B. Capitalization and Indebtedness

Not applicable.

C. Reasons for the Offer and Use of Proceeds

Not applicable.

D. Risk Factors

This section is intended to be a summary of more detailed discussion contained elsewhere in this annual report. Our business, financial condition or results of operations could be materially and adversely affected by any of the risks and uncertainties described below. As a result, the market price of our common shares and ADSs could decline, and you could lose all or part of your investment. Additional risks not presently known to us, or that we currently deem immaterial, may also impair our financial condition and business operations

Summary of Risk Factors

This section is intended to be a summary of more detailed discussions contained elsewhere in this annual report. The risks described below are not the only ones we face. Our business, results of operations or financial condition could be harmed if any of these risks materializes and, as a result, the trading price of our common shares and our ADSs could decline.

Summary of Risks Related to Our Businesses and the Industries in Which We Operate Generally

- *The expansion of our business through acquisitions and strategic alliances creates risks that may reduce the benefits we anticipate from these transactions.* Material liabilities associated with an acquisition could materially and adversely affect our reputation, business, operating results or financial condition.

- *We may be unable to implement our growth strategy successfully*. Our failure to achieve our expected growth may have a material adverse effect on our business, financial condition, results of operations and ability to repay our debt obligations.

- *The ongoing war between Russia and Ukraine may have a material adverse effect on the global and Brazilian economies as well as on us.* As a company that operates globally, the adverse effects of the ongoing war between Russia and Ukraine and their adverse effects on the global economy and market conditions could have a material adverse effect on our business.

- *Climate change can create transition risks, physical risks and other risks that could adversely affect us*. Transition and/or physical risks arising from climate change may adversely affect our business, financial condition and results of operations.

- *Government policies and regulations could have a material adverse effect on our operations and profitability*. Government policies in Brazil and elsewhere may adversely affect the supply, and demand for, and prices of, our products or restrict our ability to do business in our existing and target markets.

- *We depend on our information technology systems*. Any failure of our information technology systems to operate effectively or integrate with other systems, or inadequate performance of, or breaches of security regarding such systems could result in interruptions in the availability of our online resources.

- *Material weaknesses in our internal control over financial reporting have been identified, and if we fail to remediate such material weaknesses (and any other ones) and to maintain effective internal controls over financial reporting, we may be unable to accurately report our results of operations, meet our reporting obligations and/or prevent fraud*. In connection with the preparation of the audited consolidated financial statements as of and for the year ended December 31, 2022, we identified evidence of internal control deficiencies which, when aggregated, have been classified as material weaknesses in our internal controls over financial reporting. Although these material weaknesses did not result in actual misstatements as certain mitigating actions were taken by our management to complete the analysis of our financial reporting prior to year-end, these material weaknesses, if not mitigated, could have resulted in a reasonable possibility that a material misstatement of our consolidated financial statements would not be prevented or detected on a timely basis in future periods.

- *Our debt level could adversely affect our financial health and prevent us from fulfilling our debt obligations*. We are bound to comply with obligations that may place us at a competitive disadvantage compared to our competitors that have less debt and reduces our ability to raise capital to finance our investments and operations, which could adversely impact our ability to recover from economic changes. Furthermore, we may be unable to comply with restrictive covenants under our financing agreements.

- *Our controlling group holds 672,312,942 or 35.87% of our common shares and voting rights*. We are highly dependent on our chairman and other members of our management to develop and implement our strategy and to oversee our operations. If we lose key personnel, our business, financial condition and results of operations may be adversely affected.

- *Our business would be materially adversely affected if operations at our transportation and distribution facilities experienced significant interruptions*. The distribution of fuels, natural gas and other products is by its nature subject to inherent risks, including interruptions or disturbances in the distribution system which may be caused by accidents or force majeure events.

- *The production of lubricants, natural gas transportation and the storage and transportation of fuel products and lubricant products are inherently hazardous.* The complex manufacturing operations performed as part of our operations could result in personal injury and death, severe damage to or destruction of property and equipment and environmental damage.

- *Changes in taxes and other assessments may adversely affect us*. The modification, suspension, cancellation or non-renewal of our tax benefits could have a material adverse effect on us.

- *Our business, operations and results may be adversely impacted by COVID-19.* The effects of the COVID-19 pandemic are ongoing, and its continuation or a resurgence could precipitate or aggravate the other risk factors identified in this annual report on Form 20-F.

Summary of Risks Related to Our American Depositary Shares and Our Common Shares

- *Our ADSs may not be as liquid as our common shares*. Our maintenance of two listings may adversely affect liquidity for our common shares and ADSs and result in pricing differentials between them.

- *Holders of our ADSs do not have the same voting rights as our shareholders*. *Furthermore, holders of our ADSs may face difficulties in serving process on or enforcing judgments against us and other persons*. Holders of our ADSs may not be able to give voting instructions to the Depositary, withdraw our common shares underlying their ADSs to vote such shares, to exercise the preemptive rights relating to the common shares, or receive dividends or interest on own capital.

- *The market price of our common shares and ADSs may be volatile.* Broad general economic, political, market and industry factors may adversely affect the market price of our common shares and ADSs.

- *We are a foreign private issuer and, as a result, in accordance with the listing requirements of the NYSE, we rely on certain home country governance practices from Brazil, rather than the corporate governance requirements of the NYSE.* The standards that are applicable to us are considerably different than the standards applied to U.S. domestic issuers.

- *Although we believe we were not a passive foreign investment company ("PFIC") for our taxable year ended December 31, 2022, there is a risk that we will be a PFIC for 2023 or any future taxable year, which could result in adverse U.S. federal income tax consequences to U.S. investors in the ADSs.*

Summary of Risks Related to the Countries in Which We Operate

- *Our international operations expose us to political and economic risks in other countries.* Our international activities expose us to risks not faced by companies that operate solely in Brazil.

- *Historically, the Brazilian government has influenced and continues to influence the economy of Brazil, which may negatively affect our business and financial performance*. Macroeconomic policies imposed by the Brazilian government can have a significant impact on market conditions, as well as on the business and the prices of securities issued by Brazilian companies such as us.

- *The deterioration of economic and market conditions in other countries may have a negative impact on the Brazilian economy and on our business.* The market for securities issued by Brazilian companies is influenced, to differing degrees, by global economies and market conditions, especially those of Latin American countries and emerging markets.

- *The Brazilian political environment has historically influenced and continues to influence the performance of the country's economy and the confidence of investors and the general public.* The Brazilian economy has been and continues to be affected by political events in Brazil, which have also had an impact on the confidence of investors and the general public. Recently, Brazil has undergone high levels of political and economic volatility and instability, including the contraction of its gross domestic product, strong fluctuations of the *real* against the U.S. dollar, increased unemployment, and lower levels of spending and consumer confidence.

- *Inflation and government measures to curb inflation may adversely affect the Brazilian economy, the Brazilian securities market, our business and operations, and the market prices of our shares.* Brazil has experienced extremely high rates of inflation in the past and has therefore implemented monetary policies that have resulted in one of the highest interest rates in the world.

- *Significant volatility in the value of the Brazilian real in relation to foreign currencies could harm our ability to meet our liabilities denominated in foreign currencies.* Due to inflationary pressures and adjustments to economic policy, the Brazilian currency has historically experienced volatility against the foreign currencies.

- *If we do not successfully comply with laws and regulations designed to prevent governmental corruption in countries in which we operate and sell our products (notably Brazil), we could become subject to fines, penalties or other regulatory sanctions, which could cause our sales and profitability to be materially reduced.* Any breach of anti-corruption laws may have a material adverse effect on our business, financial condition and results of operations.

Risks Related to Our Businesses and the Industries in Which We Operate Generally

The expansion of our business through acquisitions and strategic alliances creates risks that may reduce the benefits we anticipate from these transactions.

We have grown substantially through acquisitions and intend to continue to grow by acquiring, or investing in, directly or indirectly, from time to time, businesses considered suitable by our management that are consistent with our values and which we believe are conducive to generating results. Additionally, we may enter into strategic alliances to increase our competitiveness in the markets in which we operate.

Despite our recent expansion, our management is unable to predict whether and when any new acquisitions or strategic alliances will occur or the likelihood that any particular transaction will be completed on favorable terms and conditions. Our ability to continue to expand our business through acquisitions or alliances depends on many factors, including its ability to identify acquisition opportunities or access capital markets on acceptable terms. Even if we are able to identify opportunities and obtain the resources necessary to do so, financing these acquisitions could result in an overcommitment on our part.

Acquisitions, particularly those involving sizeable enterprises, may bring managerial and operational challenges, including the diversion of management's attention from existing operations and difficulties in integrating operations and personnel. Any material failure by us in integrating new businesses or in managing any new alliances may adversely affect our business and financial performance. Additionally, some of our major competitors may pursue growth through acquisitions and alliances, which may reduce the likelihood that we will be successful in completing acquisitions and alliances. In addition, any major acquisition we consider may be subject to antitrust and other regulatory approvals. We may not be successful in obtaining required approvals on a timely basis or at all.

Acquisitions also expose us to the risk of successor liability-related actions involving any acquired entity, their respective management or contingent liabilities incurred before the acquisition. The due diligence investigation conducted in connection with an acquisition, and any contractual guarantees or indemnities that we may receive from sellers of acquired companies, may not be sufficient to protect us from, or compensate us for, actual liabilities. Material liabilities associated with an acquisition, such as labor or environmental liabilities, could materially and adversely affect our reputation, business, operating results or financial condition, and reduce the benefits that we expect to result from such acquisition.

On October 14, 2022, our subsidiary Cosan Oito completed the acquisition of a noncontrolling interest in Vale. For more information about the risks related to the acquisition of the interest at Vale, see "— The financial investment by the Company in Vale involved a combination of complex transactions and involves financial risks" and "Risks Related to Vale."

The financial investment in Vale involved a combination of complex transactions and involves financial risks.

In October 2022, we concluded a financial investment of approximately 4.9% of the total common shares (excluding treasury shares) issued by Vale. We may increase this financial investment to up to 6.5% of Vale's capital stock.

The initial financial investment was made by means of two complex structures, encompassing direct financing and derivatives instruments with substantial amounts involved. We incurred new indebtedness as a result of contracting such new financings instruments and we are therefore subject to certain restrictive covenants set forth in these financing instruments, which impact our capacity to incur new debt or make new investments. Failure to comply with these covenants may result in the mandatory prepayment or acceleration of our outstanding debt, which would have a material adverse effect on our business, financial condition and results of operations.

Additionally, the derivative transactions we have entered into in connection with our financial investment in Vale expose us to the risk of financial losses if certain adjustments events agreed upon by the parties occur, such as variations in the value of the underlying asset (i.e., Vale’s shares) or market events. Such events could result in our obligations under these agreements being accelerated, in losses to us and could have a material adverse effect on our business, financial condition and results of operations.

In addition, the Vale shares we have acquired are partially assigned as collateral in favor of the counterparties under the derivative transactions we have entered into in connection with the acquisition. If we were to default under the applicable agreements, the relevant counterparties may enforce the security and take over these shares, resulting in our loss of ownership of our financial investment in Vale.

Failure to comply with the obligations we have undertaken in connection this transaction may also have a material adverse effect on our business, financial condition and results of operations.

See also “Presentation of Financial and Certain Other Information—Certain Corporate Events—Acquisition of Stake in Vale S.A., or ‘Vale.’”

We may not successfully acquire or develop additional production capacity through greenfield projects or expansion of existing facilities.

We may explore growth opportunities in the future through the acquisition or development of greenfield projects or through the expansion of our existing facilities. We may be unable to complete these projects on a timely basis or at all, and may not realize the related benefits we anticipate. The factors which may prevent us from doing so include, among other things, (i) our failure to obtain environmental and other licenses; (ii) our inability to obtain supplies of appropriate equipment or raw materials; (iii) increases in costs and/or decreases in revenue; (iv) a lack of qualified workforce; (v) lack of service providers; and (vi) our inability to obtain any required financing on satisfactory terms, or at all.

Our greenfield projects and/or expansion of existing facilities require a significant number of service providers. Any inability on our part to enter into contracts with duly qualified service providers who are able to provide the technical services that we require may prevent us from completing our greenfield projects and/or expansions of existing facilities on a timely basis, or at all. In addition, the integration of greenfield projects or expansion of our existing facilities may result in unforeseen operating difficulties and may require significant financial and managerial resources that would otherwise be used for our current operations. Planned or future greenfield projects or expansions of existing facilities may not enhance our financial performance. Any failure in the implementation of growth projects and/or expansion of existing facilities may have a material adverse effect on our business, financial condition and results of operations.

We may be unable to implement our growth strategy successfully.

Our future growth and financial performance depend, in part, on the successful implementation of our business strategy, including (i) our ability to maintain our existing client base, increase volume from existing clients in specific markets and locations and attract new clients, (ii) our capacity to finance investments (through indebtedness or otherwise), or (iii) our ability to increase our operational capacity and expand our current capacity to supply to new markets, among others. We cannot assure you that we will be able to achieve these objectives and/or strategies successfully or at all. Our failure to achieve any of these objectives and/or strategies as a result of competitive difficulties, cost increases or restrictions on our ability to invest, among other factors, may limit our ability to implement our growth strategy successfully. We may need to incur additional indebtedness in order to finance new investments to implement our growth strategy. Unfavorable economic conditions in Brazil and in the global credit markets, such as high interest rates on new loans, reduced liquidity or reduced interest of financial institutions in granting loans may limit our access to new credit. Furthermore, failure to achieve our expected growth may have a material adverse effect on our business, financial condition, results of operations and ability to repay our debt obligations.

The ongoing war between Russia and Ukraine may have a material adverse effect on the global and Brazilian economies as well as on us.

Russia’s invasion of Ukraine on February 24, 2022 marked the beginning of an ongoing war between the two countries which has materially affected the global economy and international relations. The conflict has already caused strong reactions from the United States, the United Kingdom, the European Union (“EU”), and other countries around the world, notably the members of the North Atlantic Treaty Organization (“NATO”), which have applied broad economic sanctions against Russia, including financial and trade measures. The United States, the EU, and the United Kingdom have taken measures against Russian businesses and governmental entities, the Russian central bank and others, such as sanctioning individuals with close ties to the Russian president, imposing visa restrictions on several oligarchs, as well as their family members and close associates, and blocking or freezing assets. In addition, several countries have already provided support to Ukraine, with the supply of financial resources, weapons and equipment, as well as other humanitarian aid, which may lead to the internationalization of the conflict.

