

Risk Factors Comparison 2025-02-20 to 2024-02-21 Form: 10-K

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There are inherent risks associated with Alcoa's business and industry. In addition to the factors discussed elsewhere in this report, the following risks and uncertainties could have a material adverse effect on our business, financial condition, or results of operations, including causing Alcoa's actual results to differ materially from those projected in any forward- looking statements. Although the risks are organized by heading, and each risk is described separately, many of the risks are interrelated. ~~You should not interpret the disclosure of any risk factor to imply that the risk has not already materialized.~~ While we believe we have identified and discussed below the key risk factors affecting our business, there may be additional risks and uncertainties that are not presently known to Alcoa or that Alcoa currently deems immaterial that also may materially adversely affect us in future periods. See Part II Item 7 of this Form 10- K in Management's Discussion and Analysis of Financial Condition and Results of Operations under the caption Forward- Looking Statements.

Industry and Global Market Risks The aluminum industry and aluminum end- use markets are highly cyclical and are influenced by several factors, including global economic conditions, the Chinese market, and overall consumer confidence. The nature of the industries in which our customers operate causes demand for our products to be cyclical, creating potential uncertainty regarding future profitability. The demand for aluminum is sensitive to, and impacted by, demand for the finished goods manufactured by our customers in industries, such as the commercial construction, transportation, and automotive industries, which may change as a result of factors beyond our control. The demand for aluminum is also highly correlated to economic growth, and we could be adversely affected by large or sudden shifts in the global inventory of aluminum and the resulting market price impacts. We believe the long- term prospects for aluminum and aluminum products are positive; however, we are unable to predict the future course of industry variables or the strength of the global economy and the effects of government intervention. Our business, financial condition, and results of operations may be materially affected by the conditions in the global economy generally, including inflationary and recessionary conditions, and in global capital markets, including in the end markets and geographic regions in which we and our customers operate. Many of the markets in which our customers participate are also cyclical in nature and experience significant fluctuations in demand for their products based on economic and geopolitical conditions, consumer demand, raw material and energy costs, foreign exchange rates, and government actions. Many of these factors are beyond our control. The Chinese market is a significant source of global demand for, and supply of, commodities, including aluminum. Chinese production rates of aluminum, both from new construction and installed smelting capacity, can fluctuate based on Chinese government policy, such as the level of enforcement of production capacity limits and / or licenses and environmental policies. In addition, industry overcapacity, a sustained slowdown in Chinese aluminum demand, or a significant slowdown in other markets, that is not offset by decreases in supply of aluminum or increased aluminum demand in emerging economies, such as India, Brazil, and several Southeast Asian countries, could have an adverse effect on the global supply and demand for aluminum and aluminum prices. Also, changes in the aluminum market can cause changes in the alumina and bauxite markets, which could also materially affect our business, financial condition, or results of operations. As a result of these factors, our profitability is subject to significant fluctuation. A decline in consumer and business confidence and spending, severe reductions in the availability and cost of credit, and volatility in the capital and credit markets could adversely affect the business and economic environment in which we operate and the profitability of our business. We are also exposed to risks associated with the creditworthiness of our suppliers and customers. If the availability of credit to fund or support the continuation and expansion of our customers' business operations is curtailed or if the cost of that credit is increased, the resulting inability of our customers or of their customers to either access credit or absorb the increased cost of that credit could adversely affect our business by reducing our sales or by increasing our exposure to losses from uncollectible customer accounts. These conditions and a disruption of the credit markets could also result in financial instability of some of our suppliers and customers. The consequences of such adverse effects could include the interruption of production at the facilities of our customers, the reduction, delay or cancellation of customer orders, delays or interruptions of the supply of raw materials we purchase, and bankruptcy of customers, suppliers, or other creditors. Any of these events could adversely affect our business, financial condition, and results of operations. We have in the past and could in the future be materially adversely affected by volatility and declines in aluminum and alumina demand and prices, including global, regional, and product- specific prices, or by significant changes in production costs which are linked to LME or other commodities. The overall price of primary aluminum consists of several components: (i) the underlying base metal component, which is typically based on quoted prices from the LME; (ii) the regional premium, which comprises the incremental price over the base LME component that is associated with the physical delivery of metal to a particular region (e. g., the Midwest premium for metal sold in the United States); and (iii) the product premium, which represents the incremental price for receiving physical metal in a particular shape (e. g., foundry, billet, slab, rod, etc.) and / or alloy. Each of the above three components has its own drivers of variability. The LME price volatility is typically driven by macroeconomic factors (including geopolitical instability), global supply and demand of aluminum (including expectations for growth, contraction, and the level of global inventories), and trading activity of financial investors. In ~~2023~~ 2024, LME cash prices reached a high of \$ 2, ~~636~~ 695 per metric ton in ~~January~~ May ~~2023~~ 2024 and a low of \$ 2, ~~069~~ 110 per metric ton in ~~August~~ January ~~2023~~ 2024. While global inventories remained ~~consistent~~ at historically low levels in ~~2023~~ 2024, high inventories could lead to a reduction in the price of aluminum and declines in the LME price have had a negative impact on our business, financial condition, and results of operations. ~~Similarly, it is possible that persistently high inventories of Russian origin aluminum stocks in LME warehouses could have a negative impact on LME pricing.~~ Regional premiums tend to vary based on the supply of and demand

for metal in a particular region, associated transportation costs, and import tariffs. Product premiums generally are a function of supply and demand for a given primary aluminum shape and alloy combination in a particular region. Periods of industry overcapacity may also result in a weak aluminum pricing environment. A sustained weak LME aluminum pricing environment, deterioration in LME aluminum prices, or a decrease in regional premiums or product premiums could have a material adverse effect on our business, financial condition, or results of operations. Similarly, our operating results are affected by significant changes in key costs of production that are ~~commodity or linked to~~ LME ~~linked~~ **or other commodities**. Most of our alumina contracts contain two pricing components: (1) the API price basis and (2) a negotiated adjustment basis that takes into account various factors, including freight, quality, customer location, and market conditions. Because the API component can exhibit significant volatility due to market exposure, revenues associated with our alumina operations are exposed to market pricing. Market-driven balancing of global aluminum supply and demand may be disrupted by non-market forces. In response to market-driven factors relating to the global supply and demand of aluminum and alumina, including energy prices and environmental policies, other industry producers have independently undertaken to reduce or increase production. Changes in production may be delayed or impaired by the ability to secure, or the terms of long-term contracts, to buy energy or raw materials. The impact of non-market forces on global aluminum industry capacity, such as political instability or pressures or governmental policies in certain countries relating to employment, **trade**, the environment, or maintaining or further developing industry self-sufficiency, may affect overall supply and demand in the aluminum industry. For example, the ongoing **active** conflict between Russia and Ukraine could adversely impact macroeconomic conditions and result in heightened economic sanctions from ~~the U. S. and the~~ international **community communities** in a manner that adversely affects our industry. The disruption of the market-driven balancing of the global supply and demand of aluminum, a resulting weak pricing environment, and margin compression may adversely affect our business, financial condition, and results of operations. Our participation in increasingly competitive and complex global markets exposes us to risks, including legal and regulatory risks and changes in conditions beyond our control, that could adversely affect our business, financial condition, or results of operations. We have operations or activities in numerous countries and regions outside the United States, including Australia, Brazil, Canada, Europe, Guinea, and Saudi Arabia. The risks associated with the Company's global operations include:

- Geopolitical risks, such as political instability, ~~coups-~~ **coup** d'états, civil unrest, strikes and work stoppages, expropriation, nationalization of properties by a government, imposition of sanctions, changes to import or export regulations and fees, renegotiation, revocation or nullification of existing agreements, leases, licenses, and permits, and changes to mining royalty rules or laws;
- Economic and commercial instability risks, including those caused by sovereign and private debt default, corruption, and changes in local government laws, regulations, and policies **(including fiscal policies)**, such as those related to tariffs and trade barriers, trade tensions, taxation, exchange controls, employment regulations, **carbon dioxide compensation support**, and repatriation of earnings;
- Weakening macroeconomic conditions;
- Decreasing manufacturing activity, especially in the global automotive sector;
- War or terrorist activities;
- Major public health issues, such as a pandemic or epidemic, which could cause disruptions in our operations, supply chain, or workforce;
- Information systems failures or disruptions, including due to cyber attacks;
- Difficulties enforcing intellectual property and contractual rights, or limitations in the protection of technology, data, and intellectual property, in certain jurisdictions; and,
- Unexpected events, accidents, or environmental incidents, including natural disasters.

