(h) Other receivables

Other receivables include balances due from customers, insurance premiums receivable and reinsurance losses recoverable, as well as other receivables. Trade receivables, insurance premium receivables and other receivables are primarily short-term in nature with stated collection terms of less than one year from the date of origination. Reinsurance recoverables are comprised of amounts ceded under reinsurance contracts or pursuant to mandatory government-sponsored insurance programs. Reinsurance recoverables relate to unpaid losses and loss adjustment expenses arising from property and casualty contracts and benefits under life and health contracts. Receivables are stated net of estimated allowances for uncollectible balances.

We measure expected credit losses primarily utilizing credit loss history, with adjustments to reflect current or expected future economic conditions when reasonable and supportable forecasts of losses deviate from historical experience. In evaluating expected credit losses of reinsurance recoverables on unpaid losses, we review the credit quality of the counterparty and consider right-of-offset provisions within reinsurance contracts and other forms of credit enhancement including collateral, guarantees and other available information. We charge-off receivables against the allowances after all reasonable collection efforts are exhausted.

(i) Derivatives

We carry assets and liabilities arising from derivative contracts at fair value in other assets and accounts payable, accruals and other liabilities in our Consolidated Balance Sheets. Balances are net of reductions permitted under master netting agreements with counterparties. We record the changes in fair value of derivative contracts that do not qualify as hedging instruments for financial reporting purposes in earnings or, if such contracts involve our regulated utilities subsidiaries, as regulatory assets or liabilities when inclusion in regulated rates is probable.

(j) Fair value measurements

As defined under GAAP, fair value is the price that would be received to sell an asset or paid to transfer a liability between market participants in the principal market or in the most advantageous market when no principal market exists. Adjustments to transaction prices or quoted market prices may be required in illiquid or disorderly markets in estimating fair value. Alternative valuation techniques may be appropriate under the circumstances to determine the value that would be received to sell an asset or paid to transfer a liability in an orderly transaction. Market participants are assumed to be independent, knowledgeable, and able and willing to transact an exchange and not acting under duress. Our nonperformance or credit risk is considered in determining the fair value of liabilities. Considerable judgment may be required in interpreting market data used to develop the estimates of fair value. Accordingly, estimates of fair value presented herein are not necessarily indicative of the amounts that could be realized in a current or future market exchange.

(k) Inventories

Inventories consist of manufactured goods, goods or products acquired for resale and homes constructed for sale. Manufactured inventory costs include materials, direct and indirect labor and factory overhead. At December 31, 2022, we used the last-in-first-out (“LIFO”) method to value approximately 30% of consolidated inventories with the remainder primarily determined under first-in-first-out and average cost methods. Non-LIFO inventories are stated at the lower of cost or net realizable value. The excess of current or replacement costs over costs determined under LIFO was approximately \$2.5 billion as of December 31, 2022 and \$1.9 billion as of December 31, 2021.

Notes to Consolidated Financial Statements (Continued)

(1) Significant accounting policies and practices (Continued)

(l) Property, plant and equipment and equipment held for lease

We use property, plant and equipment in our operations. We also own equipment that we lease to others under lease contracts. We record additions to property, plant and equipment and equipment held for lease at cost, which includes asset additions, improvements and betterments. With respect to constructed assets, all materials, direct labor and contract services as well as certain indirect costs are capitalized. Indirect costs include interest over the construction period. With respect to constructed assets of our utility and energy subsidiaries that are subject to authoritative guidance for regulated operations, capitalized costs also include an allowance for funds used during construction, which represents the cost of equity funds used to finance the construction of the regulated facilities. Normal repairs and maintenance and other costs that do not improve the property, extend its useful life or otherwise do not meet capitalization criteria are charged to expense as incurred.

Depreciation of assets of our regulated utilities and railroad is generally determined using group depreciation methods where rates are based on periodic depreciation studies approved by the applicable regulator. Under group depreciation, a composite rate is applied to the gross investment in a particular class of property, despite differences in the service life or salvage value of individual property units within the same class. When such assets are retired or sold, no gain or loss is recognized. Gains or losses on disposals of all other assets are recorded through earnings.

We depreciate property, plant and equipment used by our other businesses to the estimated salvage value primarily using the straight-line method over estimated service lives. Ranges of estimated service lives of depreciable assets used in our other businesses are as follows: buildings and improvements – 5 to 50 years, machinery and equipment – 3 to 25 years and furniture, fixtures and other – 3 to 15 years. Ranges of estimated useful lives of depreciable assets unique to our railroad business are as follows: track structure and other roadway – 10 to 100 years and locomotives, freight cars and other equipment – 6 to 43 years. Ranges of estimated useful lives of assets unique to our regulated utilities and energy businesses are as follows: utility generation, transmission and distribution systems – 5 to 80 years, interstate natural gas pipeline assets – 3 to 80 years and independent power plants and other assets – 2 to 50 years. We depreciate the equipment held for lease to estimated salvage value primarily using the straight-line method over estimated useful lives ranging from 3 to 35 years. We use declining balance depreciation methods for assets when the revenue-earning power of the asset is greater during the earlier years of its life.