The war has already resulted in significant volatility in the financial markets, depreciation of the Russian ruble and the Ukrainian hryvnia against the U.S. dollar and other currencies, and rising energy and commodity prices around the world. If the conflict continues or escalates, markets may face continued volatility as well as economic and security consequences, including but not limited to supply shortages of different products, further increases in commodity prices, including piped natural gas, higher energy prices, higher prices of foodstuffs, and market volatility, among others.

The potential consequences of the war for us include, without limitation:

- Appreciation of the U.S. dollar, which may increase the price of goods and services on which we depend and for which we pay certain of our obligations, and increase pressure on our margins and prices in general.

- Increased inflation in Brazil and measures by the Brazilian government and the Brazilian Central Bank to contain inflation, which could materially impact the cost of debt and third-party capital for our financing and investment activities.

- The increase in oil prices as a result of a more limited or less accessible supply of Russian oil globally may also lead to a decrease in our margins and an increase in the costs of acquisition of basic inputs, such as diesel fuel.

- Brazil is dependent on imports of Russian and Belarusian fertilizers. The failure to obtain sufficient quantities of fertilizer could adversely affect our business, notably the production of grains transported by Rumo and the production of sugarcane by Raízen.

- A recession in the Brazilian and/or global economies as a result of the events mentioned above could also have a material adverse effect on our business.

Other potential consequences include, but are not limited to, growth in the number of popular uprisings in the region, increased political discontent, especially in the regions most affected by the conflict or economic sanctions, increased cyberterrorism activities and attacks, an exodus from regions close to the areas of conflict and an increase in the number of refugees fleeing across Europe, among other unforeseen social and humanitarian effects.

The effects of the war between Russia and Ukraine are ongoing, and its continuation or escalation could precipitate or aggravate the other risk factors identified in this annual report on Form 20-F, which in turn could further materially and adversely affect our business, financial condition, liquidity, results of operations and profitability, including in ways not currently known or considered by us to present material risks.

We may engage in hedging transactions, which involve risks that can harm our financial performance.

We are exposed to market risks arising from the conduct of our business activities—in particular, market risks arising from changes in commodity prices, exchange rates or interest rates. In an attempt to minimize the effects of the volatility of prices and exchange rates on our cash flows and results of operations, for example, we engage in hedging transactions involving commodities and exchange rate futures, options, forwards and swaps. We also engage in interest rate-related hedging transactions from time to time. Hedging transactions expose us to the risk of financial loss in situations where the counterparty to the hedging contract defaults on its contract or there is a change in the expected differential between the underlying price in the hedging agreement and the actual price of commodities or the exchange rate. We may incur significant hedging-related losses in the future. In particular, Raízen enters into hedging transactions against market price fluctuations by fixing the prices of our sugar export volumes and exchange rates. Since we record derivatives at fair value, to the extent that the market prices of our products exceed the fixed price under our hedging policy, our results will be lower than they would have been if we had not engaged in such transactions as a result of the related non-cash derivative expenses. As a result, our financial performance would be adversely affected during periods in which commodities prices increase. Alternatively, we may choose not to engage in hedging transactions in the future, which could have a material adverse effect on our financial performance during periods in which commodities prices decrease.

Climate change can create transition risks, physical risks and other risks that could adversely affect us.

Climate risk is a transversal risk that can be an aggravating factor for the types of traditional risks that we manage in the ordinary course of business, including without limitation the risks described in this “Risk Factors” section. Based on the classifications used by Task-Force on Climate-Related Financial Disclosures, we consider that there are two primary sources of climate change-related financial risks: physical and transition.

Physical risks resulting from climate change can be event-driven (acute) or long-term shifts (chronic) in climate patterns:

- Acute physical risks include increased severity of extreme weather events, such as drought, hurricanes; or floods.
- Chronic physical risks include changes in precipitation patterns and extreme variability in weather patterns, rising mean temperatures, chronic heat waves or rising sea levels.

Especially in Brazil, rainfall patterns have been constantly changing, causing certain regions to experience rainfall volumes far above historical averages, resulting in floods and inundations and landslides in hillside and mountain regions. Such changes in rainfall patterns could have an adverse effect on our production and distribution capacity, affecting crop harvests as well as our ability to produce sugar and ethanol, generate energy, distribute our products and provide services to our customers. The occurrence of storms and floods may also influence the cost to insure our assets, especially those in high-risk regions, where storms, tornadoes and other extreme events are more pronounced. In periods of scarcity of rain, water deficiency occurs because of the decrease in the levels of water reservoirs, with an influence on the availability and costs of electric energy, considering the dependence on energy generated through hydroelectric plants, as well as on crop harvests. The scarcity of rains combined with low levels of reservoirs can lead governments and authorities to restrict industrial activities and direct water for human consumption. The increase in average temperatures may have an impact on our operating costs due to the greater demand for cooling and air conditioning to produce, store and transport some of our products. Historically, in periods of water scarcity, the Brazilian government authorizes an increase in the energy prices as a measure to stimulate the reduction of consumption, which can create inflationary pressure, with impacts on the income levels of the population in general, on production costs and on the final price of products, which consequently affects our revenues and results.

Extreme and prolonged changes in rainfall patterns and an increase in temperatures can influence production cycles in certain regions, and droughts can influence the increase in fires and devastation, which may adversely affect our facilities. Additionally, they can also cause a reduction in revenue and an increase in costs due to negative impacts on our employees and suppliers, such as increased absenteeism and issues involving health and safety.

Transition risks refer to actions taken to address mitigation and adaptation requirements related to climate change, and they can fall into various categories such as market, technology and market changes:

- Market risk may manifest through shifts in supply and demand for certain commodities, products, and services, as climate-related risks and opportunities are increasingly taken into account.
- Technology risk arises from improvements or innovations to support the transition to a lower-carbon, energy-efficient economic system that can have a significant impact on companies to the extent that new technology displaces old systems and disrupts some parts of the existing economic system.
- Policy actions generally fall into two categories—those that attempt to constrain actions that contribute to the adverse effects of climate change and those that seek to promote adaptation to climate change. The risk associated with, and the financial impact of, policy changes depend on the nature and timing of the policy change.

These requirements may increase going forward as a result of the increasing importance of environmental matters, which could expose us to increased compliance costs and limit our ability to pursue certain business opportunities and provide certain products and services, each of which could adversely affect our business, financial condition and results of operations.

We are subject to extensive environmental regulations and may be exposed to liabilities in the event we fail to comply with these regulations.

Our business activities in Brazil are subject to extensive laws and regulations concerning environmental protection, which impose on us various environmental obligations, such as environmental licensing requirements; standards for the release of effluents, management of solid waste, emission and discharge of hazardous materials, sugarcane burning, and health and safety of our employees; protection of certain areas (including the Legal Reserve, areas of traditional indigenous and *quilombolas* communities, conservation units, archeological sites and permanent preservation areas); and the need for special authorizations for the use of water, among others.

Failure to comply with such laws and regulations (including a failure to obtain or maintain relevant environmental permits, as well as to comply with technical conditions imposed by environmental permits) may subject the violator to administrative fines, mandatory interruption of activities and criminal sanctions, in addition to the obligation to remedy and pay environmental and third-party damage compensation. In addition, Brazilian environmental law adopts a strict liability system for environmental damages, in connection with which a polluter is liable irrespective of whether the polluter was at fault or engaged in intentional misconduct, resulting in our joint and several liability for the obligations of our suppliers or customers, for example.

Brazilian law provides that separate legal personality may be disregarded where it would otherwise prevent the repayment of environmental damages. In such a situation, shareholders may be held personally liable for environmental liabilities.

If we become subject to environmental liability, any costs we may incur in connection with the indemnification against potential environmental damage would lead to a reduction in the financial resources that would otherwise remain at our disposal for current or future strategic investment, which may materially and adversely affect our business, results of operations or financial condition.

As environmental laws and their enforcement become increasingly stringent, our expenses for complying with environmental requirements are likely to increase in the future. Furthermore, the possible implementation of new regulations, changes in existing regulations or the adoption of other measures could cause the amount and frequency of our expenditures relating to environmental preservation to vary significantly compared to present estimates or historical costs. Any unplanned future expenses could force us to reduce or forego strategic investments, and as a result, could materially and adversely affect our business, results of operations or financial condition.

The occurrence of environmental damage may lead to the need to make significant financial resources available for both containment and repair of these damages. The occurrence of such events may also lead to a disruption in production due to intervention by government agencies. In either case, financial and/or image impacts may be significant. In addition, the creation of new regulations may lead to the need for greater expenses for environmental preservation. Furthermore, extensive environmental regulation can also lead to delays in the implementation of new projects as bureaucratic procedures for obtaining environmental licenses from various government agencies may take considerable time.

We are party to a number of administrative and judicial proceedings for alleged failures to comply with environmental and health laws, which may result in fines, shutdowns, obligations to remedy or contain the environmental damage caused or other adverse effects on our operations. Claims that give rise to administrative proceedings may also lead to civil or criminal claims against us and our subsidiaries. Our costs of complying with current and future environmental and health and safety laws, and our liabilities arising from past or future claims, could adversely affect our business or financial performance.

We may face conflicts of interest in transactions with related parties.

We engage in business and financial transactions with our controlling shareholder and other shareholders that may create conflicts of interest between our Company and these shareholders. Commercial and financial transactions between our affiliates and us, even if entered into on an arm's-length basis, create the potential for, or could result in, conflicts of interest. See "Item 7. Major Shareholders and Related Party Transactions—B. Related Party Transactions."

Technological advances could affect demand for our products and services or require substantial capital expenditures for us to remain competitive.

The development and implementation of new technologies may result in a significant reduction in the costs of the products and services we provide. We cannot predict when new technologies may become available, the rate of acceptance of new technologies by our competitors or the costs associated with such new technologies. Advances in the development of alternatives to the products and services which we currently sell could significantly reduce demand or eliminate the need for them.

For example, the development of alternative products to sugar, ethanol and natural gas may reduce the demand for our products or materially reduce the demand for ethanol or natural gas to be used as a source of energy, and the use of alternative sweeteners may adversely affect the overall demand for sugar in Brazil and abroad, which could have a material adverse effect on our business, financial condition and results of operations.

Any advances in technology which require significant capital expenditures to remain competitive or which otherwise reduce demand for our products and services will have a material adverse effect on our business and financial performance. Any other alternative products or technological advances which reduce demand for the products of our subsidiaries and joint ventures may have a material adverse effect on our results of operations and financial condition.

Any failure of our information technology systems could adversely affect our operating results and make us more susceptible to cyber threats, adversely affecting our business.

We depend on information technology systems for significant elements of our operations, including the storage of data and retrieval of critical business information. Our information technology systems are vulnerable to damage from a variety of sources, including network failures, malicious human acts, and natural disasters. Moreover, despite network security and back-up measures, some of our servers are potentially vulnerable to physical or electronic break-ins, computer viruses, and similar disruptive problems. Failures or significant disruptions to our information technology systems or those used by our third-party service providers could prevent us from conducting our general business operations. Any disruption or loss of information technology systems on which critical aspects of our operations depend could have an adverse effect on our business, results of operations, and financial condition.

Furthermore, we store highly confidential information on our information technology systems, including information related to our products. If our servers or the servers of the third party on which our data is stored are attacked by a physical or electronic break-in, computer virus or other malicious human action, our confidential information could be stolen or destroyed. Any security breach involving the misappropriation, loss or other unauthorized disclosure or use of confidential information of our suppliers, customers, or others, whether by us or a third party, may (i) subject us to civil and criminal penalties; (ii) adversely impact our reputation; and (iii) expose us to liability to our suppliers, customers, other third parties or governmental authorities, among others. Any such developments may adversely affect our business, financial condition and results of operations.

In addition, any failure of our information technology systems to operate effectively or integrate with other systems, or inadequate performance of, or breaches of security regarding, such systems could result in interruptions in the availability of our online resources, delays in delivering products or services and reduced efficiency in our operations. Each of these factors may adversely affect our businesses as well as their financial condition, results of operations and reputation. We also hold certain highly confidential personal and financial data relating to our customers in our information technology systems. Any failures in the information technology systems on which we depend or any breaches resulting in the unauthorized disclosure of the personal or financial data of our customers may adversely affect our business, financial condition, results of operations and reputation.

We were the target of a cybersecurity incident which disrupted our systems

On March 11, 2020, our subsidiaries and jointly controlled companies suffered a cyberattack by ransomware that caused a partial and temporary interruption of our operations. The affected entities within our group implemented their own contingency plans, continued operating partially during the cyberattack, and progressively reconnected their operating systems following the attack.

Following the incident, we have taken certain additional precautionary measures to reduce cyber risks. However, we cannot assure you that our security frameworks and measures will be successful in preventing future cyberattacks. In addition, we expect that the cost to obtain cyber liability insurance in the future should we wish to do so (we do not currently have cyber liability insurance) will be higher than they would otherwise have been as a result of this incident.

Further, the incident may have a negative impact on our reputation and cause customers, suppliers and other third parties with whom we maintain relationships to lose confidence in us. We are unable to predict the impact to these relationships.

We have taken certain precautionary measures to reduce cyber risks, including the following: (a) hired a chief of information security and cybersecurity for the Cosan Group; (b) established a strategy, framework and roadmap to develop our cybersecurity measures over the next three years; (c) created a new information security and cybersecurity department; (d) created a cyber-defense center including a security operations center which focuses on cyberattacks and operates on a 24/7 basis; (e) created a new vulnerability management structure to focus on risk mitigation including periodic pentesting (i.e., an authorized simulated cyberattack on a computer system) exercises; (f) created a new governance and operational system to cover periodic report reviews of dashboards and key performance indicators with technical teams; (g) created an awareness program including new security policies, standards, procedures and periodic phishing simulations; (h) approved our Cyber and Information Security Policy; (i) launched the Vendor Risk Management Program, focusing on pinpointing and mitigating risks associated with vendors; and (j) launched our Crisis Cybersecurity Management Program, reinforcing our commitment to keep main stakeholders (C-Level), teams (i.e., Cybersecurity, DPO, Legal, Internal Controls, Internal Audit, IT and Compliance) and related processes continuously updated on the prevention of major cyberattacks.