We have experienced some of these events, and while the impact of any of the foregoing factors is difficult to predict, any one or more of them could adversely affect our business, financial condition, or results of operations. Existing insurance arrangements may not provide sufficient coverage or reimbursement for significant costs that may arise from such events. Unexpected or uncontrollable events or circumstances in any of the foreign markets in which we operate, including actions by foreign governments such as changes in foreign policy or fiscal regimes, termination of our leases or agreements with such foreign governments, increased government regulation, or forced curtailment or continuation of operations, could materially and adversely affect our business, financial condition, or results of operations. We have in the past been and may in the future be unable to obtain, maintain, or renew permits or approvals necessary for our mining operations, which could materially adversely affect our operations and profitability. Our mining operations are subject to extensive permitting and approval requirements. These include permits and approvals issued by various government agencies and regulatory bodies at the federal, state, and local levels of governments in the countries in which we operate. The permitting and approval rules are complex, are often subject to interpretations by regulators, which may change over time, and may be impacted by heightened levels of regulatory oversight and stakeholder focus on addressing environmental and social impacts of mining activities. Changing expectations and increased information required by regulators has in the past and could in the future make our ability to comply with the applicable requirements more difficult, inhibit or delay our ability to timely obtain the necessary approvals, if at all, result in approvals being conditioned in a manner that may restrict the Company's ability to efficiently and economically conduct its mining activities, require us to adjust our mining plans, or preclude the continuation of certain ongoing operations and mining activities or the development of future mining operations. Failure to obtain, maintain, or renew permits or approvals, or permitting or approval delays, restrictions, or conditions has in the past and may in the future impact the quality of the bauxite we are able to mine and could increase our costs and affect our ability to efficiently and economically conduct our operations, potentially having a materially adverse impact on our results of operations and profitability. In addition, the permitting processes, restrictions, and requirements imposed by conditional permits or approvals, and associated costs and liabilities, have in the past and may in the future be extensive, which can delay or prevent commencing or continuing exploration or production operations. This has in the past adversely affected and could in the future adversely affect the Company's mining operations and production, as well as our refining and smelting operations, and has in the past and could in the future require us to curtail, close, or otherwise modify our production, operations, and sites. In addition, these processes, restrictions, and requirements have in the past resulted and could in the future result in the Company's mining permits being rescinded or modified, or adjustment to our mining plans, to mitigate against adverse impacts to sites within or near our mining areas that have environmental, biodiversity,

or cultural significance. Such actions have in the past had and could in the future have a material adverse impact on our results of operations and profitability. For example, the Company seeks annual approvals from the Western Australia government for rolling five- year mine plans to maintain operations at the Huntly and Willowdale bauxite mines. This statutory annual mine approvals process for the Company' s 2023- 2027 Mining and Management Program (MMP) took longer than it had taken historically due to increased requirements and expectations from stakeholders with respect to certain environmental matters. As a result of the prolonged approval process, the Company began mining lower grade bauxite in April 2023, which impacted the Company' s refineries **and cost structures** by increasing the use of caustic, energy, and bauxite and decreasing alumina output. The Company' s 2023- 2027 MMP ~~was~~ **and 2024- 2028 MMP were** approved in December 2023, and in connection with such approval, the Company is subject to certain new **conditions, which amongst other** requirements to address key environmental factors, such as enhanced protections for drinking water, increased distances from reservoirs, biodiversity, and accelerated **accelerates** forest rehabilitation. The new requirements will require an acceleration of cash spend of approximately \$ 40 **during** over the next three ~~---~~ **the and half years period from 2024 through 2027** from asset retirement obligations already recorded. Our operations and profitability have in the past and could in the future be impacted by rising energy costs and interruptions or uncertainty in energy supplies. Our refineries and smelters consume substantial amounts of natural gas and electricity in the production of alumina and aluminum. The prices for and availability of energy have in the past and could in the future be impacted by volatile market conditions resulting from factors beyond our control such as weather, political, regulatory, and economic conditions. For example, in 2023, the Company announced its engagement with the regional and national governments in Spain to discuss sustained and ongoing losses at the San Ciprián refinery and smelter **incurred substantial losses in 2024 and in prior years as a result of a challenging economic environment, primarily due to the high cost of energy. In October 2024, Alcoa announced that it is progressing toward entering into a strategic partnership with IGNIS Equity Holdings, SL (IGNIS EQT), the majority shareholder in the IGNIS Group of Companies, a vertically integrated energy company based in Spain, to support the continued operation of the San Ciprián complex. Alcoa would continue as the managing operator of the San Ciprián operations, partly driven by with IGNIS EQT holding 25 percent ownership. In January 2025, the Company, the Spanish national and Xunta regional governments, and IGNIS EQT signed a memorandum of understanding that outlines a process for the parties to work cooperatively toward the common objective of improving the long- term cost of energy outlook for the San Ciprián operations and delays in permitting and development focuses on the key areas of cooperation** cost competitive and renewable energy supplies. Though we have ownership in certain hydroelectricity assets, we also rely on third parties for our supply of energy resources consumed in the manufacture of our products. Energy supply contracts for our operations vary in length and market exposure, and we ~~could be,~~ **and** have been ~~and could be~~ negatively impacted by: • Significant increases in LME prices, or spot electricity, fuel oil and / or natural gas prices; • Unavailability of or interruptions or uncertainty in energy supply or unplanned outages due to political instability, droughts, hurricanes, **earthquakes**, wildfires, other natural disasters, equipment failure, or other causes; • Unavailability of long- term energy from renewable sources in particular locations or at competitive rates; • Curtailment of one or more refineries or smelters due to the inability to extend energy contracts upon expiration ~~or,~~ negotiate new arrangements on cost- effective terms, **or** the unavailability of energy at competitive rates; and, • Curtailment of one or more facilities due to high energy costs that render their continued operation uneconomic, discontinuation of power supply interruptibility rights granted to us under a regulatory regime in the country in which the facility is located, or due to a determination that energy arrangements do not comply with applicable laws, thus rendering the operations that had been relying on such country' s energy framework uneconomic. Events, such as those listed above, have in the past and could in the future result in high energy costs, the disruption of an energy source, finding a replacement energy source at a higher cost, the requirement to repay all or a portion of the benefit we received under a power supply interruptibility regime **or carbon dioxide compensation schemes**, or the requirement to remedy any non- compliance of an energy framework to comply with applicable laws. These events have disrupted our operations and resulted in production curtailments that could have a material adverse effect on our business, financial condition, **or** results of operations. Our operations and profitability have been and could continue to be adversely affected by unfavorable changes in the cost, quality, or availability of raw materials or other key inputs, or by disruptions in the supply chain. Our business, financial condition, and results of operations have been and could continue to be negatively affected by unfavorable changes in the cost, quality, or availability of energy, raw materials, including carbon products, caustic soda, and other key inputs, such as bauxite, as well as freight costs associated with transportation of raw materials and key inputs to refining and smelting locations. We may not be able to fully offset the effects of higher raw material or energy costs through price increases, productivity improvements, cost reduction programs, or reductions or curtailments to production at our operations. A decrease in the quality of raw materials or key inputs has in the past and could continue to result in lower production volumes. For example, the Company is currently mining and processing lower grade bauxite in Western Australia, which has caused increased production costs. Changes in the costs of bauxite, alumina, energy, **and** other inputs during a particular period may not be adequate to offset concurrent sharper decreases in the price of alumina or aluminum and could have a material adverse effect on our operating results. In addition, due to global supply chain disruptions, we may not be able to obtain sufficient supply of our raw materials, energy, or other key inputs in a timely manner, including due to shortages, inflationary cost pressures, **trade policies**, or transportation delays, which could cause disruption in our operations or production curtailments. Though we have been able to source our raw materials and other key inputs in adequate amounts from other suppliers or our own stockpiles to date, there can be no guarantee that our operations or profitability will not be adversely affected in the future. Our suppliers, vendors, and customers could experience similar constraints that could impact our operations and profitability. **Business Strategy Risks We have incurred,..... such a transaction could be significant.** Global Operational **and Regulatory** Risks Our global operations expose us to risks related to economic, political, and social conditions, including the impact of trade policies **, tariffs,** and