We evaluate property, plant and equipment and equipment held for lease for impairment when events or changes in circumstances indicate that the carrying value of such assets may not be recoverable or when the assets are held for sale. Upon the occurrence of a triggering event, we assess whether the estimated undiscounted cash flows expected from the use of the asset and the residual value from the ultimate disposal of the asset exceeds the carrying value. If the carrying value exceeds the estimated recoverable amounts, we reduce the carrying value to fair value and record an impairment loss in earnings, except with respect to impairment of assets of our regulated utility and energy subsidiaries where the impacts of regulation are considered in evaluating the carrying value.

(m) Leases

We are party to contracts where we lease property from others. When we lease assets from others, we record right-of-use assets and lease liabilities. Right-of-use assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. In this regard, lease payments include fixed payments and variable payments that depend on an index or rate. The lease term is generally considered the non-cancellable lease period. Certain lease contracts contain renewal options or other terms that provide for variable payments based on performance or usage. Options are not included in determining right-of-use assets or lease liabilities unless it is reasonably certain that options will be exercised. Generally, incremental borrowing rates are used in measuring lease liabilities. Right-of-use assets are subject to review for impairment. As permitted under GAAP, for some leases we do not separate lease components from non-lease components by class of asset and we do not record assets or liabilities for leases with terms of one year or less.

(n) Goodwill and other intangible assets

Goodwill represents the excess of the acquisition price of a business over the fair value of identified net assets of that business. We evaluate goodwill for impairment at least annually. When evaluating goodwill for impairment, we estimate the fair value of the reporting unit. Several methods may be used to estimate a reporting unit's fair value, including market quotations, asset and liability fair values and other valuation techniques, including, but not limited to, discounted projected future net earnings or net cash flows and multiples of earnings. When the carrying amount of a reporting unit, including goodwill, exceeds the estimated fair value, the excess up to the balance of goodwill is charged to earnings as an impairment loss.

Notes to Consolidated Financial Statements (Continued)

(1) Significant accounting policies and practices (Continued)

(n) Goodwill and other intangible assets (Continued)

Intangible assets with indefinite lives are also tested for impairment at least annually and when events or changes in circumstances indicate that, more-likely-than-not, the asset is impaired. Significant judgment is required in estimating fair values and performing goodwill and indefinite-lived intangible asset impairment tests. We amortize intangible assets with finite lives in a pattern that reflects the expected consumption of related economic benefits or on a straight-line basis over the estimated economic useful lives. Intangible assets with finite lives are reviewed for impairment when events or changes in circumstances indicate that the carrying amount may not be recoverable.

(o) Revenue recognition

We earn insurance premiums on prospective property/casualty insurance and reinsurance contracts over the loss exposure or coverage period in proportion to the level of protection provided. Premiums are generally earned in proportion to the coverage provided, which in most cases is ratably over the term of the contract with unearned premiums computed on a monthly or daily pro-rata basis. Premiums on retroactive property/casualty reinsurance contracts are generally received in full and are earned at the inception of the contracts, as all underlying loss events covered by the policies occurred prior to contract inception. Premiums for life reinsurance and periodic payment annuity contracts are earned when due. Premiums for periodic payment annuity contracts are received in full at the inception of the contracts. Premiums earned are stated net of amounts ceded to reinsurers. Premiums earned on contracts with experience-rating provisions reflect estimated loss experience under such contracts.

Sales and service revenues are recognized when goods or services are transferred to a customer. A good or service is transferred when (or as) the customer obtains control of that good or service. Revenues are based on the consideration we expect to receive in connection with our promises to deliver goods and services to our customers.

We manufacture and/or distribute a wide variety of industrial, building and consumer products. Our sales contracts provide customers with these products directly or through wholesale and retail channels in exchange for consideration specified under the contracts. Contracts generally represent customer orders for individual products at stated prices. Sales contracts may contain either single or multiple performance obligations. In instances where contracts contain multiple performance obligations, we allocate the revenue to each obligation based on the relative stand-alone selling prices of each product or service.

Sales revenue reflects reductions for returns, allowances, late delivery penalties, volume discounts and other incentives, some of which may be contingent on future events. In certain customer contracts, sales revenue includes certain state and local excise taxes billed to customers on specified products when those taxes are levied directly upon us by the taxing authorities. Sales revenue excludes sales taxes and value-added taxes collected on behalf of taxing authorities. Sales revenue includes consideration for shipping and other fulfillment activities performed prior to the customer obtaining control of the goods. We also elect to treat consideration for such services performed after control has passed to the customer as sales revenue.

Our product sales revenues are generally recognized at a point in time when control of the product transfers to the customer, which coincides with customer pickup or product delivery or acceptance, depending on terms of the arrangement. We recognize sales revenues and related costs with respect to certain contracts over time, primarily from certain castings, forgings and aerostructures contracts. Control of the product units under these contracts transfers continuously to the customer as the product is manufactured. These products generally have no alternative use and the contract requires the customer to provide reasonable compensation if terminated for reasons other than breach of contract.