We could be the target of attempted cyber threats in the future and they could adversely affect our business.

We face various cybersecurity risks, including but not limited to penetration of our information technology systems and platforms by ill-intentioned third parties, infiltration of malware (such as computer viruses) into our systems, contamination (whether intentional or accidental) of our networks and systems by third parties with whom we exchange data, unauthorized access to confidential customer and/or proprietary data by persons inside or outside our organization and cyberattacks causing systems degradation or service unavailability that may result in business losses.

In addition, we may be subject to potential fraud and theft by cybercriminals, who are becoming increasingly sophisticated, seeking to gain unauthorized access to or exploit weaknesses that may exist in our systems. We continuously monitor and develop our networks and information technology infrastructure. We also conduct annual tests to prevent, detect, address and mitigate the risk of unauthorized access, misuse, computer viruses and other events that could have an impact on our security. However, we cannot guarantee that these measures will be effective in protecting us against cyberattacks and other breaches related to our information technology systems. Techniques used to gain unauthorized, improper or illegal access to our systems, our data or our customers’ data, to disable or degrade service, or to sabotage systems, due to constant evolution, can be difficult to detect quickly and are often not known until used on a target. Unauthorized parties may attempt to gain access to our systems or facilities through various means, including, among others, hacking into our systems or those of our customers, partners or vendors, or attempting to fraudulently induce our employees, customers, partners, vendors or other users of our systems to disclose usernames, passwords, financial information or other sensitive information, which may in turn be used to access our information technology systems. Certain efforts by third parties to access our information technology systems may be supported by significant financial and technological resources, making them even more sophisticated and difficult to detect. We have seen in recent years computer systems of businesses and organizations being targeted not only by cyber criminals, but also by rogue activists and states. Cyberattacks can cause the loss of significant amounts of customer data and other confidential information, as well as significant levels of liquid assets (including cash). In addition, cyberattacks could cause the shutdown of our information technology systems, including systems used to service our customers. We may also be subject to the effects of cyberattacks against critical infrastructure in Brazil and other countries in which we operate, and we have limited ability to protect our technology systems against such attacks.

If we fail to effectively manage our cybersecurity risk, for example, by failing to update our systems and processes in response to new threats, this could harm our reputation and adversely affect our operating results, financial condition and prospects through the payment of customer compensation, regulatory penalties and fines and/or the loss of assets. Furthermore, upon a failure to comply with applicable laws and regulations, we may be ordered to change our business practices, policies or systems in a manner that adversely impacts our operating results.

Moreover, critical infrastructures that our information technology systems rely on in Brazil and other countries in which we operate may be the target of cyberattacks, which could negatively affect our ability to service our customers.

Further, we store highly confidential information on our information technology systems, including personal data, financial information, and other types of information related to our products and customers. If our servers or the servers of the third parties on which our data is stored are the subject of a physical or electronic break-in, computer virus or other cyber risks, our confidential information could be stolen, rendered unavailable, devalued or destroyed. Any security breach involving the misappropriation, loss or other unauthorized disclosure or use of confidential information of our suppliers, customers, or others, whether by us or a third party, could (i) subject us to civil and criminal penalties, (ii) have a negative impact on our reputation or (iii) expose us to liability to our suppliers, customers, other third parties or government authorities.

We cannot assure you that our information technology systems will not be attacked in the future, that we will be able to adequately protect the confidential information we maintain. If we are the victim of successful cyberattacks or experience cybersecurity incidents in the future, we could incur substantial costs and suffer other negative consequences, such as remediation costs (liabilities for stolen assets or information or repairs of system damage, among others), increased cybersecurity protection costs, lost revenue from unauthorized use of proprietary information or the failure to retain or attract customers after an attack, as mentioned above, litigation and legal risks, increased insurance, reputational damage affecting the trust of our customers and investors, as well as damage to our competitiveness, stock price, and long-term shareholder value. Any failure by us to adequately protect our information technology systems and the confidential data which we hold could have a material adverse effect on our business, financial condition and results of operations. Importantly, even when a failure or disruption to our systems or facilities is resolved in a timely manner or an attempted cyber incident or other security breach is successfully prevented or thwarted, substantial resources are typically expended to do so, and we may be required to take actions that could negatively affect customer satisfaction or behavior and could pose a threat to our reputation.

Any of the above developments could adversely affect our business, as well as its financial condition, results of operations and reputation.

Failure to comply with the Brazilian General Data Protection Law may adversely affect our business.

Until the entry into force of Law No. 13,709/2018, or the Brazilian General Data Protection Law (*Lei Geral de Proteção de Dados Pessoais*), or the "LGPD," the processing of personal data in Brazil was regulated by a series of rules scattered throughout legislation such as the Brazilian Federal Constitution, Law No. 8,078/1990, or the Consumer Protection Code, and the Brazilian Civil Framework for the Internet. The LGPD, which came into force on September 18, 2020, regulates practices related to the processing of personal data in Brazil, through a system of rules that impacts all sectors of the economy and establishes, among other measures, protection rights for the holders of personal data. In cases where the processing of personal data is permitted through legal bases, there are obligations and requirements related to information security incidents, such as leakage of personal data and transfer of personal data, as well as sanctions for non-compliance. In addition, the LGPD authorized the creation of the National Data Protection Authority (*Autoridade Nacional de Proteção de Dados*), or ANPD, which is responsible for developing guidelines and applying administrative sanctions in case of non-compliance with the LGPD. The administrative sanctions provided for in the LGPD (art. 52, 53 and 54), came into effect on August 1, 2021, under Law no. 010/2020; if we are not in compliance with the LGPD, we will be subject to the following sanctions, in isolation or cumulatively: (i) warning, with an indication of the deadline for adopting measures; (ii) fines of up to 2% of the revenue of the group's last fiscal year, excluding taxes, up to an overall amount of R$50 million per violation; (iii) daily fines up to the limit referred to in item B; (iv) an incident disclosure obligation; (v) temporary blocking and/or deletion of personal data; (vi) partial suspension of the database to which the infraction relates for a period of up to six months, extendable for the same period, until the personal data processing is regularized; (vii) suspension of the exercise of the personal data processing activity to which the infraction relates for a period of up to six months, extendable for the same period; and (viii) partial or total prohibition from exercising activities related to data processing.

In addition to administrative sanctions, failure to comply with any provisions set forth in the LGPD has the following risks: (i) the filing of legal, individual or collective actions seeking compensation for damages arising from violations, based not only on the LGPD, but on sparse and sectorial legislation on current data protection; and (ii) the application of the penalties provided for in the Consumer Protection Code and the Brazilian Civil Framework for the internet by some consumer protection agencies, since they have already acted in this regard, even before the validity of the LGPD and the effective structuring of the ANPD, especially in cases of security incidents that result in breaches of personal data. Therefore, failures in the protection of personal data processed by us as well as failure to comply with the applicable legislation, including those related to cybersecurity incidents and other events of failures in our information technology systems, may result in high fines, disclosure of the incident to the market, elimination of personal data from the base and even suspension of activities, resulting in costs that may have an adverse and negative effect on our reputation, results, the value of our ADSs and our common shares.

Our performance depends on maintaining functioning labor relations with our employees and our compliance with labor laws. Any deterioration of those relations or increase in labor costs could adversely affect our business.

All of our employees are represented by labor unions. Our relationships with these organizations are governed by labor agreements or collective bargaining agreements which we negotiate with labor unions. Upon the expiry of such agreements, we are required to renegotiate new agreements with the applicable labor union. As part of these renegotiations, new terms and conditions may be established. In certain cases, these agreements may not be renewed, which could lead to strikes and/or stoppages in our activities and have an adverse impact on our business, financial condition and results of operations. Furthermore, since the enactment of Law No. 13,467/2017, labor agreements and collective bargaining agreements prevail over certain provisions of labor legislation, as stated in items I to XV, of Article 611-A, of the Consolidation of Brazilian Labor Laws (*Consolidação das Leis do Trabalho*), such as working time arrangements and the manner in which these are recorded, work breaks, and certain employer-specific internal rules, among others. As a result, employers may expand or reduce certain labor rights, provided this is done pursuant to the terms of labor agreements negotiated with unions and/or individual agreements negotiated with the respective employees.

Failure to comply with, obtain or renew the licenses and permits required for each of the sectors in which we operate may have a material adverse effect on us.

We are required to obtain specific licenses with respect to our terminals from the applicable environmental authorities, which are required in connection with the emission, ejection and emanation of products and by-products resulting from distribution activities. We are also required to obtain specific licenses and permits from governmental authorities for rural producers in order to carry out certain of our operations. Similarly, we are also required to obtain applicable licenses and comply with regulatory obligations for operations involving fuel and energy sectors. The laws and regulations which govern these licenses may occasionally require us to purchase and install costly pollution control equipment or to make operational changes to limit our impact on the environment and/or the health of our employees.

Any failure to comply with the terms of such laws, regulations and licenses and permits may result in significant financial penalties, criminal sanctions, revocation of operating licenses and permits, and/or the prohibition of certain of our activities. In addition, we may not be able to renew licenses that are currently in effect or obtain new licenses necessary to operate new ventures, which could affect our results or impact the development of our business plans, growth and expansion.

Contamination of our products and other related risks could adversely affect our reputation, leading to judicial and administrative proceedings and/or resulting in the closure of our production facilities.

Certain of our products may have adverse effects on consumers (including certain components, raw materials and supplies used to produce these products), including as a result of product contamination or subsequent errors in the production or distribution chain.

Contamination of any of our products may result in a need for recalls or the beginning of legal and administrative proceedings against us, which may adversely affect our reputation, our business, the operation of our production facilities, our financial condition and our operating results. Any damage to our reputation could have a material adverse effect on us.

We are exposed to the possibility of losses related to natural disasters, catastrophes, accidents, fire, political, social and economic events and other events not in our control, which may have a material adverse effect on our business, financial conditions and results of operations.

Our operations are subject to certain risks that affect our properties, facilities, permanent passageways, rail banks and inventory, including, among others, fire, which may destroy machinery, equipment and facilities as well as client cargo being transported, explosions, fuel leaks and other flammable products as well as other environmental events, cargo loss or damage to railroads or cargo loading and unloading terminals, accidents, business interruptions due to political, social or economic events (whether local or international), civil unrest or other conflicts, labor claims, demonstrations by social and/or environmental groups or associations, strikes or work stoppages (of our own employees or of those linked to entities with which we have a relationship, such as port operators) disease outbreaks, pests, adverse weather conditions, and natural disasters, such as floods, may result in the loss of revenues, assumption of liabilities or cost increases. We are also subject to stoppages and blockades of highways and other public roads. Stoppages and blockages of highways and other public roads may adversely affect our business and results. Moreover, our operations may be periodically affected by crop shortfalls, landslides and other natural disasters.

Our transportation and handling of cargo exposes us to risks relating to catastrophes, mechanical and electrical failures, collisions and loss of assets. A portion of our freight activities involves petroleum products and other flammable materials, and the presence of such products may aggravate the effects of any catastrophe.

As our insurance does not cover all potential risks and losses we may incur, the occurrence of a natural disaster of large proportions, catastrophes, cyberattacks, pandemics, mechanical failures, loss of assets or any other of the events referred to above, and any resulting damage to our business, may have a material adverse effect on our business, operating results and financial condition, including as a result of civil, administrative and/or criminal sanctions relating to environmental liability.

We are exposed to credit and other counterparty risks of our customers in the ordinary course of our business.

We have various credit terms with various types of customers, including fuel distributors, wholesalers, retailers, trading companies and consumers of the energy which we generate or trade. Our customers have varying degrees of creditworthiness and are subject to different rules and regulations. We are therefore exposed to the risk of nonpayment or other default under our contracts and other arrangements with them.

In the event that a significant number of material customers default on their payment obligations to us, our financial condition, results of operations or cash flows, could be materially and adversely affected. Any of these risks could have an adverse effect on our business, financial condition and results of operations.

Our inability to post judicial collateral or provide guarantees in pending legal or administrative proceedings could have a material adverse effect on our business, financial condition and results of operations.

We may not have sufficient funds to post collateral or provide guarantees in judicial or administrative proceedings involving substantial amounts. Even if we do not post such collateral or provide guarantees, we will be liable for paying any amounts due pursuant to any unfavorable outcomes in legal proceedings. We cannot assure you that, if we cannot make such payments, our assets, including financial assets, will not be attached or that we will be able to obtain tax good-standing certificates, all of which may have a material adverse effect on our business, financial condition and results of operations.

We are subject to anti-corruption, anti-bribery, anti-money laundering and other international trade laws and regulations.

We are subject to anti-corruption, anti-bribery, anti-money laundering and other international trade laws and regulations. We are required to comply with the laws and regulations of Brazil and various jurisdictions where we conduct operations. In particular, we are subject to the Brazilian Anti-corruption Law No. 12,846, to the U.S. Foreign Corrupt Practices Act of 1977, or the “FCPA,” to the United Kingdom Bribery Act of 2010, as well as economic sanction programs, including those administered by the United Nations, the European Union and the United States, including the U.S. Treasury Department’s Office of Foreign Assets Control, or “OFAC.” The FCPA prohibits providing anything of value to foreign officials for the purposes of obtaining or retaining business or securing any improper business advantage. As part of our business, we may deal with entities and employees which are considered foreign officials for purposes of the FCPA. In addition, economic sanctions programs restrict our dealings with certain sanctioned countries, individuals and entities. Although we have internal policies and procedures designed to ensure compliance with applicable anti-fraud, anti-bribery and anti-corruption laws and sanctions regulations, potential violations of anti-corruption laws have been identified on occasion as part of our compliance and internal control processes. When such issues arise, we attempt to act promptly to learn relevant facts, conduct appropriate due diligence and take any appropriate remedial action to address the risk. Given the size of our operations and the complexity of the production chain, there can be no assurance that our internal policies and procedures will be sufficient to prevent or detect all inappropriate practices, fraud or violations of law by our employees, directors, officers, partners, agents and service providers or that such persons will not take actions in violation of our policies and procedures (or otherwise in violation of the relevant anti-corruption laws and sanctions regulations) for which we or they may be ultimately held responsible. Violations of anti-bribery and anti-corruption laws and sanctions regulations could have a material adverse effect on our business, reputation, results of operations and financial condition. In addition, we may be subject to one or more enforcement actions, investigations and proceedings by authorities for alleged infringements of these laws. These proceedings may result in penalties, fines, sanctions or other forms of liability and could have a material adverse effect on our reputation, business, financial condition and results of operations.