adverse industry publicity, which may negatively impact our business and our ability to operate in certain locations. We are subject to risks associated with doing business internationally, including foreign or domestic government fiscal and political crises, political and economic disputes and sanctions, social requirements and conditions, **the imposition of tariffs and other actions taken by governments**, and adverse industry publicity. These factors, among others, bring uncertainty to the markets in which we compete, and may adversely affect our business, financial condition, and results of operations. **In the United States, the U. S. government has taken actions with respect to the implementation of significant changes to certain trade policies, including import tariffs and quotas, modifications to international trade policy, the withdrawal from or renegotiation of certain trade agreements, and other changes that have affected U. S. trade relations with other countries, any of which may require us to significantly modify our current business practices or may otherwise materially and adversely affect our business or those of our customers. The U. S. government continues to review trade policies and negotiate new agreements with countries globally that could impact the Company. To the extent that further agreements are reached on a broader range of imports, or these tariffs and other trade actions result in a decrease in international demand for aluminum produced in or imported into the United States or otherwise negatively impact demand for our products, our business may be adversely impacted, and could further exacerbate aluminum and alumina price volatility and overall market uncertainty. While the U. S. government has recently established or threatened to establish new tariffs on imports of Mexican-, Canadian- and Chinese- origin and on certain raw materials of any country of origin, including aluminum, the status of any such tariffs is fluid and the ultimate impact on the Company will be based on a number of variables that are not known at this time. The impact on the Company will be based on the final tariffs imposed, which we are not able to predict at this time.** In addition, we operate in communities around the world, and social issues in the communities where we operate have affected and could continue to affect our **operations** ~~ability to maintain our social license to operate~~; furthermore, incidents related to our industry have generated and could continue to generate negative publicity and impact the social acceptability of our operations in such locations, including by damaging our reputation, our relationships with stakeholders, and our competitive position. Growing expectations of hosting communities as well as increasing social activism pose additional challenges to ~~us maintaining our~~ **operations** ~~social license to operate and~~ **our ability to expanding** ~~--- expand~~ our business. For example, community and stakeholder concerns in Juruti, Brazil have affected our ability to access certain mining areas at times. In certain jurisdictions, there are increasing regulatory developments to protect minority groups, such as Indigenous people in Australia. This could have an adverse effect on our ability to secure expansions to our operations at all or in the expected timeframe, could significantly increase our cost of doing business, and could disrupt our operations. ~~and our supply chain.~~

Legal and Regulatory Risks—We may be exposed to significant legal proceedings, investigations, or changes in foreign and / or U.S. federal, state, or local laws, regulations, or policies. Our results of operations or liquidity in a particular period could be affected by new or increasingly stringent laws, regulatory requirements or interpretations, or outcomes of significant legal proceedings or investigations adverse to the Company. We may become subject to unexpected or rising costs associated with business operations, compliance measures, or provision of health or welfare benefits to employees due to changes in laws, regulations, or policies. We are also subject to a variety of legal and compliance risks, including, among other things, potential claims relating to health and safety, environmental matters, intellectual property rights, **governance, employment practices, employee and retiree benefit matters**, product liability, data privacy, taxes and compliance with U.S. and foreign export, anti-bribery, and competition laws, and sales and trading practices. We could be subject to fines, penalties, interest, or damages (in certain cases, treble damages). ~~In addition~~ **In addition** the United States, **if we violate** in recent years, the **terms** U. S. government has taken actions with respect to the implementation of significant changes to certain trade policies, including import tariffs and quotas, modifications to international trade policy, the withdrawal from or **our** renegotiation of certain trade agreements, and other changes that have affected U. S. trade relations with other countries, any of which may require us to significantly modify our current business practices or may otherwise materially and adversely affect our business or those of our customers. The U. S. government continues to review trade policies and negotiate new agreements with countries globally that could impact the Company. For example, the U. S. government **governmental authorities** is negotiating agreements with countries in relation to the tariffs initially applied under Section 232 of the Trade Expansion Act of 1962 (Section 232) in 2018. In 2021, **we may face additional monetary sanctions** the U. S. and European Union (EU) reached agreement whereby the U. S. lifted the Section 232 duties and applied a tariff rate-quota allowing duty-free importation of aluminum from the EU based on historical volumes, **costs** and the EU suspended its retaliatory tariffs that had been in place on certain U. S. products. The U. S. and EU began discussions in 2022 on a Global Arrangement on Sustainable Steel and Aluminum and the parties continue negotiations for a high-level framework. To the extent that further agreements are reached on a broader range of imports, **clawbacks**, or these tariffs and other trade actions result in a decrease in international demand for aluminum produced in the United States or otherwise negatively impact **impacts** demand for our products, our business may be adversely impacted, and could further exacerbate aluminum and alumina price volatility and overall market uncertainty. **While** We are exposed to fluctuations in foreign currency exchange rates and interest rates, as well as inflation and other economic factors in the countries in which we **believe** operate. Economic factors, including inflation and fluctuations in foreign currency exchange rates and interest rates, competitive factors in the countries in which we operate, and volatility or deterioration in the global economic and financial environment, have in the past and could in the future affect our business, financial condition, and results of operations. Changes in the valuation of the U. S. dollar against other currencies, particularly the Australian dollar, Brazilian real, Canadian dollar, euro, and Norwegian kroner, which are the currencies of certain countries in which we have **adopted appropriate risk management and compliance programs to address and reduce these risks, the global and diverse nature of our** operations means that these risks continue to exist, **and additional legal proceedings and contingencies** may affect ~~arise from time to time~~. In addition, various factors ~~our~~ or ~~profitability~~ developments can lead the Company to change current estimates of **liabilities** or make estimates for matters previously not susceptible of reasonable estimates, **such** as some important inputs