The primary performance obligation under our freight rail transportation service contracts is to move freight from a point of origin to a point of destination. The performance obligations are represented by bills of lading which create a series of distinct services that have a similar pattern of transfer to the customer. The revenues for each performance obligation are based on various factors including the product being shipped, the origin and destination pair and contract incentives, which are outlined in various private rate agreements, common carrier public tariffs, interline foreign road agreements and pricing quotes. The transaction price is generally a per car/unit amount to transport railcars from a specified origin to a specified destination. Freight revenues are recognized over time as the service is performed because the customer simultaneously receives and consumes the benefits of the service. Revenues recognized represent the portion of the service completed as of the balance sheet date. Invoices for freight transportation services are generally issued to customers and paid within 30 days or less. Customer incentives, which are primarily provided for shipping a specified cumulative volume or shipping to/from specific locations, are recorded as a reduction to revenue on a pro-rata basis based on actual or projected future customer shipments.

Notes to Consolidated Financial Statements (Continued)

(1) Significant accounting policies and practices (Continued)

(o) Revenue recognition (Continued)

Our energy revenue derives primarily from tariff-based sales arrangements approved by various regulatory commissions. These tariff-based revenues are mainly comprised of energy, transmission, distribution and natural gas and have performance obligations to deliver energy products and services to customers which are satisfied over time as energy is delivered or services are provided. Our nonregulated energy revenue primarily relates to our renewable energy business. Energy revenues are equivalent to the amounts we have the right to invoice and correspond directly with the value to the customer of the performance to date and include billed and unbilled amounts. Payments from customers are generally due within 30 days of billing. Rates charged for energy products and services are established by regulators or contractual arrangements that establish the transaction price, as well as the allocation of price among the separate performance obligations. When preliminary regulated rates are permitted to be billed prior to final approval by the applicable regulator, certain revenue collected may be subject to refund and a liability for estimated refunds is accrued. Other service revenues derive from contracts with customers in which performance obligations are satisfied over time, where customers receive and consume benefits as we perform the services or at a point in time when the services are provided. Other service revenues primarily derive from real estate brokerage, automotive repair, aircraft management, aviation training, franchising and news distribution.

Leasing revenue is generally recognized ratably over the term of the lease or based on usage, if applicable under the terms of the contract. A substantial portion of our lessor contracts are classified as operating leases.

(p) Losses and loss adjustment expenses

We record liabilities for unpaid losses and loss adjustment expenses under property/casualty insurance and reinsurance contracts for loss events that have occurred on or before the balance sheet date. Such liabilities represent the estimated ultimate payment amounts without discounting for time value.

We base liability estimates on (1) loss reports from policyholders and cedents, (2) individual case estimates and (3) estimates of incurred but not reported losses. Losses and loss adjustment expenses in the Consolidated Statements of Earnings include paid claims, claim settlement costs and changes in estimated claim liabilities. Losses and loss adjustment expenses charged to earnings are net of amounts recovered and estimates of amounts recoverable under ceded reinsurance contracts. Reinsurance contracts do not relieve the ceding company of its obligations to indemnify policyholders with respect to the underlying insurance and reinsurance contracts.

(q) Retroactive reinsurance contracts

We record liabilities for unpaid losses and loss adjustment expenses under short duration retroactive reinsurance contracts consistent with property/casualty insurance and reinsurance contracts described in Note 1(p). With respect to retroactive reinsurance contracts, we also record deferred charge assets at the inception of the contracts, representing the excess, if any, of the estimated ultimate claim liabilities over the premiums earned. We subsequently amortize the deferred charge assets over the expected claim settlement periods using the interest method. Changes to the estimated timing or amount of future loss payments also produce changes in deferred charge balances. We apply changes in such estimates retrospectively and the resulting changes in deferred charge balances, together with periodic amortization, are included in insurance losses and loss adjustment expenses in the Consolidated Statements of Earnings.

(r) Insurance policy acquisition costs

We capitalize the direct incremental costs that relate to the successful sale of insurance contracts, subject to ultimate recoverability. Direct incremental acquisition costs include commissions, premium taxes and certain other costs associated with successful efforts. We expense all other underwriting costs as incurred. For short duration contracts, we subsequently amortize deferred policy acquisition costs to underwriting expenses as the related premiums are earned. Acquisition costs related to long duration life insurance contracts are amortized over the expected premium-paying period in proportion to the anticipated premiums over the life of the policy. Such anticipated premiums are estimated using the same assumptions used for computing liabilities for future policy benefits. The recoverability of deferred policy acquisition costs generally considers anticipated investment income. The unamortized balances are included in other assets and were approximately \$3.8 billion and \$3.4 billion at December 31, 2022 and 2021, respectively, which included \$3.2 billion and \$2.9 billion, respectively, related to property and casualty insurance contracts.