Our debt level could adversely affect our financial health and prevent us from fulfilling our debt obligations, which would reduce our ability to raise capital to finance our investments and operations and could adversely impact our ability to recover from economic changes.

As of December 31, 2022, our gross indebtedness (loans, borrowings and debentures - current and non-current liabilities) was R$52,987.2 million (of which R$4,542.2 million was current liabilities). Our debt level and the composition of our debt could, among other things: (i) require us to reserve a substantial part of our operational cash flows to pay principal and interest on our debt, which will reduce the availability of our cash flow to fund working capital, capital expenditures, acquisitions and investments; (ii) limit our flexibility in planning for, or reacting to, changes in our business and the industries in which we operate; (iii) limit our ability to borrow additional funds, obtain bank guarantees or collateral insurance and generally increase our borrowing costs; and (iv) place us at a competitive disadvantage compared to our competitors that have less debt.

Recent increases in interest rates, high levels of inflation, volatility in financial markets, the ongoing banking crisis in the United States which led to the failure of Silicon Valley Bank and the forced sale of Credit Suisse, and tightening credit conditions in Brazil and globally could make it more difficult for us to refinance our existing indebtedness on terms acceptable to us or at all.

Any of the aforementioned developments could have a material adverse effect on us, our financial condition and our results of operations.

We may be unable to comply with restrictive covenants under our financing agreements.

We are subject to certain restrictive covenants based on certain financial and non-financial indicators which are set forth in the majority of the indebtedness and finance agreements to which we are a party. The majority of such covenants relate to requirements to comply with certain predetermined levels of leverage.

Any failure by us to comply with the restrictive covenants in our credit agreements as a result of adverse conditions in our business environment may trigger the acceleration of part of our indebtedness, limit our access to new credit facilities as well as adversely affect our business and results of operations.

Failure to work within our financial framework could impact our ability to operate and result in financial loss.

Failure to accurately forecast or work within our financial framework could impact our ability to operate and result in financial loss. Trade and other receivables, including overdue receivables, may not be recovered, divestments may not be successfully completed and a substantial and unexpected cash call or funding request could disrupt our financial framework or overwhelm our ability to meet our obligations.

An event such as a significant operational incident, legal proceedings or a geopolitical event in an area where we have significant activities, could reduce our financial liquidity and our credit ratings. Credit rating downgrades could potentially increase financing costs and limit access to financing or engagement in our trading activities on acceptable terms, which could put pressure on the group’s liquidity.

In the event of extended constraints on our ability to obtain financing, we could be required to reduce capital expenditure or increase asset disposals in order to provide additional liquidity.

We may raise additional capital in the future, including by issuing securities, which may result in a potential dilution of equity investors’ stake in our shares, or by taking on additional indebtedness.

We may need additional funds in the future to implement our business strategy and may choose to raise them through the public or private placement of shares and/or other securities convertible or exchangeable into shares. Any such issuance of our securities may result in a decrease in the price of our common shares and/or ADSs and dilute our existing shareholders’ interests in our share capital.

Furthermore, we cannot assure you that additional capital will be available or on satisfactory terms or at all. The lack of access to additional capital on satisfactory terms may restrict the growth and development of our activities, which may have a material adverse effect on our business, financial condition and results of operations and, consequently, the price of our securities. The raising of additional funds by means of the issuance of shares or securities convertible into shares may, under the terms of the Brazilian Corporation Law, be made to the exclusion of the preemptive rights of its shareholders, including investors in our shares, and may therefore dilute the financial investment of investors.

We may also opt to raise additional capital by taking on additional indebtedness, which could have a material adverse effect on our ability to service our indebtedness, our cash flows, business, financial condition and results of operations. Furthermore, we cannot assure you that we would be able to raise any such indebtedness on satisfactory terms or at all, particularly given the recent increases in interest rates globally which have restricted the availability of credit for borrowers across all the markets in which we operate. See also “—Our debt level could adversely affect our financial health and prevent us from fulfilling our debt obligations, which would reduce our ability to raise capital to finance our investments and operations and would adversely impact our ability to recover from economic changes.”

We are not insured against business interruption of operations and most of our assets are not insured against war or sabotage.

Our operations are subject to a number of hazards and risks. We maintain insurance at levels that are customary in our industry to protect against these liabilities; however, our insurance may not be adequate to cover all losses or liabilities that might be incurred in our operations.

We do not maintain insurance coverage for any type of business interruptions of operations, including business interruptions caused by work stoppages. If, for example, our workers were to strike, the resulting work stoppages could have a substantial and adverse effect on us. In addition, we do not insure most of its assets against war or sabotage. Therefore, an attack or an operational incident causing an interruption of our business activities could have a material and adverse effect on our performance.

Moreover, we will be subject to the risk that we may not be able to maintain or obtain insurance of the type and amount desired at reasonable rates. If we were to incur a significant liability for which we were not fully insured, it could have a materially adverse effect on our business, financial condition and results of operations.

We are highly dependent on our chairman and other members of our management to develop and implement our strategy and to oversee our operations.

We are dependent upon the ability and experience of a number of our key personnel who have substantial experience with our operations. Such key personnel include our chairman and controlling shareholder, other members of senior management and certain members of our board of directors. Many of our key personnel have worked for us for a significant amount of time or were recruited by us specifically due to their industry experience. It is possible that the loss of the services of one or a combination of our key personnel could have a material adverse effect on our business, financial condition and results of operations. In particular, our business is particularly dependent on our chairman, who is also our controlling shareholder. We currently do not carry any key-man insurance.

Our controlling group holds 672,312,942 or 35.9% of our common shares and voting rights.

Our controlling group, led by our ultimate controlling shareholder, has the power to indirectly control the Company, including the power to:

- elect a majority of our directors and appoint our executive officers, set our management policies and exercise overall control over our Company and subsidiaries;
- agree to sell or otherwise transfer his controlling stake in our Company; and
- determine the outcome of substantially all actions requiring shareholder approval, including transactions with related parties, corporate reorganizations, acquisitions and dispositions of assets, and dividends.

Currently, because of our share capital structure, our controlling group is able to control substantially all matters submitted to our shareholders for a vote or approval. The concentrated control will limit your ability to influence corporate matters and, consequently, we may take actions that our shareholders do not view as beneficial. Moreover, our controlling group may make decisions that are contrary to the interests of our other shareholders, and diverge from those of our minority shareholders. These may include actions to conduct acquisitions, divest assets, engage in new business partnerships and engage in new financings or similar operations. As a result, the market price of our common shares and ADSs could be adversely affected.

We may not be able to access the capital markets or secure bank financing in the amounts necessary to meet our financial obligations, investments objectives and execute our business strategy.

We rely on obtaining financing and refinancing of existing loans in order to operate our business, implement our strategy and grow our business. We need bank guarantees to obtain credit facilities and we typically need insurance guarantees in order to participate in court proceedings to which we are a party.

Our ability to obtain funding to finance our growth or operate our business depends on several factors, including our level of indebtedness and market conditions. Substantial volatility in the global capital markets, high interest rates, high inflation, unavailability of financing in the global capital markets at reasonable rates, the ongoing banking crisis in the United States and Europe, and credit market disruptions have had a significant negative impact on financial markets, as well as on the global and Brazilian economies. In particular, the cost of financing in the global debt markets has increased substantially, restricting the availability of funds in such markets. Substantial volatility in the financial and capital markets, the unavailability of financing at reasonable rates, recent and ongoing increases in inflation and interest rates in Brazil and globally, and disruptions in the credit market and increasing inflation in Brazil and the world’s largest economies may have a significant negative impact on overall conditions for fundraising.

If we are unable to obtain new financing or refinance existing loans when required, obtain or renew insurance guarantees on reasonable terms or at all, we may not be able to honor our financial obligations or exploit business opportunities.

If we decide to increase our debt levels, we may be subject to risks, including our inability to pay outstanding debt, which may adversely affect our financial condition. In addition, in connection with any new indebtedness we incur, we may be required to meet certain covenants in our financing arrangements, such as maintaining financial ratios, and may be subject to restrictions on our ability to incur new debt or make new investments. A breach of these covenants may result in a mandatory prepayment or acceleration of the maturity of our outstanding debt. In the event of a prepayment or acceleration, our assets and cash flow might not be sufficient to pay the full amount due, which would have a material adverse effect on our financial condition.

Our governance processes, compliance policies and internal controls may not be sufficient to prevent regulatory penalties and reputation damage.

Our compliance and governance policies, which include the review of internal controls over financial reporting, may not be sufficient to ensure that we are able to comply with existing and future legal, regulatory (including applicable anti-corruption and antitrust laws), accounting and other corporate governance requirements and standards. Accordingly, we, our subsidiaries and our affiliates may be subject to violations of our code of conduct and anti-corruption policies, and cases of fraudulent behavior or corrupt or anti-competitive practices by employees, contractors or other agents.

In particular, given the complexity and breadth of our business, and the particular sensitivity of the industries in which we operate to anti-competitive practices, we cannot assure you that our processes, such as our governance and compliance programs as well as our internal controls, are sufficient to avoid risks of investigation of illicit or irregular conduct and possible penalties. Despite the existence of our internal procedures, we may be subject to, among other things, litigation, investigations, expenses, fines, administrative and criminal sanctions and penalties by different authorities (including arrests and coercive conduction of its representatives, employees, contractors or other collaborators), in addition to the loss of licenses, permits or other regulatory instruments necessary for its operations, search and apprehension, and damage to its image and reputation. The fuel sector, in particular, has been the subject of investigation by the Brazilian authorities, especially by the Brazilian Antitrust Authority and the Brazilian Federal Public Prosecutors’ Office. There are allegations of cartels involving price agreements in the fuel distribution sectors, and the Brazilian Antitrust Authority has been monitoring participants in these sectors in different regions of Brazil. Our fuel operations are subject to continued supervision and regular inspections, so there is a risk of being charged in administrative proceedings or notices of infraction (*autos de infração*) by the National Petroleum, Natural Gas and Biofuels Agency (*Agência Nacional do Petróleo, Gás Natural e Biocombustíveis* or “ANP”).

Failure to comply with the applicable rules and legislation may subject us, our subsidiaries, our affiliates, our employees, contractors or other agents, to, among other things, litigation, investigations, expenses, fines, loss of operating licenses, reputation damage, preventive arrest warrants, coercive measures and other applicable sanctions, penalties and damage, each of which may adversely affect our business, financial condition and results of operations.

Government policies and regulations could have a material adverse effect on our operations and profitability.

Government policies in Brazil and elsewhere, in each case whether at the federal, state or local level, may adversely affect the supply and demand for, and prices of, our products or restrict our ability to do business in our existing and target markets, which could adversely affect our financial performance.

Agricultural production and trade flows are significantly affected by Brazilian federal, state and municipal, as well as foreign, government policies and regulations. Governmental policies affecting the agricultural industry, such as taxes, tariffs, duties, subsidies and import and export restrictions on agricultural commodities and commodity products, may influence industry profitability, the planting of certain crops versus others, the uses of agricultural resources, the location and size of crop production, the trading levels for unprocessed versus processed commodities, and the volume and types of imports and exports.

Pursuant to the Brazilian Federal Constitution, gas distribution services are the responsibility of the state government of each Brazilian state. Our natural gas distribution operations are currently concentrated in the states of São Paulo and Rio Grande do Sul. Our activities are regulated, respectively, by the Public Services Regulatory Agency of the State of São Paulo (*Agência Reguladora de Serviços Públicos do Estado de São Paulo* or “ARSESP”) and by the State Agency for the Regulation of Delegated Public Services of the State of Rio Grande do Sul (*Agência Estadual de Regulação dos Serviços Públicos Delegados do Rio Grande do Sul* or “AGERGS”). Any changes affecting governmental policies and regulations regarding natural gas in these states (at the federal, state, or municipal level) may have a material adverse effect on our business, financial condition and results of operations.

In addition, oil and oil products have historically been subject to price controls in Brazil. Due to the increase in fuel prices in 2021, a legislative bill was introduced in the Brazilian Congress proposing to establish guidelines for the selling prices of gasoline, diesel and liquefied petroleum gas, or “LPG.” In addition, the legislative bill seeks to establish progressive export tax rates on crude oil. The legislative process related to such legislative bill has not progressed as of the date of this annual report. Moreover, because Petrobras is the only supplier of domestically produced oil-based fuels in Brazil, and a government-controlled company, prices of oil and oil products are subject to the influence of the Brazilian government, resulting in potential inconsistencies between international prices and internal oil prices, which could adversely impact our business, financial results and results of operations.

Our business, operations and results may be adversely impacted by COVID-19.

The COVID-19 pandemic added a new source of uncertainty to global economic activity and it has had, and is expected to continue to have, a negative impact on global, regional and national economies and to disrupt supply chains and reduce international trade and business activity. New variants of the virus have emerged or may emerge against which existing vaccines and acquired immunity may not be effective. Restrictions will likely remain in place or once again be enacted if contagion levels increase, thereby suppressing economic activity. The materialization of these risks has affected global growth and may decrease investors’ interest in assets from Brazil, which has adversely affected the market price of our securities, possibly making it more difficult for us to access capital markets and, as a result, to finance our operations in the future.

The current COVID-19 pandemic and its potential impact on the global economy may affect our ability to meet our financial targets. A continued downturn in local, regional or global economic conditions may adversely affect our business, results of operations and financial condition. The extent to which the COVID-19 pandemic adversely impacts our future financial and operating results, and for what duration and magnitude, depends on several continuously evolving factors that are difficult to predict and, in many instances, are beyond our control, including, but not limited to, the negative economic impact of the pandemic on general economic activity, the actions taken by governments, businesses and individuals in response to the pandemic, the recovery of economies and demand for our products following the end of the pandemic and our ability to keep our costs consistent with changes in demand for our products and services.

See also “Item 4. Information on the Company—A. History and Development of the Company—Impact of COVID-19” and “Item 5. Operating and Financial Review and Prospects—Principal Factors Affecting Our Results of Operations—Impact of COVID-19.”