are purchased a significant judicial ruling, judgment, or settlement, or significant regulatory developments or changes in applicable law. A future adverse ruling or settlement or unfavorable changes in laws, regulations or policies, or other currencies, while contingencies that the Company cannot predict with certainty could have a material adverse effect on our results of operations or cash flows products are generally sold in U a particular period. See Part I Item 3 of this Form 10- K and Part II Item 8 of this Form 10- K in Note S to dollars. As the Consolidated Financial U. S. dollar strengthens, the cost curve shifts down for smelters outside the United States Statements under caption Contingencies, but costs for our U. S. smelting portfolio may not decline. Changes in tax laws or exposure to additional tax liabilities could affect our future profitability. We are subject to income taxes in both the United States and various non- U. S. jurisdictions. Changes in foreign and domestic tax laws, regulations, or policies, or their interpretation and application by regulatory bodies, or exposure to additional tax liabilities could affect our future profitability. For example, in October 2021, a new framework for international tax was agreed to by 137 member countries and jurisdictions of the Organisation for Economic Co- operation and Development (OECD), including the two- pillar solution for a global minimum level of taxation. While the future of Pillar One remains uncertain, it is likely that the global minimum tax under Pillar Two will be fully effective in 2025 in most of the countries in which we operate by January 1, 2025. The implementation of We are continuing to evaluate the Pillar Two Framework and its potential in these countries did not have a material impact on during 2024, but they could in the future periods should the Company's tax profile change. We continue to monitor any additional guidance released by the OECD, along with the pending and adopted legislation in the countries in which we operate. Our domestic and international tax liabilities are dependent upon the distribution of profits among the different jurisdictions in which we operate. Our tax expense includes estimates of additional tax that may be incurred for tax exposures and reflects various estimates and assumptions. The assumptions include assessments of future earnings of the Company that could impact the valuation of our deferred tax assets. Our future results of operations could be adversely affected by changes in the effective tax rate as a result of a change in the mix of earnings in countries with differing statutory tax rates, changes in the overall profitability of the Company, changes in tax legislation and rates, changes in generally accepted accounting principles, and changes in the valuation of deferred tax assets and liabilities. Significant changes to tax laws or regulations and the positions of taxing authorities could have a substantial impact, positive or negative, on our effective tax rate, cash tax expenditures and cash flows, and deferred tax assets and liabilities. For example, in December 2023, the U. S. Treasury Department clarified that commercial grade aluminum can qualify for Section 45X of the Advanced Manufacturing Tax Credit, enacted as part of the Inflation Reduction Act (IRA). Section 45X provides a tax credit for certain costs incurred in the production of critical minerals, including aluminum. In the fourth quarter of 2023, the Company recorded a full year benefit of \$ 36 related to its Massena West (New York) smelter and its Warrick smelter. On October 24, 2024, the U. S. Treasury finalized the Proposed Regulations under Section 45X with important modifications including the ability to include the cost of certain direct and indirect materials in the cost base of the credit. The Proposed Regulation on the definition of aluminum was not finalized; the U. S. Treasury has indicated it will finalize the definition at a later date. In 2024, the Company recorded benefits of \$ 71 related to its Massena West smelter and its Warrick smelter, including \$ 30 for the full year 2023 and 2024 benefit resulting from the October update. We are subject to tax audits by various tax authorities in many jurisdictions, such as Australia, Brazil, Canada, and Norway. For example, in July 2020, AofA received Notices of Assessment (the Notices) from the Australian Taxation Office (ATO) related to the pricing of certain historic third- party alumina sales. The Notices asserted claims for income tax payable by AofA of approximately \$ 145 (A \$ 214), exclusive of interest and penalties. The Notices also included claims for compounded interest on the ultimate tax amount totaling approximately \$ 481 (A \$ 707). In accordance with the ATO's dispute resolution practices, AofA paid 50 % of the assessed income tax amount exclusive of interest and any penalties to the ATO during the third quarter of 2020, and the ATO is not expected to seek further payment prior to final resolution of the matter. If AofA is ultimately successful, any amounts paid to the ATO as part of the 50 % payment would be refunded. The ATO has also issued a position paper with its preliminary view on the imposition of administrative penalties related to the tax assessment, proposing penalties of approximately \$ 87 (A \$ 128). AofA disagrees with the ATO's proposed position on penalties and submitted a response to the position paper in the fourth quarter of 2020. After the ATO completes its review of AofA's response, the ATO could issue a penalty assessment. The Company does not agree with the ATO's positions, and AofA will continue to defend this matter in the Australian Courts is uncertain at this time. We regularly assess the potential outcomes of examinations by tax authorities in determining the adequacy of our provision for income taxes. The results of tax audits and examinations of previously filed tax returns or related litigation and continuing assessments of our tax exposures could materially affect our financial results. See Part II Item 8 of this Form 10- K in Notes Q and S to the Consolidated Financial Statements under captions Unrecognized Tax tax Benefits benefits and Contingencies, respectively. We face significant competition globally within..... the Consolidated Financial Statements under caption Contingencies. Climate change, climate change legislation or regulations, and efforts to reduce greenhouse gases (GHG) and build operational resilience to extreme weather conditions may adversely impact our operations and markets. Energy is a significant input in a number of our operations and there is growing recognition that consumption of energy derived from fossil fuels is a contributor to climate change. Several governments or regulatory bodies in areas where we operate, such as in the United States, Asia Australia, Brazil, Canada, and the EU, have introduced or are contemplating legislative and regulatory change in response to the potential impacts of climate change, which could result in changes to the margins of GHG intensive assets and energy- intensive assets. These regulatory mechanisms relating to carbon may be either voluntary or legislated and the inconsistency of associated regulations may impact our operations directly or indirectly through customers or our supply chain. Assessments of the potential impact of future climate change legislation, regulation, and international treaties and accords are uncertain, given the wide scope of potential regulatory change in countries in which we operate and the diversity in the scope and development of such regulations. For example, in 2021, the European Commission proposed a Carbon Border Adjustment Mechanism (CBAM) as a

levy on carbon-intensive imports, which was provisionally approved in December 2022. In October 2023, the CBAM entered into application of its transitional phase, which **applies will apply** to aluminum, with the first reporting period for importers ending January 31, 2024, and full implementation of CBAM will begin on January 1, 2026. We may realize increased capital expenditures, costs, or taxes resulting from required compliance with revised or new legislation or regulations, including costs to purchase or profits from sales of allowances or credits under a carbon credit / pricing or “ cap and trade ” system, increased insurance premiums and deductibles as new actuarial tables are developed to reshape coverage, a change in competitive position relative to industry peers, and changes to profit or loss arising from increased or decreased demand for goods produced by the Company and, indirectly, from changes in costs of goods sold. Though we are investing in technology to reduce the production of **GHG greenhouse gases** in the manufacture of our products, such as our ELYSIS partnership aluminum smelting technology and other technologies that are designed to limit the production of carbon in alumina refining, in certain aspects of our operations, our ability to reduce our GHG emissions is also dependent on the actions of third parties, especially energy providers, and our ability to make significant changes in our GHG emissions. As a result, we could face additional costs associated with any new regulation of GHG emissions, and our ability to modify our operations to avoid these costs may be limited in the near term. **We also have operations in jurisdictions that have implemented or are developing regulations covering a variety of environmental and social topics, including GHG emissions, such as the European Union’s Corporate Sustainability Reporting Directive, and similar regulations under consideration in U. S. states and other countries in which we operate, which contain new and extensive disclosure requirements that may require additional resources and costs associated with compliance. If we fail to comply with the various reporting frameworks, we could face scrutiny from stakeholders and regulators, incur monetary penalties and reputational harm, and could become subject to litigation or result in other material impacts to our business.** In addition, regulations to combat climate change could impact the competitiveness of the Company, including the attractiveness of the locations of some of the Company’s assets. The global focus on climate is raising awareness in all countries, such as the agreement at the 26th United Nations Climate Change Conference of the Parties (COP26) by many governments of countries where the Company operates to combat deforestation, which could adversely affect our ability to mine and operate in sensitive areas like the Jarrah Forest and the Amazon. The potential physical impacts of climate change or extreme weather conditions on the Company’s operations are highly uncertain, **could be significant,** and will be particular to the geographic circumstances. These may include changes in rainfall patterns, wildfires, heat waves, shortages of water or other natural resources, changing sea levels, changing storm patterns, flooding, increased frequency and intensities of storms, and changing temperature levels. Any of these may disrupt our operations, hinder transportation of products to us or of our products to customers, interrupt energy supplies, prevent access to our facilities, negatively impact our suppliers’ or customers’ operations and their ability to fulfill contractual obligations to us, and / or cause damage to our facilities, all of which may increase our costs, reduce production, and adversely affect our business, financial condition, or results of operations. Measures to mitigate or adapt our assets, including current operations, closed or curtailed locations, and impoundment structures, to the potential physical climate-related risks may increase costs. In addition, we rely on our customers and suppliers to assess their own potential physical impacts of climate change and implement appropriate mitigation or adaptation actions. Thus, we may not be able to influence the resiliency of our suppliers or customers to potential physical impacts of climate change. **Our business, financial condition, and results of operations could be adversely affected by disruptions in the global economy caused by ongoing regional conflicts. The global economy has been negatively impacted by ongoing regional conflicts, such as the conflict between Russia and Ukraine and the conflict in the Middle East. Such adverse and uncertain economic conditions have exacerbated supply chain disruptions and increased our costs for certain raw materials and energy, particularly in Spain which impacted the viability of the San Ciprián operations. Additionally, in 2022, in response to the conflict between Russia and Ukraine, we ceased purchasing raw materials from and selling our products to Russian businesses. Furthermore, governments in the U. S., United Kingdom, and European Union have each imposed export controls on certain products and financial and economic sanctions on certain industry sectors and parties in Russia. To date, these actions and other ongoing regional conflicts and responses have not had a material adverse impact on the Company’s business, but they could have material negative impacts if the conflicts continue and global sales of our products are affected. Increased trade barriers or restrictions on global trade, or retaliatory measures taken in response, as well as the destabilizing effects of regional conflict, could also adversely affect our business, financial condition, and results of operations by limiting sales, restricting access to required raw materials, or raising costs thereof. Destabilizing effects that these ongoing regional conflicts may pose for the global oil and natural gas markets could also adversely impact our operations by further increasing our energy costs. In addition, further escalation of geopolitical tensions related to such conflicts could result in loss of property, cyber attacks, additional supply disruptions, an inability to obtain key supplies and materials, reduced production and sales, and / or operational curtailments, and adversely affect our business and our supply chain. We are exposed to fluctuations in foreign currency exchange rates and interest rates, as well as inflation and other economic factors in the countries in which we operate. Economic factors, including inflation and fluctuations in foreign currency exchange rates and interest rates, competitive factors in the countries in which we operate, and volatility or deterioration in the global economic and financial environment, have in the past and could in the future affect our business, financial condition, and results of operations. Changes in the valuation of the U. S. dollar against other currencies, particularly the Australian dollar, Brazilian real, Canadian dollar, euro, and Norwegian kroner, which are the currencies of certain countries in which we have operations, may affect our profitability, as some important inputs are purchased in other currencies, while our products are generally sold in U. S. dollars. As the U. S. dollar strengthens, the cost curve shifts down for smelters outside the United States, but costs for our U. S. smelting portfolio may not decline. We face significant competition globally within and beyond the aluminum industry, which may have an adverse effect on**