Raízen, Moove, Compass and WX Energy are subject to the application of regulatory penalties in the event of noncompliance with the terms and conditions of their respective authorizations, including the possible revocation of such authorizations.

Raízen performs generation activities in accordance with the regulations applicable to the energy sector and with the terms and conditions of authorizations granted by the Brazilian government through ANEEL. The duration of such authorizations varies from 20 to 35 years.

ANEEL may apply regulatory penalties to Raízen in the event of noncompliance with the authorizations or with the regulations applicable to the energy sector. Such penalties may include, depending on the seriousness of the infraction, warnings, fines (in some cases up to 2% of our revenues for the last 12 months), restrictions on Raízen’s operations, temporary suspension from participating in public bidding procedures to obtain new permissions, authorizations and concessions, prohibition from contracting with ANEEL, and revocation of its authorizations.

In addition, Raízen conducts its fuel distribution activities and Moove manufactures and distributes lubricants and base oil in accordance with the rules and regulations applicable to the oil and gas sector in Brazil as well as with the terms of the licenses and permits granted to them by the Brazilian government acting through the ANP. Failure to comply with the applicable rules and regulations or with the terms of the relevant licenses and permits may result in fines and other penalties (including confiscation or destruction of products, cancellation of product registrations, bans on certain facilities, and revocation of existing licenses and permits, among others). The applicable fines vary between R$5 thousand and R$5 million, depending on the gravity of the infraction, the economic capacity of the noncompliant party and recidivism.

Furthermore, the electricity trading operations of WX Energy Comercializadora de Energia Ltda., or “WX Energy,” which Bioenergia Barra Ltda., a wholly-owned subsidiary of Raízen Energia, acquired on July 5, 2018, and Compass Comercialização S.A., or “Compass Comercialização,” which was acquired on January 31, 2020, are highly regulated and supervised by the Brazilian government, including through ANEEL as well as other regulatory authorities. Such regulatory authorities have discretionary authority to implement and change policies, interpretation and rules applicable to different aspects of WX Energy and Compass Comercialização’s businesses, especially their operations, maintenance, safety, compensation and inspection. Any significant regulatory measure implemented by the competent authorities may impose a significant burden on both companies’ activities.

We cannot assure you that Raízen, Moove, Compass Comercialização and WX Energy will not be penalized by ANEEL, ANP or other federal, state or local regulatory authorities, as applicable, nor can we assure you that they will comply with all terms and conditions of their authorizations and with the regulations applicable to their respective businesses, which may have a material adverse effect on their and our business, financial condition and results of operations.

We face significant competition, which may have a material adverse effect on our market share and profitability.

The ethanol and sugar industries in which Raízen operates are highly competitive. Internationally, Raízen competes with global ethanol and sugar producers in the United States, India, Thailand, Australia and Europe, among others. Some of Raízen’s competitors are divisions of larger enterprises and may have greater financial resources than Raízen has or than we have. In Brazil, Raízen competes with numerous small to medium-size producers. The Brazilian ethanol and sugar industry remains highly fragmented. Raízen’s major competitors in Brazil are Tereos - Guarani, Bunge, Santa Terezinha and São Martinho, among others. Each of these producers markets ethanol and sugar products through the Cooperative of Sugarcane, Sugar and Ethanol Producers of the state of São Paulo (*Cooperativa de Produtores de Cana-de-açúcar, Açúcar e Álcool do Estado de São Paulo*), or “Copersucar.” Copersucar consists of producers in the states of São Paulo, Minas Gerais and Paraná. Raízen is not a member of Copersucar.

Raízen also faces strong competition from international producers, particularly in highly regulated and protected markets such as the United States and the European Union. With regard to sugar exports, Raízen faces intense competition from producers all around the world, including India, Thailand, and the European Union, among others. There are global producers of sugar whose costs are lower than those of Brazilian producers, including Raízen, and whose production capacity and prices could lead to a decrease in prices on the global sugar market. Furthermore, Raízen faces very strong competition internationally with regards to ethanol, especially from the United States. Ethanol production in the United States is based on corn-derived ethanol and is undertaken on a larger scale than Brazilian ethanol production. Accordingly, a reduction in corn prices may lead to material reductions in the price of ethanol produced in the United States and result in increased competition in the Brazilian market.

Historically, imports of sugar have not provided substantial competition for us in Brazil due to, among other factors, the production and logistical cost-competitiveness of sugar produced in Brazil. If the Brazilian government were to create incentives for sugar imports, Raízen could face increased competition in the Brazilian market by foreign producers. Many factors influence our competitive position, including the availability, quality and cost of fertilizer, energy, water, chemical products and labor. Some of our international competitors might have greater financial and marketing resources, larger customer bases and broader product ranges than Raízen does. If Raízen is unable to remain competitive with these producers in the future, its market share may be adversely affected.

The fuel distribution market in Brazil in which Raízen operates is active and highly competitive. For example, we compete with domestic fuel distributors who purchase substantially all of their fuel from Petrobras and from suppliers based outside of Brazil. There are few domestic participants, such as Vibra, Ipiranga and Raízen, who import fuels into Brazil. In addition, Raízen competes with producers and marketers in other industries that supply alternative forms of energy and fuel to satisfy the requirements of Raízen’s industrial, commercial and retail consumers. Certain measures currently being taken by participants in the fuel distribution market, including the expansion of their distribution networks, as well as the arrival of new participants, may result in an increase in fuel supply and a consequent decrease in fuel prices, which may have an adverse effect on our business, financial condition and results of operations. Raízen’s main competitor in Argentina is state-owned YPF, which has more than half of the market share in the country.

Moove’s main competitors in the global lubricant market are larger and have substantially greater resources than Moove. Because of their larger capitalization, these companies may be more flexible in responding to volatile industry or market conditions, such as shortages of base oil and other feedstock or intense price fluctuations. The actions of Moove’s competitors could lead to lower prices or reduced margins for Moove’s products, which could have a material and adverse effect on Moove and on our business, results of operations and financial performance.

Competition in the transportation services industry in which Rumo operates is intense and includes (i) competition with other transportation modes, such as road freight; (ii) competition with alternative export options for agricultural products through other ports; (iii) dependence on operating quality and port and terminal capacity; (iv) the limitations established by the maximum tariffs established by the ANTT; (v) a reduction in road tariffs, particularly during times of declining growth rates in the economy or low demand from agricultural producers, which may limit our ability to maintain or increase rates, operating margins or growth of Rumo’s business; and (vi) establishment of cooperative relationships by Rumo’s competitors to increase their ability to address shipper needs. Rumo’s main competitors are companies in the truck transportation business, which has historically been the main cargo transportation mode in Brazil. Any new measures by the Brazilian government that benefit or reduce costs for road transportation, such as cheaper toll fares or permanent suspension of the toll-road concession program, may also limit Rumo’s growth prospects. Rumo may also face significant competition from third parties if the granting authority decides to subject its maturing concessions to a rebidding process.

The intense competition in the Brazilian markets in which we operate and the actions of our competitors could lead to lower prices or reduced margins for the products we sell, as well as reductions in our sales volumes, which could have a material and adverse effect on our business, results of operations and financial performance.

Adverse weather conditions may have an adverse effect in our businesses.

Raízen’s ethanol and sugar production depends on the volume and sucrose content of the sugarcane that we cultivate or that is supplied to us by sugarcane producers located in the vicinity of our mills. Crop yields and sucrose content depend primarily on weather conditions such as rainfall and temperature, which vary and may be influenced by global climate change. Weather conditions have historically caused volatility in the ethanol and sugar industries and, consequently, in our results of operations, by causing crop failures or reduced harvests. Flood, drought or frost, which may be influenced by global climate change, may have a material adverse effect on the supply and pricing of the agricultural commodities that we sell and use in our business. Future weather patterns may reduce the amount of sugar or sugarcane that we can recover in a given harvest or its sucrose content.

WX Energy and Compass Comercialização, which are energy trading companies, may also be affected by adverse weather conditions, mainly reduced rainfall. If rainfall is reduced compared to normal levels, this would result in a decrease in the flow of rivers, a reduction in the reservoirs of the hydroelectric plants, and adversely affect the generation of energy thereby leading to an increase in the price of energy traded in the local market.

During the third and fourth quarters of 2014, a severe drought affected southeast Brazil, Comgás’s concession area, during which time residents were encouraged to save water. As a relevant portion of Comgás’s revenues is derived from the residential segment, and a significant portion of natural gas used by residential consumers is used for heating water, Comgás experienced a decrease in its net revenues derived from the residential segment. Therefore, our and Comgás’s business may be materially affected by unusual climate patterns.

Rumo's operations may be adversely affected by climatic conditions. For example, excessive rainfall may result in a deterioration in the conditions of railroads and an increase in transit time, which may lead to losses. Infrastructure deficiencies resulting from adverse weather conditions, among other things, may make it more difficult to conduct business in the areas in which Rumo operates.

Raw material and supply service costs are subject to fluctuations that could have a material adverse effect on our business, financial condition and results of operations.

Raw materials used in our business and the costs of services in connection with our operations are subject to wide fluctuations depending on market conditions and government policies. For example, Compass's distributors and Raízen's distribution of natural gas and the procurement of agricultural inputs are subject to developments in the international energy and commodity markets, to Brazilian trade and other governmental policies, and to the policies of foreign governments, among other factors. The prices charged our various businesses for inputs and services are influenced by several factors over which we have little or no control, including, but not limited to, international and national economic conditions, regulations, government policies, the actions of our counterparties, tariff adjustments and global effects of supply and demand, particularly in commodity prices. We cannot assure you that we will be able to pass on any increased costs to our customers, which could decrease our profit margin and result in a material adverse effect on our business, financial condition and results of operations.

Furthermore, the ongoing COVID-19 pandemic and, in early 2022, the war between Russia and Ukraine has disrupted supply chains and international trade generally, affecting in particular the supply of fertilizer globally and in Brazil. Brazil depends to a significant extent on imports of Russian and Belarusian fertilizer, which have been severely disrupted. Failure to obtain sufficient amounts of fertilizer may result in a reduction in grain production, which could affect Rumo's transported volumes. In addition, Raízen may be unable to obtain fertilizer (in particular nitrate) on favorable terms, sufficient quantities or at all, which could make agricultural production less efficient (potentially resulting in reduced output) or result in increases in costs (including as a result of the need to purchase other types of fertilizers). Any of these developments could have a material adverse effect on our business, financial condition and results of operations.

The fuel, natural gas, and base oil distribution businesses are concentrated in a single supplier.

Significant interruption in sales of fuels, natural gas and lubricants by us may occur if there is an interruption in the supply by our only supplier, Petrobras. Any interruption would immediately affect our ability to supply products to their customers. If we are unable to obtain adequate supply from Petrobras on acceptable terms, we may seek to cover their demands through purchases in the international market. The cost of products in the international market may be higher than the price obtained through the supplier.

Any interruption could increase our purchasing costs and reduce our sales volume, consequently adversely affecting our operating margins. In addition, we may be adversely affected if Petrobras significantly modifies its business plan or reduces its activities related to the distribution of fuel in Brazil. In particular, the current divestment plan of Petrobras suggests that Petrobras is scaling back its positions in refining and logistics, which may result in disruption of logistics services and changes to distribution policies, which may adversely affect the competitiveness of fuel distributors.

We are subject to developments affecting the Brazilian agribusiness sector as a whole.

We cannot assure you that in the future, the Brazilian agribusiness sector (i) will maintain the growth rate and development which it has experienced in recent years and (ii) will not suffer losses due to unfavorable climatic conditions, reduction of the prices of the agricultural commodities in the national and international markets, changes in credit policies for domestic producers, both by government agencies and private entities, that may affect our income, as well as other economic and political crises that may affect the agricultural industry in general. Any deterioration in the overall condition of the Brazilian agribusiness sector may have a material adverse effect on us.

Fire and other disasters could affect our agricultural and manufacturing properties and our facilities and distribution networks, which would have a material adverse effect on our production, transportation and distribution volumes and, consequently, results of operations.

Our operations are subject to risks affecting our agricultural properties and facilities and distribution networks, including fire potentially destroying some or all of our crop and facilities. In addition, our operations are subject to hazards associated with the manufacture of flammable products and transportation of raw materials and flammable products. Our insurance coverage may not be sufficient to provide full protection against these types of casualties.

We may be adversely affected by unfavorable outcomes in pending legal proceedings.

We are involved in a significant number of tax, civil (including regulatory and environmental) and labor proceedings. As of December 31, 2022, we had recorded a provision for legal proceedings totaling R$1,801.2 million in which we deem the risk of loss as probable (equivalent to R$986.7 million net of judicial deposits and restricted cash). We cannot predict whether we will prevail in these or other proceedings, or whether we will have to pay significant amounts, including penalties and interest, as payment for our liabilities, which would materially and adversely impact our business and financial performance.

In addition, unfavorable decisions in criminal proceedings involving members of our management may have a material adverse effect on us. Certain members of our management have been named as defendants in criminal proceedings (i) in their capacity as officers of the predecessor entity of Raízen Energia for alleged artificial price fixing of fuel and the formation of a cartel with the purpose of establishing control over the regional market, (ii) in their capacity as officers of Raízen Energia and in our Company for alleged tax evasion carried out by these entities and (iii) in their capacity as officers of the predecessor entities of Raízen for the crimes of disobedience and pollution in connection with the alleged burning of sugarcane contrary to a judicial decision. In the event of a final non-appealable conviction, one or more of these officers may be barred from holding executive positions within our Company, and depending on the development of the proceedings, our reputation in the opinion of our clients, suppliers and investors may be materially adversely affected.

We cannot predict whether we will prevail in these or other proceedings, or whether we will have to pay significant amounts, including penalties and interest, as payment for our liabilities, which would materially and adversely impact our business, financial condition and results of operations. If we are the subject of an unfavorable outcome in any of these legal proceedings, the amount of such unfavorable decisions will have a material adverse effect on our financial position and operating results.

Our business would be materially adversely affected if operations at our transportation and distribution facilities experienced significant interruptions. Our business would also be materially adversely affected if the operations of our customers and suppliers experienced significant interruptions.