profitability. We compete with a variety of both U. S. and non- U. S. aluminum industry competitors as well as with producers of other materials, such as steel, titanium, plastics, composites, ceramics, and glass, among others. Use of such materials could reduce the demand for aluminum products, which may reduce our profitability and cash flow. Factors affecting our ability to compete include increased competition from overseas producers, our competitors' pricing strategies, the introduction or advancement of new technologies, equipment by our competitors or our customers, government regulation or support of certain material production, changes in our customers' strategy or material requirements, and our ability to maintain the cost- efficiency of our facilities. Certain competitors possess financial, technical, and management resources to develop and market products that may compete favorably against our products, and consolidation among our competitors may also allow them to compete more effectively. In addition, our competitive position depends, in part, on our ability to operate as an integrated aluminum value chain, leverage innovation expertise across businesses and key end markets, and access an economical power supply to sustain our operations in various countries. See Part I Item 1 of this Form 10- K under caption Competition.

We may not achieve our strategies or expectations relating to environmental, social, and governance considerations, which could expose us to potential liabilities, increased costs, reputational harm, and other adverse effects on our business. We have established strategies and expectations relating to certain environmental, social, and governance considerations, including regarding reducing GHG emissions, reducing water usage, reducing waste, improving safety performance, and managing social risks across our operations. These strategies and expectations reflect our current plans and aspirations, and there is no guarantee that they will be achieved. Our ability to achieve any such strategies or expectations is subject to numerous factors and conditions, some of which are outside of our control. Examples of such factors include, but are not limited to, evolving legal, regulatory, and other standards, processes, and assumptions, the pace of scientific and technological developments, increased costs, the availability of requisite suppliers, energy sources, or financing, and changes in carbon markets. Failures or delays (whether actual or perceived) in achieving our strategies or expectations related to these matters could expose us to potential liabilities, increased costs, reputational harm, and other adverse effects on our business. Furthermore, many governments, regulators, investors, employees, customers, media outlets, and other stakeholders are increasingly focused on environmental, social, and governance considerations relating to businesses, **and in some cases have divergent views on these issues,** including relating to climate change and GHG emissions, **biodiversity, and** human capital **;-strategies and programs diversity, equity and inclusion-**. Our business may face increased scrutiny from such stakeholders and if our strategies relating to environmental, social, and governance considerations do not meet stakeholder expectations and standards, which continue to evolve and may differ across jurisdictions in which we operate, our business, financial condition, results of operations, and reputation could be adversely impacted. Similarly, our failure or perceived failure to pursue or fulfill our strategies and **manage** expectations; comply with federal, state, regional, or international ethical, environmental, or other standards, regulations, or expectations; adhere to public statements; satisfy reporting standards; or meet evolving and varied stakeholder expectations within the timelines we announce, or at all, could have adverse operational, reputational, financial, and legal impacts. We are subject to a broad range of health, safety, and environmental laws, regulations, and other requirements in the jurisdictions in which we operate that may expose us to substantial claims, costs, and liabilities. Our operations worldwide are subject to numerous complex and increasingly stringent federal, state, local and foreign laws, regulations, policies, and permitting, licensing, and other requirements, including those related to health, safety, environmental, and waste management and disposal matters, which may expose us to substantial claims, costs, and liabilities. We may be subject to fines, penalties, and other damages, such as natural resource or community damages and the costs associated with the investigation and cleanup of soil, surface water, groundwater, and other media under laws such as CERCLA (commonly known as Superfund) or similar U. S. and foreign regulations. These laws, regulations, policies, and permitting, licensing, and other requirements could change or could be, and have been, applied or interpreted in ways that could (i) require us to enjoin, curtail, close, or otherwise modify our operations and sites, including the implementation of corrective measures, the installation of additional equipment or structures, or the undertaking of other remedial actions, or (ii) subject us to enforcement risk or impose on or require us to incur additional capital expenditures, compliance or other costs, fines, penalties, or damages, any of which could adversely affect our results of operations, cash flows and financial condition, and the trading price of our common stock. The costs of complying with such laws, regulations, policies, and other requirements, including participation in assessments, remediation activities, and cleanups of sites, as well as internal voluntary programs, are significant and will continue to be so for the foreseeable future. Environmental laws may impose cleanup liability on owners and occupiers of contaminated property, including previously owned, non- operational, or divested properties, regardless of whether the owners and occupiers caused the contamination or whether the activity that caused the contamination was lawful at the time it was conducted. As a result, we may be subject to claims arising from current or former conditions at sites that we own or operate currently, as well as at sites that we owned or operated in the past, and at contaminated sites that have always been owned or operated by third parties, regardless of whether we caused the contamination or whether the activity that caused the contamination was lawful at the time it was conducted. Liability may be without regard to fault and may be joint and several, so that we may be held responsible for more than our share of the contamination or other damages, or even for the entire share. In addition, because environmental laws, regulations, policies, and other requirements are constantly evolving, we will continue to incur costs to maintain compliance and such costs could increase materially and prove to be more limiting and costly than we anticipate. Evolving standards and expectations can result in increased litigation and / or increased costs, all of which can have a material and adverse effect on our business operations, earnings, and cash flows. Future compliance with environmental, health, and safety legislation and other regulatory requirements or expectations may prove to be more limiting and costly than we anticipate and may disrupt our business operations and require significant expenditures. Our business, financial condition, or results of operations in a particular period could be materially affected by certain health, safety, or environmental matters, including remediation costs and damages related to certain sites. Our operations include impoundment structures, which could

impact the environment or cause exposure to hazardous substances or other damage, which could result in material liabilities to us. Some of our operations generate hazardous waste and other byproducts, which we contain in tailing facilities, residue storage areas, and other structural impoundments that are subject to extensive regulation and increasingly strict industry standards. Failure of storage areas caused by extreme weather events, erosion, or unanticipated structural failure of impoundments could result in severe, and in some cases catastrophic, damage to the environment, natural resources, or property, or personal injury and loss of life. The impact that our operations may have on the environment, as well as exposures to hazardous substances or wastes associated with our operations, could result in significant costs, civil or criminal damages, fines or penalties, and enforcement actions issued by regulatory or judicial authorities enjoining, curtailing, or closing operations or requiring corrective measures, any of which could have a material adverse effect on Alcoa's primary listing on the New York Stock Exchange (NYSE). Dual listing may result in price variations between Alcoa's securities listed on the different exchanges due to a number of factors, including that Alcoa common stock listed on the NYSE is traded in U.S. dollars and CDIs listed on the ASX are traded in Australian dollars, inherently introducing exchange rate volatility, and differences between the trading schedules and time zones of the two exchanges, among other factors. A decrease in the price of Alcoa's securities in one market may result in a decrease in the price of Alcoa's securities in the other market. Dual listing also presents the Company with the opportunity to raise additional funds through the issuance of CDIs, which could cause dilution to stockholders. We may not be able to obtain or maintain adequate insurance coverage. We maintain various forms of insurance, including insurance covering claims related to our properties and risks associated with our operations. Our existing property and liability insurance coverages contain exclusions and limitations on coverage. In connection with renewals of insurance, we have experienced, or could experience in the future, additional exclusions and limitations on coverage, significantly increased self-insured retentions and deductibles, and significantly higher premiums. We may not be able to procure adequate insurance coverage for certain risks, if at all, and existing insurance arrangements may not provide sufficient coverage or reimbursement for significant costs that may arise. As a result, in the future our insurance coverage may not cover claims to the extent that it has in the past and the costs that we incur to procure insurance may increase significantly, either of which could have an adverse effect on our results of operations.