The distribution of fuels, natural gas and other products is by its nature subject to inherent risks, including interruptions or disturbances in the distribution system which may be caused by accidents or force majeure events. Our operations are dependent upon the uninterrupted operation of our terminals and storage facilities and various means of transportation and distribution facilities. We are also dependent upon the uninterrupted operation of certain facilities owned or operated by our suppliers and customers. Operations at our facilities and at the facilities owned or operated by our suppliers and customers could be partially or completely shut down, temporarily or permanently, as the result of any number of circumstances that are not within our control, such as:

- catastrophic events, including hurricanes, floods and fire;
- environmental matters (including environmental licensing processes or environmental incidents, contamination, wildlife preservation obligations and others);
- labor difficulties (including work stoppages, strikes and other events);
- changes to legislation; and
- disruptions in the supply of our products to our facilities or means of transportation.

Any significant interruption at these facilities or inability to transport products to or from these facilities or to or from our customers for any reason could subject us to liability in judicial, administrative or other proceedings, even for disruptions caused by events outside of our control. If we are held liable for such events, our business, financial condition, results of operations and cash flow would be materially adversely affected.

Volatility in the price of the products we sell, through subsidiaries and joint ventures, may have a material adverse effect on us.

Our results of operations may be significantly affected by volatility in the prices of the products we sell, through subsidiaries and joint ventures. The prices of these products are subject to significant fluctuation as a result of domestic and international demand, production volumes and global stock levels. Price volatility may have a significant impact on our results of operations, particularly if our revenues fall below our production costs.

The prices at which our subsidiaries and joint ventures are able to sell their products depend on market conditions, both in Brazil and internationally, which are outside of our control. The prices at which our subsidiaries and joint ventures are able to sell their products have a significant impact on our results of operations. As is the case with other commodities, the prices of the products we sell, through subsidiaries and joint ventures, are subject to significant fluctuation as a result of natural disasters, harvest levels, agricultural investments, governmental policies (in particular with regard to the agricultural sector), trade policies, changes in supply and demand patterns, increases or decreases in purchasing power, the production of similar or competing products and other factors beyond our control. A significant portion of our products are also traded on commodities exchanges and their prices may therefore be affected by speculation on financial markets.

In addition, the price of sugar is also affected by the obligation to comply with certain requirements relating to exports and the consequent effects on supply within Brazil. As a result, the price of sugar has historically been subject to greater volatility than the prices of other products. Sugar prices may decrease as a result of, directly or indirectly, competition from alternative sweeteners, including saccharine and high fructose corn syrup, changes in agricultural policies or international or Brazilian trade policies (including those mandated by the World Trade Organization).

Any significant or prolonged decrease in the price of sugar and/or ethanol may have adverse effects on our business, financial condition and results of operations.

The production of lubricants, natural gas transportation and the storage and transportation of fuel products and lubricant products are inherently hazardous.

The complex manufacturing operations performed at (i) Raízen’s facilities (mills, terminals and its refinery in Argentina), (ii) Comgás (infrastructure used in the distribution of piped natural gas), (iii) Moove (a lubricants oil blending plant) and (iv) Rumo (storage terminals, ports and railcars) involve a variety of safety and other operating risks, including the handling, production, storage and transportation of toxic materials. These risks could result in personal injury and death, severe damage to or destruction of property and equipment and environmental damage. A material accident at one of these could result in a suspension of operations and result in significant remediation costs and lost revenue. In addition, insurance proceeds, if available, may not be received on a timely basis and may be insufficient to cover all losses, including lost profit. Equipment breakdowns, natural disasters, and delays in obtaining supplies or required replacement parts or equipment could also have a material adverse effect on our manufacturing operations and results of operations. Disruption of transportation and logistics services or insufficient investment in public infrastructure could have a material adverse effect on operating results. In Brazil, there is a wide range of regulations, norms, and standards that regulate the handling, storage, use, transportation, and marketing of products considered hazardous. Failure to comply with these regulations may result in the filing of administrative proceedings against these companies and the payment of fines, penalties or obligations to indemnify, as well as other sanctions.

The shareholders’ and certain other definitive agreements with respect to the Joint Venture and certain other of our subsidiaries are subject to various put and call options and termination provisions.

We have entered into certain definitive agreements with Shell with respect to the Joint Venture, Raízen. Specifically, these agreements set forth the rights and obligations of each shareholder in respect of our and Shell’s interest in the Joint Venture and establish certain options whereby we or Shell may acquire the other shareholder’s interest in the Joint Venture, certain lock-up provisions, rules governing intra-group transfers regarding our economic group and Shell, and remedies for fundamental breaches of the documentation governing the incorporation and operation of the Joint Venture. If triggered, these provisions may cause the Joint Venture, or our participation in it, to terminate prior to the scheduled expiration date of certain of the agreements in June 2031.

In November 2016, we executed amendments to certain agreements with Shell to remove the fixed-date call options over Raízen S.A. shares exercisable in 2021 and 2026 and replace them with certain call and put options exercisable by us or Shell in certain circumstances, including, among others, (1) fundamental breaches of the obligations provided for in the agreements governing the Joint Venture, (2) breach of anticorruption laws, (3) insolvency or bankruptcy of a party, (4) change of control and (5) in the event of the death or disability of our current Chairman, Mr. Rubens Ometto Silveira Mello or if he fails to attend meetings of the board of directors of Raízen for 12 consecutive months. Moreover, we granted Shell a call option that is applicable if we fail to comply with certain obligations agreed upon with Shell or if certain of Raízen’s or our financial indices are not met.

We also granted Shell a call option that can be exercised by Shell if a controlling company (referred to as a “Controlling Entity”) fails to (1) have a CEO for a period exceeding six months, (2) publish or prepare, as required by law, its financial statements under the terms and conditions agreed in the Joint Venture Agreement, or (3) if Cosan or a new shareholder of Cosan (referred to as a “New Cosan Shareholder”), as applicable, with respect to a joint venture entity (referred to as a “JV Entity”), fails to (i) appoint members to the executive board or (ii) propose names of candidates for the position of CEO of Raízen within the period provided for in the Shareholders’ Agreements. Lastly, there is a call option granted by us to Shell in the event of an involuntary delisting or involuntary suspension of the registration, as a publicly held company, of Cosan or any successor thereof.

We and Shell further agreed to renew the existing lock-up period for five years from the date of the execution of the amendment, following which the parties may sell their shares in Raízen S.A. subject to compliance with certain preemption rights in each other’s favor.

In May 2021 and July 2021, we executed amendments to certain agreements in anticipation of Raízen’s initial public offering, which was completed in August 2021. As part of these amendments, the lock-up period referred to above was renewed for an additional five years from July 2021. The call and put options described above remained the same.

We are also parties to shareholders’ agreements, partnership agreements, association agreements and other related agreements in relation to a number of other businesses, as described under “Item 7. Major Shareholders and Related Party Transactions—A. Major Shareholders.” If any of the provisions described above or other similar provisions are triggered under the shareholders’ agreements or any of the other related agreements relating to the Joint Venture or our other businesses, our partnerships, or certain rights we hold in connection therewith, could terminate prior to the scheduled expiration, which could adversely affect our results of operations.

The modification, suspension, cancellation or non-renewal of the tax benefits which we have been granted could have a material adverse effect on us.

We benefit from certain federal, state and municipal tax incentives, benefit programs and special regimes, including reductions in corporate income tax, suspensions of PIS and COFINS (respectively, the profit participation contribution and the social security financing contribution, both of which are social contributions due on certain revenues net of some expenses on certain products, reductions in ICMS on certain activities, and suspensions or reductions in certain other taxes (including import duties, tax on industrial products (*Imposto sobre Produtos Industrializados*) and certain other social security charges). We cannot assure you that these tax benefits will be maintained or renewed or that we will be able to obtain new tax benefits. If we lose our existing tax benefits due to our noncompliance with future requirements or if the current tax programs and agreements from which we benefit are modified, suspended, canceled or not renewed, we could be materially and adversely affected.

Material weaknesses in our internal control over financial reporting have been identified, and if we fail to remediate such material weaknesses (and any other ones) and to maintain effective internal controls over financial reporting, we may be unable to accurately report our results of operations, meet our reporting obligations and/or prevent fraud.

Disclosure controls and procedures over financial reporting are designed to provide reasonable assurance that information required to be disclosed by the Company is accumulated and communicated to management, and recorded, processed, summarized and reported in accordance with applicable rules.

These disclosure controls and procedures have inherent limitations which include the possibility that judgments in decision-making can be faulty and that breakdowns occur because of errors or mistakes. Additionally, controls can be circumvented by any unauthorized management override of controls. Consequently, our businesses are exposed to risk from potential noncompliance with policies, employee misconduct or negligence and fraud, which could result in regulatory sanctions, civil claims and serious reputational or financial harm. It is not always possible to deter employee misconduct and the precautions we take to prevent and detect this activity may not always be effective. Accordingly, because of the inherent limitations in the control system, misstatements due to error or fraud may occur and not be detected.

Since the completion of the corporate reorganization of the Cosan group, which included the Merger, Cosan, as a foreign private issuer, began to be required to comply with the reporting, disclosure control and other applicable obligation under the Exchange Act, the Sarbanes-Oxley Act and Dodd Frank Act, as well as rules adopted, and to be adopted, by the SEC and NYSE.

In connection with the preparation of the audited consolidated financial statements as of and for the year ended December 31, 2022, we identified evidence of internal control deficiencies which, when aggregated, have been classified as material weaknesses in our internal controls over financial reporting. A material weakness is a deficiency, or combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement in our annual financial statements will not be prevented or detected on a timely basis.

The material weaknesses identified were that management controls were insufficient to detect deficiencies in how we account for non-recurring transactions, in particular with respect to the design and execution of controls pertaining to significant unusual transactions and to business combinations. Such deficiencies in the aggregate gave rise to material weaknesses in our internal control environment.

These material weaknesses did not result in actual misstatements as certain mitigating actions were taken by our management to complete the analysis of our financial reporting prior to year-end, such that there were no impacts in our consolidated financial statements as of December 31, 2022. However, the material weaknesses described above, if not mitigated, could have resulted in a reasonable possibility that a material misstatement of our consolidated financial statements would not be prevented or detected on a timely basis in future periods. We intend to review the design and improve the execution of our procedures in order to mitigate the risk of future errors in our consolidated financial statements, which may include the involvement of external parties, if applicable. We cannot assure you that our efforts will be effective, that we will be able to remedy these material weaknesses or that we will be able to prevent any future material weakness or significant deficiency in our internal control over financial reporting. Failure to remedy any material weakness in our internal controls over financial reporting, or to implement or maintain other effective control systems required of public companies in the United States, could have a material adverse effect on our business, financial condition and results of operations and could also restrict our future access to capital markets and reduce or eliminate the trading market for our shares and ADSs.

For details of the controls and remedial actions mentioned above, see the section of this annual report entitled “Item 15. Controls and Procedures—A. Disclosure Controls and Procedures.”

Public health threats or outbreaks of communicable diseases could have an adverse effect on our operations and financial results.

We may face risks related to public health threats or outbreaks of communicable diseases. The outbreak of communicable diseases could result in a widespread health crisis that could adversely affect the global economy and our ability and our business partners’ ability to conduct business in Brazil for an indefinite period of time. For example, the recent outbreak in China of COVID-19 has spread across the globe, resulting in a global or regional economic slowdown, a shutdown of production and supply chains and a disruption of international trade, negatively impacting the industries in which we operate.

Disruptions in public and private infrastructure, including communications and financial, could materially and adversely disrupt our normal business operations. We have transitioned a significant subset of our employee population to a remote work environment in an effort to mitigate the spread of COVID-19, which may have exacerbated certain risks to our business, including an increased demand for information technology resources, increased risk of phishing and other cybersecurity attacks, and increased risk of unauthorized dissemination of sensitive personal information or proprietary or confidential information about us, our hub partners, our students or other third-parties. See “—We were the target of a cybersecurity incident which disrupted our systems” and “—We could be the target of attempted cyber threats in the future and they could adversely affect our business.”

We may not be successful in meeting our environmental, social and corporate governance, or ESG, commitments, which may have an adverse effect on our business, financial condition, reputation and results of operations.

The market is increasingly concerned with how companies assess and manage ESG risks to protect themselves and create opportunities to generate value. As part of this trend, we have made certain ESG commitments, and we strive to maintain socially responsible business practices, including fostering social investments and structuring programs to generate a positive social impact through in areas related to our business, such as renewable energy, employability, education, and culture. Failure to meet our ESG commitments or to pursue these socially responsible business practices, partially or at all, may have a material adverse effect on our business, reputation, financial condition and results of operations.

There has been an increase in ESG rules and regulations applicable to our business and we expect this tendency to continue. Given the pace of legislative developments in this area, we may not be able to comply with the new regulations in their totality. We are also exposed to the risk that future ESG rules and regulations may adversely affect our ability to conduct our business by requiring us to reduce the value of our assets or reduce their useful life, facing increased compliance costs or taking other actions that may be adverse to us.

The activities of Raízen, Rumo, Moove and Compass may impact the lives and socioeconomic dynamics of communities, especially those neighboring our operating units, bioenergy parks, service stations and franchisees. These impacts may include truck, train, vehicle and pedestrian traffic, construction, property expropriation, and the displacement of communities. As a result, there may be stoppages in our operations by virtue of demonstrations in surrounding communities, as well as investigations and judicial measures by public prosecutors and other authorities. Such demonstrations or investigations may be motivated by a lack of dialogue with the communities surrounding our units.

In addition, our suppliers or dealers may engage in conduct that violates human rights and for which we may be held liable in civil, labor, criminal and administrative proceedings, including for damages and remediation costs. As a result, we may face difficulties in obtaining or maintaining operating licenses, and their reputation may be negatively affected.

We operate in sectors in which market demand and prices are cyclical and affected by weather and economic conditions in Brazil and worldwide.

The sectors in which we operate are historically cyclical and sensitive to internal and external changes in supply and demand. Rainfall and temperature levels, which may vary and may be influenced by global climate changes, may cause significant volatility in the sectors in which we operate and adversely affect our business. Furthermore, Raízen’s business is subject to seasonality according to the sugarcane growth cycle in the Central-South region of Brazil. The annual sugarcane harvesting period in the Central-South region of Brazil begins in April or May and ends in November or December. This creates fluctuations in Raízen’s inventory and in its ability to generate energy, both of which usually peak in December, to cover sales between crop harvests (primarily from January to March), and a degree of seasonality in our gross profit, with ethanol and sugar sales significantly lower in the quarter ended on December 31. Rural producers of sugar and ethanol with whom Raízen maintains a commercial relationship may experience a similar degree of seasonality, which may impact the supply of ethanol and/or other products necessary for Raízen’s activities. Seasonality and any reduction in the volumes of sugar recovered could have a material adverse effect on our business, financial condition and results of operations. Raízen is also subject to seasonality with respect to demand for the energy which it generates and sells. Specifically, demand for energy is subject to various factors which vary from season to season according to the type of customer, geographical location and consumption type (e.g., residential, commercial or industrial), among other factors, and demand for energy and trading activities may be affected by variations in such factors. Furthermore, Rumo is subject to the seasonality that influences the sugar production cycle and grain harvest. During the peak months of each harvest, there is higher demand for transport and logistics operations. Seasonality could have a material adverse effect on our business, financial condition and results of operations.

We may be unable to protect our intellectual property rights and may be accused of violating third-party property.

If we are unable to protect our intellectual property rights, or those of subsidiaries, investees and jointly controlled company, our ability to operate our business and to compete in the markets in which we operate could be adversely affected. Among other factors, the success of our business also depends on the effective protection of our trademarks, patents, domain names, trade secrets, know-how and intellectual property rights and those held by our subsidiaries, investees and jointly controlled company.

There is a risk that we may not be successful in renewing our title or licensing certain intellectual property rights in a timely manner or at all, or that the validity of such rights may be successfully challenged by third parties. In addition, we may not be able to enforce intellectual property rights in certain countries where our subsidiaries, investees or common controlled company operate as the laws of certain foreign countries, including those in many emerging markets, may not fully protect these rights. The costs required to maintain proper registration and protect such rights can be substantial and affect the result of our operations.

We cannot assure you that third parties will not infringe or misappropriate intellectual property rights, despite our efforts to actively monitor against their unauthorized use. In addition, we are not able to guarantee that the measures taken by companies to protect our intellectual property rights will be sufficient. For this reason, we may need to engage in legal proceedings to defend our rights and there can be no guarantees that we will be successful.

The improper or unauthorized use of such intellectual property rights could decrease the value of our brands, adversely affect our reputation, cause a decline in sales, and have a material adverse effect on our business, financial condition and results of operations.

Additionally, third parties may claim that the products or services provided by our subsidiaries, investees or our jointly controlled company violate their intellectual property rights. Consequently, our companies may be forced to engage in potentially costly litigation, or to revise, in whole or in part, the products that are allegedly infringing on the rights of third parties and/or pay significant amounts in damages, royalties or licensing fees, in addition to the potential risk of damages to our image and loss of demand for our products. Any such developments could have a material adverse effect on business, financial condition and results of operations.

Our activities are inherently hazardous and involve high operational risk.

Through our subsidiaries, we produce, store and transport combustible inflammable and petroleum products. We also manufacture and transport lubricating oil blends, which involve a variety of operational and safety risks, including manufacturing, handling, sorting and transporting flammable, explosive and toxic materials. These risks can result in personal injury, death, severe damage to or destruction of property, plant and equipment, and environmental damage. A major accident at one of our subsidiaries' facilities could force us to suspend operations and result in significant compensation costs, loss of revenue and reputational damage.

Railroad transportation is an activity, which is carried out by Rumo, that involves risks relating to mechanical failures, derailments or other accidents that could interrupt the network of railroads, result in the payment of fines, damages to locomotives and wagons and loss of the product transported, which could result in significant financial losses and reputational damage for us. These accidents may also expose nearby communities to risks of life, personal injuries, significant damages to property and the environment. The occurrence of any of these events may have a material adverse effect on our business, financial condition and results of operations. Furthermore any contamination of the soil or underground may subject our subsidiaries to administrative sanctions, including, but not limited to, suspension, shutdown, mandatory payment of fines and other expenses, or an obligation to materially alter or cease particular operations, in addition to subjecting them to criminal and civil proceedings in case of environmental damages, which include the obligation to repair and/or indemnify the contaminated area for any damages caused to the environment, public health and third parties. The proximity of our operation and storage sites to populated areas, including residential, commercial and industrial facilities, may also increase our risk exposure.

The costs associated with complying with current and potential legislation relating to environmental protection, health and safety, and liabilities incurred in connection with the leakage or exposure to harmful substances are substantial. Any increase in such costs could have a material adverse impact on our business, results of operations and financial standing of our subsidiaries.

We may also not receive insurance proceeds, if available, in a timely manner and these may be insufficient to cover all losses, including lost profits. Equipment breakdowns, natural disasters and delays in obtaining necessary replacement supplies, may also have a material adverse effect on our business, financial condition and results of operations.

Anticompetitive practices in the fuel and lubricant distribution markets may distort market prices.

We believe that, in recent years, anticompetitive practices have been one of the main problems affecting fuel distributors in Brazil. These practices usually involve a combination of tax evasion and fuel adulteration, such as diluting gasoline by mixing solvents or adding anhydrous ethanol in proportions greater than those permitted by law (anhydrous ethanol is taxed less than hydrous ethanol and gasoline).

Taxes constitute a significant portion of the cost of fuels sold in Brazil. For this reason, tax evasion has been a recurring practice of some distributors, allowing them to charge lower prices. These practices have allowed some distributors to supply large quantities of fuel products at prices lower than those offered by the main distributors, allowing the former to increase their sales volumes at the expenses of the latter. Consequently, these anti-competitive practices may affect our subsidiaries' sales volumes, which could have a material adverse effect on our businesses. If these practices become predominant, it could result in lower prices or reduced margins for products sold, which may cause a material adverse impact on our subsidiaries' businesses and results of operations.

Given the complexity and breadth of our operations and the special sensitivity of the sector in which we operate, particularly in regard to anti-competitive practices, we cannot guarantee that our internal control mechanisms, such as our governance and compliance programs, are sufficient to avoid risks of investigations for illicit or irregular conducts and possible sanctions and legal proceedings. Despite having these internal control mechanisms, we and our subsidiaries, investees and jointly controlled company, may be subject to, among others, litigation, investigations, expenses, fines, sanctions and penalties, both administrative and criminal, by different authorities. We may also lose our licenses, permits or other regulatory instruments required for our operations, be subjected to search and seizure procedures, and suffer damage to our image and reputation. The fuel sector, in particular, has been the subject of investigations by the Brazilian authorities, especially by the Brazilian Antitrust Authority and the Public Prosecutors' Offices. There are allegations on involving cartels and price agreements in the fuel distribution sector, and the Brazilian Antitrust Authority has been monitoring participants, which may adversely affect our operations.

Volatility and uncertainty in fuel prices can affect our operational margins and competitive position.

Fuel prices have historically been volatile and may continue to be so in the future. Fuel prices are influenced by numerous factors including, among others, demand and supply, processing, transportation allotment and availability, price and availability of alternative fuel sources, weather conditions, natural disasters and political conditions or hostilities in oil-producing regions, besides the political factors related to government pricing policy.

In our operations, we may need to contract freight services provided by outsourced truck drivers to carry out the distribution of our products, and the costs of these types of services are strongly linked to the cost of fuels, especially that of diesel, which may adversely affect our business, financial condition and results of operations.

Particularly in relation to our subsidiary Rumo, significant reductions in fuel prices could make rail transport less attractive, considering that Rumo's main competitors have a higher exposure to road freight, which has between 50% and 60% of its cost linked to that of diesel, while the railroads, on average, have a much lower exposure at approximately 20%. If fuel prices were to decrease, the price of rail transport would decrease less than the price of road freight, which could result in lost transportation volume for Rumo or force Rumo to decrease its prices in order to be able to retain or attract customers.

In addition, the gas distribution market may also be impacted, because the price of natural gas is indexed to a basket of fuel oils and inflation. Rapid variations and/or substantial decreases in international prices for oil and oil-derived products may therefore have an effect on the price of our natural gas which could have a material adverse effect on Compass.

Accordingly, any significant variations in fuel prices may have a material adverse effect on our business, financial condition and results of operations.

Our business is subject to seasonal trends.

Raízen's business is subject to seasonality according to the sugarcane growth cycle in the Central-South region of Brazil. The annual sugarcane harvesting period in the Central-South region of Brazil begins in April or May and ends in November or December. This creates fluctuations in Raízen's inventory and in its ability to generate energy, both of which usually peak in December, to cover sales between crop harvests (primarily from January to March), and a degree of seasonality in our gross profit, with ethanol and sugar sales significantly lower in the quarter ended on December 31. Rural producers of sugar and ethanol with whom Raízen maintains a commercial relationship may experience a similar degree of seasonality, which may impact the supply of ethanol and/or other products necessary for Raízen's activities. Seasonality and any reduction in the volumes of sugar recovered could have a material adverse effect on our business, financial condition and results of operations.

Raízen is also subject to seasonality with respect to demand for the energy which it generates and sells. Specifically, demand for energy is subject to various factors which vary from season to season according to the type of customer, geographical location and consumption type (e.g., residential, commercial or industrial), among other factors, and demand for energy and trading activities may be affected by variations in such factors.

Furthermore, Rumo is subject to the seasonality that influences the sugar production cycle and grain harvest. During the peak months of each harvest, there is higher demand for transport and logistics operations.

Seasonality could have a material adverse effect on our business, financial condition and results of operations.

Since the consummation of our significant financial investment in Vale in the fourth quarter of 2022, we became exposed to risks affecting Vale.

As a result of our significant financial investment in Vale as further described under “Presentation of Financial and Certain Other Information—Certain Corporate Events—Acquisition of Stake in Vale S.A., or ‘Vale’” and “Item 4. Information on the Company—B. Business Overview—Vale,” our business, results of operations and financial condition in future periods will be affected by any risks to which Vale is exposed. Important factors that could adversely affect Vale’s actual results of operations and financial condition include, among others, the following:

- the impact of the rupture of the tailings dam in Brumadinho in 2019, the rupture of Samarco’s tailings dam in 2015, and related remediation measures on Vale’s operations, cash flows and financial position;
- the implementation of Vale’s dam de-characterization plan;
- the outcome of the various investigations, regulatory, governmental, uncertain tax treatments and legal proceedings in which Vale is involved;
- the impact of the ongoing war in Ukraine and the economic sanctions imposed on Russia, and their impact on the global economy, which are highly uncertain and difficult to predict;
- the duration and severity of the coronavirus (COVID-19) outbreak and its impacts on Vale’s business;
- our direction and future operation;
- the implementation of Vale’s financing strategy and capital expenditure plans;
- the exploration of mineral reserves and resources and development of mining facilities;
- the depletion and exhaustion of mines and mineral reserves and resources;
- trends in commodity prices, supply and demand for commodities;
- the future impact of competition and regulation;
- the payment of dividends or interest on shareholders’ equity;

- compliance with financial covenants;
- industry trends, including the direction of prices and expected levels of supply and demand;
- the implementation of Vale’s principal operating strategies, including Vale’s potential participation in acquisition, divestiture or joint venture transactions or other investment opportunities;
- our ability to comply with Vale’s ESG targets and commitments;
- other factors or trends affecting Vale’s financial condition or results of operations; and
- the factors discussed under “Overview—Risk factors” in Vale’s latest annual report on Form 20-F filed with the SEC.

Changes in accounting standards, pronouncements and interpretations, as well as amendments and/or updates to existing accounting standards or pronouncements by the IASB, CVM, U.S. Securities and Exchange Commission, or “SEC,” and Brazilian Accounting Pronouncements Committee (Comitê de Pronunciamentos Contábeis), or “CPC,” may have a material effect on our consolidated financial statements.

The adoption of new accounting standards, pronouncements and interpretations, as well as amendments and/or updates to existing accounting standards or pronouncements by the IASB, CVM, SEC and CPC, may have a material impact on our consolidated financial statements, with possible effects on our financial results, including possible impacts on the basis of dividend distributions. The effects of the adoption of new accounting standards can only be measured if and when the adverse effects mentioned above occur.

Risks Related to Raízen

Raízen operates in industries in which the supply, demand and the market price for its products are cyclical and are affected by a number of factors and conditions in Brazil and globally.

The ethanol and sugar industries, globally and in Brazil, have historically been cyclical and sensitive to domestic and international changes in supply and demand. Raízen’s sugar production depends on the volume and sucrose content of the sugarcane that it cultivates or is provided to it by farmers located near its plants. Crop yields and sucrose content of the sugarcane mainly depend on weather conditions, such as rainfall and temperature, which may vary and may be influenced by global climate change.

Raízen’s ethanol and sugar production depends on the volume and sucrose content of the sugarcane that it cultivate or that is supplied to Raízen by growers located in the vicinity of its mills. Weather conditions have caused volatility in the ethanol and sugar sectors and, consequently, in Raízen’s operational results by causing crop failures or reduced harvests. Floods, droughts and frosts, which can be influenced by global climate change, may affect the supply and prices of the agricultural commodities Raízen sells and uses in its business. Future climate conditions may reduce the quantity of sugar and sugarcane obtained in a given crop or the sucrose content of the sugarcane. In addition, Raízen’s production of sugar and ethanol is contingent on its ability to incur capital expenditures to renew sugarcane crops.

Historically, the international sugar market has experienced periods of limited supply, causing sugar prices and industry profit margins to increase, followed by an expansion in the industry that results in oversupply, causing declines in sugar prices and industry profit margins. In addition, fluctuations in prices for ethanol or sugar may occur, for various other reasons, including factors beyond Raízen’s control, such as:

- reduced demand for motor vehicles powered by internal combustion engines (including, without limitation, as a result of increased demand for electric vehicles);
- fluctuations in gasoline prices (including as a result of global oil prices);
- fluctuations in competitors’ production capacities; and
- the availability of substitute goods for the ethanol and sugar products produced.

The prices that may be obtained for sugar depend, in large part, on prevailing market conditions. These market conditions, both in Brazil and internationally, are beyond Raízen’s control. The wholesale price of sugar has a significant impact on Raízen’s profits. Like other agricultural commodities, sugar is subject to price fluctuations resulting from weather, natural disasters, harvest levels, agricultural investments, government policies and programs for the agricultural sector, domestic and foreign trade policies, shifts in supply and demand, increasing purchasing power, global production of similar or competing products, and other factors beyond Raízen’s control. In addition, a significant portion of the total worldwide sugar production is traded on exchanges and thus is subject to speculation, which could affect the price of sugar and Raízen’s results of operations and, consequently, us.