Business Strategy Risks We have incurred, and may incur in the future, significant costs associated with our strategy to **be a lower cost** reduce complexity and optimize our portfolio of mining, refining **competitive**, and smelting assets, **integrated aluminum production business** and we may not be able to realize the anticipated benefits from announced plans, programs, initiatives relating to our portfolio, capital investments, and developing technologies. We are executing a strategy to **be achieve safety performance and operational excellence, build a low cost high performance culture, competitive** maintain a disciplined approach to capital allocation, and pursue targeted growth opportunities **integrated aluminum production business** by implementing productivity and cost-reduction initiatives, optimizing our portfolio of assets, and investing in technology **development to advance our climate-related ambitions**. We have been taking decisive actions to **reduce complexity and optimizing lower the cost base of our operations through procurement strategies for raw materials, labor productivity, improving operating performance, deploying Company-wide business process models, and reducing overhead costs.** In 2019, the Company announced a five-year strategic portfolio review of assets by safely **smelting and refining capacity to improve cost positioning, including curtailing curtailment** the Kwinana (Australia) refinery, **closure** acquiring Alumina Limited, and announcing the sale of our **or 25- divestiture of 1 % ownership in .5 and 4 million metric tons of smelting and refining capacity, respectively.** Through January 2024, Alcoa completed its review of refining capacity and reached approximately 93 percent of its target for smelting capacity. **The strategic portfolio review is continuing. Though we have made progress on this strategy, we may not be able to realize** the Saudi Arabia joint venture **expected benefits or cost savings from this strategy**. We have taken actions and may continue to plan and execute other actions to grow or streamline our portfolio. There is no assurance that anticipated benefits of our strategic actions will be realized. With respect to portfolio optimization actions such as divestitures, curtailments, closures, and restarts, we may face barriers to exit from unprofitable businesses or operations, including high exit costs or objections from various stakeholders, the lack of availability of buyers willing to purchase such assets at prices acceptable to us, delays due to any regulatory approvals or government intervention, continuing environmental obligations, and third parties unwilling to release us from guarantees or other credit support provided in connection with the sale of assets. In addition, we may retain liabilities from such transactions, have ongoing indemnification obligations, and incur unforeseen liabilities for divested entities if a buyer fails to honor all commitments. Our business operations are capital intensive, and portfolio optimization actions such as the curtailment or closure of operations or facilities may include significant costs and charges, including asset impairment or restructuring charges and other measures. There can be no assurance that such actions will be undertaken or completed in their entirety as planned at the anticipated cost or will result in being beneficial to the Company. The effect of closures, curtailments, and divestitures over time will reduce the Company's cash flow and earnings capacity and result in a less diversified portfolio of businesses, and we will have a greater dependency on remaining businesses for our financial results. Additionally, curtailing certain existing facilities, whether temporarily or permanently, may require us to incur curtailment and carrying costs related to those facilities, as well as further increased costs should production be resumed at any curtailed facility, which could have an adverse effect on our business, financial results, and results of operations. **Our announced multi** In October 2024, we completed our five-year strategic portfolio review of **Company assets includes evaluating our portfolio to improve assess each facility's strategic benefits, competitiveness, and viability. The aim of this review, which is expected to be complete in 2024, is for the Company to be a low cost positioning, first quartile producer across or our alumina curtail, close, or divest 1.5 million and 4 million metric tons aluminum segments, and have up to 85 % of smelting production from renewable energy sources** and refining capacity, respectively. We reached approximately 93 percent of our target for smelting capacity with the decision to restart capacity at the Warriek smelter completed in the first quarter 2024, and exceeded our target for refining capacity with the decision to curtail the Kwinana refinery in January 2024. We continue to evaluate assets for opportunities for improvement to

remain profitable throughout business cycles. Our announced **roadmap of** technologies under development to support our long-term goal of being one of the lowest carbon- producing alumina refineries and aluminum smelters includes investments to develop, implement, and commercialize new technologies to reduce carbon emissions in the aluminum production process. We may not be able to implement, fully or in a cost- effective or timely way, the actions necessary to achieve this strategy and goal, which actions could include capturing, maintaining and / or expanding margins from new products, continued product innovation investment in research and development projects and new technologies, successful deployment and commercialization of effective new technologies, and cost- effective long- term energy solutions. We may not achieve the expected results from technology innovation or other benefits, including certain emissions or environmental- related goals, or expected profitability associated with this strategy. In addition, even if we are able to cost effectively develop our technologies, alternatives to technologies may be more acceptable to the market. Executing these actions also diverts senior management time and resources from our regular business operations, each of which could adversely affect the Company' s business, financial condition, and results of operations. Joint ventures, other strategic alliances, and strategic business transactions may not achieve intended results. We may experience operational challenges in integrating or segregating assets for such a venture or transaction, and such a venture or transaction could increase the number of our outstanding shares or amount of outstanding debt and affect our financial position. We participate in joint ventures, ~~including some instances where the Company is a minority owner and does not operate the assets,~~ have formed strategic alliances, ~~including some instances with governments~~, and may enter into other similar arrangements in the future. For example, **AWAC is an unincorporated global joint venture between Alcoa and Alumina Limited. AWAC consists of a number of affiliated entities, which own, operate, or have an interest in, bauxite mines and alumina refineries, as well as an aluminum smelter, in seven countries. In addition**, Alcoa is minority owner of a joint venture with the Saudi Arabian Mining Company (Ma' aden). Although the Company has **in connection with these and our other existing joint ventures and strategic alliances**, sought to protect our interests, joint ventures and strategic alliances inherently involve special risks ~~and may not achieve the intended results~~. Whether or not the Company holds majority interests or maintains operational control in such arrangements, our joint venture and other business partners may take certain actions and positions, or experience difficulties, that may negatively impact the Company and / or its reputation, such as:

- Advancing economic, political, social, or business interests or goals that are inconsistent with, or opposed to those of, the Company and our stakeholders;
- Exercising veto rights to block actions that we believe to be in our or the joint venture' s or strategic alliance' s best interests;
- Taking action contrary to our policies or objectives with respect to our investments; and,
- As a result of financial or other difficulties, be unable or unwilling to fulfill their obligations under the joint venture, strategic alliance, or other agreements, such as contributing capital to expansion or maintenance projects.

We continuously evaluate and may in the future enter into additional strategic business transactions. ~~For example, in October 2024, Alcoa announced that it is progressing toward entering into a strategic partnership with IGNIS EQT to support the continued operation of the San Ciprián complex.~~ Any such transactions could happen at any time, could be material to our business, and could take any number of forms, including, for example, an acquisition, merger, **sale or distribution of certain assets, refinancing, or other recapitalization or material strategic transaction. There can be no assurance that our joint ventures, strategic alliances, or additional strategic business transactions will be beneficial to us, whether due to the above- described risks, unfavorable global economic conditions, increases in costs, foreign currency fluctuations, political risks, government interventions, retained liabilities, indemnification obligations, or other factors. Evaluating potential transactions and integrating completed ones may divert the attention of our management from ordinary operating matters. In addition, to the extent we consummate an agreement for the sale and disposition of an asset or asset group we may experience operational difficulties segregating them from our retained assets and operations, which could impact the execution or timing of such dispositions and could result in disruptions to our operations and / or claims for damages, among other things. If we engage in a strategic transaction, we may require additional financing that could result in an increase in the number of our outstanding shares of stock or the aggregate amount and / or cost of our debt, which may result in an adverse impact to our credit ratings or adversely impact our business, financial condition, or results of operations. The number of shares of our stock or the aggregate principal amount of our debt that we may issue in connection with such a transaction could be significant.** Available Capital and Credit- Related Risks Our business and growth prospects may be negatively impacted by limits on our ability to fund capital expenditures. We require substantial capital to invest in growth opportunities and to maintain and prolong the life and capacity of our existing facilities. Our ability to generate cash flows is affected by many factors, including market and pricing conditions. Insufficient cash generation or capital project overruns may negatively impact our ability to fund as planned our sustaining and return- seeking capital projects, and such postponement in funding capital expenditures or inadequate funding to complete projects could result in operational issues. For **2024-2025**, we project capital expenditures of \$ **550-700**, of which \$ **460-625** is for sustaining capital projects and \$ **90-75** is for return- seeking capital projects. If our technology research and development projects prove feasible with an acceptable expected rate of return, our capital expenditures for return- seeking projects would increase significantly over the next several years. To the extent our access to competitive financial, credit, capital, and / or banking markets becomes impaired, our operations, financial results, and cash flows could be adversely impacted. We may also need to address commercial, political, and social issues in relation to capital expenditures in certain of the jurisdictions in which we operate. If our interest in our joint ventures is diluted or we lose key concessions, our growth could be constrained. Any of the foregoing could have a material adverse effect on our business, results of operations, financial condition, and prospects. Deterioration in our credit profile or increases in interest rates could increase our costs of borrowing money and limit our access to the capital markets and commercial credit. The major credit rating agencies evaluate our creditworthiness and issue specified credit ratings. These ratings are based on a number of factors, including our financial strength and financial policies as well as our strategies, operations, and execution of announced actions. These credit ratings are limited in scope and do not address all material risks

related to an investment in us, but rather reflect only the view of each rating agency at the time its rating is issued. Nonetheless, the credit ratings we receive impact our borrowing costs as well as our access to sources of capital on terms advantageous to our business. Failure to obtain or maintain sufficiently high credit ratings could adversely affect our interest rates in financings, our liquidity, or our competitive position, and could also restrict our access to capital markets. In addition, our credit ratings could be lowered or withdrawn entirely by a rating agency if, in its judgment, the circumstances warrant. If a rating agency were to downgrade our rating, our borrowing costs could increase, our funding sources could decrease, and we would need to rely on our cash flows from operations. As a result of these factors, a downgrade of our credit ratings could have a materially adverse impact on our future operations, cash flows, and financial position. Our indebtedness ~~restricts~~ **impacts** our current and future operations, which could adversely affect our ability to respond to changes in our business and manage our operations ~~.~~ **and failure** ~~Failure~~ to comply with ~~the~~ **agreements relating related** to our outstanding indebtedness, including ~~due to~~ events beyond our control, could result in an event of default that could materially and adversely affect our business, financial condition, results of operations, **and /** or cash flows. Alcoa and Alcoa Nederland Holding B. V. (ANHBV), a wholly- owned subsidiary of Alcoa, are party to a revolving credit agreement with a syndicate of lenders and issuers named therein (as subsequently amended, the Amended Revolving Credit Facility). Alcoa and ANHBV are also party to a revolving credit agreement available to be drawn in Japanese yen (as subsequently amended, the Amended Japanese Yen Revolving Credit Facility). The terms of the Amended Revolving Credit Facility, Amended Japanese Yen Revolving Credit Facility, and the indentures governing our outstanding notes contain covenants that could impose significant operating and financial restrictions on us upon non- compliance ~~with them~~ , including ~~on~~ our ability to, among other things: • Make investments, loans, advances, and acquisitions; • Amend certain material documents; • Dispose of assets; • Incur or guarantee additional debt and issue certain disqualified equity interests and preferred stock; • Make certain restricted payments, including limiting the amount of dividends on equity securities and payments to redeem, repurchase or retire equity securities or other indebtedness; • Engage in transactions with affiliates; • Materially alter the business we conduct; • Enter into certain restrictive agreements; • Create liens on assets to secure lenders and issuers; • Consolidate, merge, sell or otherwise dispose of all or substantially all of Alcoa’ s, ANHBV’ s or a subsidiary guarantor’ s assets; and, • Take any actions that would reduce our ownership of AWAC entities below an agreed level. The Amended Revolving Credit Facility ~~requires~~ **required** us to comply with financial covenants which includes maintaining an interest expense coverage ratio of not less than 3. 00 to 1. 00 for the 2024 fiscal year, and a debt to capitalization ratio not to exceed. 60 to 1. 00. As of January 1, 2025, the minimum interest coverage ratio requirement ~~will revert~~ **reverted** to 4. 00 to 1. 00. The results of the calculation of these ratios, when considering the Company’ s existing debt obligations, affects and could restrict the amount of additional borrowing capacity under the Company’ s Amended Revolving Credit Facility or other credit facilities, and ANHBV’ s ability to make restricted payments, to make investments **,** and to incur indebtedness. In addition, obligations under the Amended Revolving Credit Facility are secured by, subject to certain exceptions, a first priority security interest in substantially all assets of the Company, the Borrower, the material domestic wholly- owned subsidiaries of the Company, and the material foreign wholly- owned subsidiaries of the Company located in Australia, Brazil, Canada, Luxembourg, the Netherlands, Norway, and Switzerland including equity interests of certain subsidiaries that directly hold equity interests in AWAC entities. The Amended Japanese Yen Revolving Credit Facility includes covenants that are substantially the same as those included in the Amended Revolving Credit Facility. In addition, obligations under the Amended Japanese Revolving Credit Facility are secured by, subject to certain exceptions, a first priority security interest in substantially all assets of the Company, the Borrower, the material domestic wholly- owned subsidiaries of the Company, and the material foreign wholly- owned subsidiaries of the Company located in Australia, Brazil, Canada, Luxembourg, the Netherlands, Norway, and Switzerland including equity interests of certain subsidiaries that directly hold equity interests in AWAC entities. Our ability to comply with these agreements may be affected by events beyond our control, including prevailing economic, financial, and industry conditions. These covenants could have an adverse effect on our business by limiting our ability to take advantage of financing, merger and acquisition, or other opportunities. The breach of any of these covenants or restrictions could result in a default under the Amended Revolving Credit Facility, the Amended Japanese Yen Revolving Credit Facility, or the indentures governing our notes and other outstanding indebtedness, including such indebtedness for which the Company is a guarantor. See Part II Item 7 of this Form 10- K in Management’ s Discussion and Analysis of Financial Condition and Results of Operations under caption Liquidity and Capital Resources – Financing Activities **and Part II Item 8 of this Form 10- K in Note M to the Consolidated Financial Statements** for more information on the restrictive covenants in the Company’ s revolving credit facilities. If an event of default were to occur under any of the agreements relating to our outstanding indebtedness, including the Amended Revolving Credit Facility, the Amended Japanese Yen Revolving Credit Facility, and the indenture governing our notes, we may not be able to incur additional indebtedness under the Amended Revolving Credit Facility or the Amended Japanese Yen Revolving Credit Facility and the holders of the defaulted debt could cause all amounts outstanding with respect to that debt to be due and payable immediately. We cannot assure that our assets or cash flow would be sufficient to fully repay borrowings under our outstanding debt instruments if accelerated upon an event of default, which could have a material adverse effect on our ability to continue to operate as a going concern. Further, if we are unable to repay, refinance, or restructure our secured indebtedness, the holders of such indebtedness could proceed against the collateral securing that indebtedness. In addition, any event of default or declaration of acceleration under one debt instrument also could result in an event of default under one or more of our other debt instruments. We cannot guarantee that we will continue to return capital to our stockholders through the payment of cash dividends and / or the repurchase of our common stock. The reduction or discontinuation of the payment of cash dividends to our stockholders or the repurchase of our shares of common stock could adversely affect the market price or liquidity of our shares. In October 2021, the Company’ s Board of Directors initiated a quarterly cash dividend program, at \$ 0. 10 per share and authorized a \$ 500 common stock repurchase program, which was fully used with the completion of \$ 150 in repurchases during the third quarter of 2022. In July 2022, the Board of Directors

approved an additional common stock repurchase program under which the Company may purchase shares of its outstanding common stock up to an aggregate transactional value of \$ 500, depending on the Company's continuing analysis of market, financial, and other factors (the July 2022 authorization). This common stock repurchase authorization does not have a predetermined expiration date. As of December 31, ~~2023~~ **2024**, \$ 500 remained available for repurchase pursuant to this authorization. The Company is under no obligation to pay any cash dividends to stockholders or to repurchase our outstanding shares of common stock at any particular price or at all, and the payment of dividends and / or repurchases of stock may be limited, suspended, or discontinued at any time in our discretion and without notice. The Company set each of the current dividend and July 2022 authorizations at a level it believes is sustainable throughout the commodity cycle, based on our current financial position and reasonable expectations of cash flow. In addition, as described elsewhere in this " Risk Factors " section, the Company's Amended Revolving Credit Facility and Amended Japanese Yen Revolving Credit Facility (~~as defined below~~) could inhibit the Company's ability to make certain restricted payments, including the amount of dividends and payments to redeem, repurchase, or retire equity securities or other indebtedness, if the Company does not maintain certain financial ratios. The Company intends to pay dividends on a quarterly basis. Dividends on Alcoa Corporation common **stock and preferred** stock are subject to authorization by the Company's Board of Directors. The payment, amount, and timing of dividends, if any, depends upon matters deemed relevant by the Company's Board of Directors, such as Alcoa Corporation's financial position, results of operations, cash flows, capital requirements, business condition, future prospects, any limitations imposed by law, credit agreements or senior securities, and other factors deemed relevant and appropriate. Declines in asset values or increases in liabilities, including liabilities associated with benefit plans or taxes, can reduce stockholders' equity. A deficit in stockholders' equity could limit our ability under Delaware law to pay dividends and repurchase shares in the future. The reduction, suspension, or elimination of our cash dividend or our common stock repurchase program could adversely affect the market price of our stock and / or significantly increase its trading price volatility. The payment of any future dividends and the existence of a common stock repurchase program could cause our stock price to be higher than it would otherwise be and could potentially reduce the market liquidity for our stock. Additionally, any future payment of dividends or repurchases of our common stock could negatively impact our financial position and our ability to fund ordinary and existing operations, capital expenditures, the payment of taxes, and growth or other opportunities. Cybersecurity Risks Cyber attacks, security breaches, system failures, software or application vulnerabilities, or other cyber incidents may threaten the integrity of our information technology infrastructure and other sensitive business information, disrupt our operations and business processes, expose us to potential liability, and result in reputational harm and other negative consequences that could have a material adverse effect on our business, financial condition, and results of operations. We depend on information and communications technology, networks, software, and related systems to operate our business, including production controls and operating systems at our facilities and systems for recording and processing transactions, interfacing with customers, financial reporting, and protecting the personal data of our employees and other confidential information. Our global operations require increased reliance on technology, which expose us to risks of theft of proprietary information, including trade secrets and other intellectual property that could have a material adverse effect on our business, financial condition, and results of operations. The protection of such information, as well as sensitive customer information, personal data of our employees, and other confidential information, is critical to us. We face global cybersecurity threats, which may range from uncoordinated individual attempts to sophisticated and targeted measures, known as advanced persistent threats, directed at the Company. In addition, a ~~greater~~ number of our employees **work** ~~are working~~ remotely ~~since the COVID-19 pandemic~~, which has generally increased cybersecurity vulnerabilities and risk to our information technologies systems. Cyber attacks and other cyber incidents are becoming more frequent and sophisticated, are constantly evolving, **including through the use of artificial intelligence**, and are being made by groups and individuals with significant resources ~~and that employ~~ a wide range of expertise and motives. **Such attacks are also increasing in complexity, which may make cyber attacks more difficult to detect, contain, and mitigate**. Cyber attacks and security breaches may include, but are not limited to, unauthorized attempts to access information or digital infrastructure, efforts to direct payments to fictitious parties, viruses, ransomware, malicious codes, hacking, ~~phishing (including through~~ social engineering (**such as phishing and SMSishing**), denial of service, human error, and other electronic security breaches, any of which could have a material adverse effect on our business, financial condition, and results of operations. ~~As~~ **Certain** techniques used in cyber attacks ~~change frequently and~~ may not be immediately detectable, we may be unable to anticipate or detect these techniques, such as use of a zero- day exploit or unknown malware, immediately identify the scope and impact of an incident, contain the incident within our systems, or implement preventative or remediation measures ~~—~~, which may have a material adverse effect on our business, financial condition, and results of operations. In addition, we utilize third- party vendors for certain software applications, storage systems, and cloud computing services. Cyber attacks, security breaches, or other incidents on the information technology systems of our service providers or business partners could materially impact us. We have in the past experienced attempts and incidents by external parties to penetrate our and our service providers or business partners networks and systems. Such attempts and incidents to date have not had a material adverse effect on our business, financial condition, or results of operations. We continue to assess potential cyber threats and invest in our ~~information~~ technology infrastructure to address these threats, including by monitoring networks and systems, training employees on cyber threats, and enhancing security policies of the Company and its third- party providers. While the Company continually works to strengthen our systems and security measures, safeguard information, and mitigate potential risks, there is no assurance that such actions will be sufficient to prevent or timely detect cyber attacks or security breaches. Some intrusions could manipulate or improperly use our systems or networks, disclose, or compromise confidential or protected information, destroy, or corrupt data, or otherwise disrupt our operations, and because of any of these things could have a material adverse effect on our business, financial condition, and results of operations. In addition, some cybersecurity incidents could negatively impact our reputation and competitive position, and could result in litigation with third parties, regulatory action, loss of business, theft of

assets, and significant remediation costs, and because of any of these things, have a material adverse effect on our financial condition and results of operations. Such security breaches could also result in a violation of applicable U. S. and international privacy and other laws, and subject us to litigation and governmental investigations and proceedings, any of which could result in our exposure to material civil or criminal liability. For example, the European Union's General Data Privacy Regulation (GDPR) subjects companies to a range of compliance obligations regarding the handling of personal data. In the event our operations are found to be in violation of the GDPR's requirements, we may be subject to significant civil penalties, business disruption, and reputational harm, any of which could have a material adverse effect on our business, financial condition, or results of operations. Some cyber attacks or breaches could require significant management attention and resources and result in the diminution of the value of our investment in research and development, which could have a material adverse effect on our business, financial condition, or results of operations. Though we have disaster recovery and business continuity plans in place, if our information technology systems, or those of our third-party providers, are damaged, breached, interrupted, or cease to function properly for any reason, and, if the disaster recovery and business continuity plans do not effectively resolve the incident on a timely basis, we may suffer interruptions in our ability to manage or conduct business and we may be exposed to reputational, competitive, and business harm as well as litigation and regulatory action, which may materially and adversely impact our business, financial condition, or results of operations. Labor- and Pension- Related Risks Union or workforce disputes or arrangements and other employee relations issues, as well as labor market conditions, could adversely affect our business, financial condition, or results of operations. A significant portion of our employees are represented by labor unions or worker groups in a number of countries under various collective bargaining agreements or similar arrangements with varying durations and expiration dates. We may not be able to satisfactorily renegotiate our agreements when they expire. In addition, existing arrangements may not prevent strikes, work stoppages, work slowdowns, union organizing campaigns, or lockouts at our facilities in the future. We may also be subject to general country strikes or work stoppages unrelated to our business or collective bargaining agreements. A labor dispute or work stoppage of employees could have a material adverse effect on production at and shipping from one or more of our facilities, and depending on the length of work stoppage, on our business, financial condition, or results of operations. Additionally, in the current competitive labor market, if we lose critical or a significant number of workers to attrition, it may be difficult or costly to find and recruit replacement employees, which could have a material adverse effect on our business, financial condition, and results of operations. A decline in the liability discount rate, lower- than- expected investment return on pension assets, and other factors could affect our business, financial condition, results of operations, or amount of pension funding contributions in future periods. Our results of operations may be negatively affected by the amount of expense we record for our pension and other postretirement benefit plans, reductions in the fair value of plan assets, and other factors. We calculate income or expense for our plans using actuarial valuations in accordance with accounting principles generally accepted in the United States of America (GAAP). These valuations reflect assumptions about financial market and other economic conditions, which may change based on changes in key economic indicators. The most significant year- end assumptions used by the Company to estimate pension or other postretirement benefit income or expense for the following year are the discount rate applied to plan liabilities and the expected long- term rate of return on plan assets. In addition, the Company is required to make an annual measurement of plan assets and liabilities, which may result in a significant charge to stockholders' equity. See Part II Item 7 of this Form 10- K in Management's Discussion and Analysis of Financial Condition and Results of Operations under caption Critical Accounting Policies and Estimates — Pension and Other Postretirement Benefits and Part II Item 8 of this Form 10- K in Note O to the Consolidated Financial Statements. Although GAAP expense and pension funding contributions are impacted by different regulations and requirements, the key economic factors that affect GAAP expense would also likely affect the amount of cash or securities we would contribute to the pension plans. Potential pension contributions include both mandatory amounts required under federal law and discretionary contributions to improve the plans' funded status. While the Company took several actions in recent years to improve the funded status of its pension plans and adjust its asset allocation to reduce variance risk, declines in the discount rate or lower- than- expected investment returns on plan assets could have a material negative effect on our cash flows. Adverse capital market conditions could result in reductions in the fair value of plan assets and increase our liabilities related to such plans, adversely affecting our liquidity and results of operations.