The price of sugar, in particular, is also affected by producers’ compliance with sugar export requirements and the resulting effects on domestic supply. As a consequence, sugar prices have been subject to high historical volatility. Competition from alternative sweeteners, including saccharine and high fructose corn syrup changes in Brazilian or international agricultural or trade policies or developments relating to international trade, including those under the World Trade Organization, are factors that can directly or indirectly result in lower domestic or global sugar prices. Any prolonged or significant decrease in sugar prices could have a material adverse effect on Raízen’s and our business and financial performance.

Ethanol is marketed as a fuel additive to reduce vehicle emissions from gasoline, as an enhancer to improve the octane rating of gasoline with which it is blended or as a substitute fuel for gasoline. As a result, ethanol prices are influenced by the supply of and demand for gasoline, and Raízen’s business and financial performance may be materially adversely affected by fluctuations in the demand for and/or price of gasoline. The increase in the production and sale of flex fuel vehicles (hybrid vehicles, that run with ethanol or gasoline or both combined in any proportion) has resulted, in part, from lower taxation, since 2002, of such vehicles compared to gasoline only cars. This favorable tax treatment may be eliminated and the production of flex fuel vehicles may decrease, which could adversely affect demand for ethanol.

If Raízen is unable to maintain sales at generally prevailing market prices for sugar and ethanol in Brazil and internationally, or if it is unable to export sufficient quantities of ethanol and sugar to assure an appropriate domestic market balance, Raízen’s ethanol and sugar business as well as its cash flow may be adversely affected, which may have a material adverse effect on our business, financial condition and results of operations.

Ethanol prices are directly influenced by sugar and gasoline prices, so that a decline in those prices will adversely affect both our ethanol and sugar businesses.

The price of ethanol generally is closely associated with the sugar and gasoline prices in international and local markets. A vast majority of ethanol in Brazil is produced at sugarcane mills that produce both ethanol and sugar. Because sugarcane millers are able to alter their product mix in response to the relative prices of ethanol and sugar, this results in the prices of both products being directly correlated, and the correlation between them may increase over time. In addition, sugar prices in Brazil are determined by prices in the world market, so that there is a correlation between Brazilian ethanol prices and world sugar prices.

Because flex fuel vehicles allow consumers to choose between gasoline and ethanol at the pump rather than at the showroom, ethanol prices are correlated to gasoline prices as well and, consequently, international oil prices. We believe the correlation among the three products will increase over time. Accordingly, a decline in sugar prices will have an adverse effect on the financial performance of Raízen's ethanol and sugar businesses, and a decline in petroleum prices could make ethanol less competitive and reduce demand, despite increased sales of flex fuel vehicles, affecting its results and financial condition, including cash flows.

Raízen may not be successful in its plans to sell energy from bioenergy projects, and the regulation of the electricity sector issued by the Brazilian government could adversely affect its business and financial performance.

Raízen's bioenergy capacity is used to generate energy for its own industrial operations and to sell the surplus in the Brazilian national interconnected system (*Sistema Nacional Interligado*). The Brazilian government regulates the energy sector extensively. Raízen may not be able to satisfy all the requirements necessary to enter into new contracts or to otherwise comply with Brazilian energy regulation. Changes in current regulation or in the federal program for granting authorizations, and the creation of more stringent criteria for qualifying in future public energy auctions, in addition to lower prices, may adversely affect our results of operations from our bioenergy business.

Government authorities may, at their own discretion, change the regulations or the terms and conditions applicable to Raízen's electricity concessions, causing additional costs or diminishing projected revenues. Raízen may be subject to regulatory penalties if we are unable to comply with the new terms and conditions. Raízen's authorizations are subject to review by the granting authorities with respect to the amounts Raízen may sell in energy purchase and sale agreements, known as a "physical guarantee." If the physical guarantee of its plants is reduced, Raízen may have our sales capacity reduced and may be exposed to payments and penalties within the scope of the Electric Energy Sales Board (*Câmara de Comercialização de Energia Elétrica*). Raízen may also be ordered to suspend its power generation if so determined by the National Electric System Operator (*Operador Nacional do Sistema Elétrico*), for example, in the event of excess generation and incapacity of the electricity grid, and Raízen may not be fully compensated for these restrictions.

Any failure to implement these plans could have a material adverse effect on Raízen's business, financial condition and results of operations. Additionally, regulations in the electricity sector impose the payment of various sector charges, and the total costs of these charges may be increased by government authorities, adversely affecting the business of Raízen. In addition, cases of force majeure, acts of God, disturbances or interruptions can affect the energy transmission and distribution system.

Government policies and regulations directly related to Raízen products may adversely affect its results through increased production costs or reduced revenues.

The Brazilian government regulates the energy sector extensively. This includes the market for gasoline and diesel, which are the products we primarily distribute and sell. Thus, any intervention in or changes to the regulation of this sector may affect the prices of Raízen products.

More specifically, Raízen produces and sells three main types of ethanol: hydrous ethanol, anhydrous ethanol for fuel and industrial ethanol. The primary type of ethanol consumed in Brazil is hydrous ethanol, which is used as an alternative to gasoline for flex fuel vehicles (as opposed to anhydrous ethanol, which is used as an additive to gasoline). Governmental authorities of several countries, including Brazil and the United States, currently require the use of a certain percentage of anhydrous ethanol in gasoline. Since 1997, the Brazilian Sugar and Alcohol Inter-ministerial Council (*Conselho Interministerial do Açúcar e Álcool*), or "CIMA," has fixed the percentage of anhydrous ethanol that must be used as an additive to gasoline. According to CIMA Resolution No. 1, dated March 4, 2015, and MAPA Ordinance No. 75, dated March 5, 2015, the current percentage of anhydrous alcohol for regular gasoline (regular gasoline "C") is 27%, and for additive/premium gasoline (gasoline "C") is 25%. The blending of ethanol with gasoline for automotive use is subject to a high degree and regularity of inspections by the ANP, which is responsible for establishing the acceptable specification parameters for ethanol through ANP Resolution No. 907/2022. Any blending of fuel that does not comply with these parameters will be subject to fines and even the loss of the license to operate in the sector. According to ANP data, approximately one-half of all fuel ethanol in Brazil is used to fuel automobiles that run on a blend of anhydrous ethanol and gasoline; the remainder is used in either flex fuel vehicles or vehicles powered by hydrous ethanol alone. Other countries have similar governmental policies requiring various blends of anhydrous ethanol and gasoline. Any reductions in the percentage of ethanol to be added to gasoline or changes in Brazilian government policies related to the taxation and use of ethanol, as well as growth in the demand for natural gas and other fuels as an alternative to ethanol, such as natural gas, may cause us significant adverse effects.

Further, new technologies may be developed or implemented to obtain alternative energy sources, and cars that use these sources may replace flex fuel vehicles. Advances in the development of alternatives to ethanol, or the development of automobiles that use energy sources other than ethanol, could significantly reduce the demand for ethanol, thereby affecting Raízen’s sales.

Raízen may not be able to satisfy all the requirements necessary to enter into new contracts or to otherwise comply with Brazilian energy regulation. Changes in current Brazilian regulations or authorization programs and the creation of stricter criteria for eligibility in future energy auctions, in addition to lower prices, may adversely affect Raízen’s operating results in its energy cogeneration businesses, increase the costs of projected investments and, as a result, hinder the growth of its business.

In addition, flex fuel vehicles in Brazil are currently taxed at lower levels than gasoline-only vehicles, which has contributed to the increase in the production and sale of flex fuel vehicles. Any reduction in the percentage of ethanol required to be added to gasoline or increase in the levels at which flex fuel vehicles are taxed in Brazil, as well as growth in the demand for natural gas and other fuels as an alternative to ethanol, lower gasoline prices or an increase in gasoline consumption (versus ethanol), may cause demand for ethanol to decline and affect our business. In addition, ethanol prices are influenced by the supply and demand for gasoline; therefore, a reduction in oil prices resulting in a decrease in gasoline prices and an increase in gasoline consumption (versus ethanol), may have a material adverse effect on our business, financial condition and results of operations.

Raízen may be adversely affected by a shortage of sugarcane or by high sugarcane costs and the consequent lack of sugar cane may materially impact Raízen’s ability to produce and distribute ethanol and sugar.

Sugarcane is the main raw material Raízen uses for the production of ethanol and sugar. Raízen generally enters into medium- and long-term supply contracts for periods varying from three and one-half to seven years.

Raízen’s supply of sugarcane in Brazil may be significantly reduced as a result of the termination of supply contracts or lease agreements, which may result in a shortage of sugarcane supply and an increase in the price of sugarcane. If there is a shortage of sugarcane or any supply contracts or lease agreements are terminated, Raízen may experience a material reduction in the sugarcane available for processing or an increase in sugarcane prices, which may materially adversely affect our business, results of operation and financial condition.

In Brazil, the price of sugarcane may increase as a result of changes in the criteria established by the Association of Producers of Sugarcane, Sugar and Ethanol of the state of São Paulo (*Conselho dos Produtores de Cana-de-açúcar, Açúcar e Álcool do Estado de São Paulo*), or “Consecana,” which is composed of sugarcane producers and sugar mill operators. The price of sugarcane is set in supply agreements, lease agreements and partnership agreements and is partially fixed and partially variable, as provided for in the criteria set forth by Consecana. As a result, any changes to the criteria established by Consecana may lead to an increase in the cost of sugarcane, which may have a material adverse effect on our business, financial condition and results of operations.

In addition, in certain cases, as a result of the price-setting formulas in the contracts which Raízen has entered into with its customers, Raízen may not be able to pass on the full amount of these cost increases to its customers. This may have a material adverse effect on Raízen’s business, financial condition and results of operations.

Furthermore, the availability of sugarcane may be affected by various environmental and climate-related factors, including water scarcity, excessive or insufficient rainfall and other weather patterns.

Raízen may be subject to expropriation of real estate intended for rural production.

The real estate used by Raízen, or by third parties with whom Raízen maintains a partnership or lease relationship, for the cultivation of sugarcane may be unilaterally expropriated by the Brazilian government for purposes of public and social interest, and we cannot assure you that the payment of the indemnification that they may have to pay to Raízen will be fair. Pursuant to Brazilian law, the Brazilian government may expropriate the real estate of rural producers where the sugarcane is planted by necessity or for public utility or social interest, partially or totally. In the event of expropriation, we cannot assure you that the price paid by the Brazilian government will be fair or equivalent to the market value, or that it will effectively and adequately compensate Raízen for the amounts invested. Accordingly, any expropriation of any real estate used by Raízen, or by third parties with whom Raízen maintains partnership or lease relationships, may adversely and significantly affect Raízen’s financial situation and results, and may also impact Raízen’s activities, which may have a material adverse effect on our business, financial condition and results of operations.

Social movements may affect the use of Raízen's agricultural properties or cause damage to them.

Social movements are active in Brazil and advocate land reform and property redistribution by the Brazilian government. Invasion and occupation of agricultural land by large numbers of people is a common practice among the members of such movements, and in certain regions, including those in which Raízen owns or leases property, remedies such as police protection or eviction procedures might be inadequate or non-existent. As a result, we cannot assure you that Raízen's agricultural properties will not be subject to invasion or occupation by any of such social movements. In these cases, our operations, image and reputation may be affected, and Raízen may be subject to legal and administrative litigation that may result in criminal and administrative penalties, including, but not limited to, suspension, shutdowns, and a requirement to pay fines, which may range from R$50 to R$50 million and can be doubled or tripled in case of recurrence, which may also result in the need for additional investments.

In addition, Raízen may be subject to civil liabilities for environmental damage, which includes the obligation to redress any damages caused to the environment and/or public health. The demonstration of the cause-and-effect relationship between the damage caused and action or omission is sufficient to trigger the obligation to redress environmental damage.

Raízen's sugar and ethanol products are sold to a small number of customers who may be able to exercise significant bargaining power concerning pricing and other sale terms.

A non-negligible share of Raízen's sugar and ethanol production is sold to a small number of customers that acquire large portions of our production and thus may be able to exercise significant bargaining power concerning pricing and other sale terms. In addition, intense competition in the ethanol and sugar industries further increases the bargaining power of customers, which may have a material adverse effect on Raízen's sales volumes and, consequently, on us.

Raízen's export sales are subject to a broad range of risks associated with international operations.

International activities expose Raízen to risks not faced by companies operating exclusively in Brazil. The risks associated with international operations include:

- changes in tax laws and regulations and other general laws and regulations applicable to activities in the sugar and ethanol sector;
- changes in social, political and economic conditions, including recessions;
- restrictions on currency convertibility and volatility in foreign exchange markets;
- import and export quotas;
- changes in local working conditions;
- global economic and social developments, including as a result of the COVID-19 pandemic and the ongoing war between Russia and Ukraine;
- expropriation and nationalization of assets in a particular jurisdiction; and
- restrictions on the repatriation of dividends or profits.

Most ethanol and/or sugar producing countries, including the United States and member countries of the European Union, protect local producers from foreign competition by establishing government policies and regulations that affect ethanol and sugar production, including quotas, import and export restrictions, subsidies, tariffs and duties. As a result of these policies, domestic ethanol and sugar prices vary greatly in individual countries. We have limited or no access to these large markets as a result of trade barriers. If these protectionist policies continue, we may not be able to expand our export activities at the rate we currently expect, or at all, which could have a material adverse effect on our business, financial condition and results of operations. Also, if new trade barriers are established in our key export markets, Raízen may face difficulties in reallocating products to other markets on favorable terms, and both Raízen's and our business and financial performance may be adversely affected.

Raízen may be adversely affected if the outsourcing of mechanized sugarcane cutting becomes prohibited.

Raízen is a defendant in a public civil action in which the Public Ministry of Labor claims the prohibition of outsourcing the planting, loading and transport of sugarcane. If the Superior Labor Court changes its understanding in relation to the appeal granted to Raízen to annul the unfavorable decision of the lower court and determines that the activities in question are intrinsic activities to our production chain (and could not be outsourced), Raízen may be required to carry out these activities on its own on an ongoing basis (including hiring employees and purchasing suitable machinery). This could have a direct material adverse effect on Raízen and an indirect one on us. Such material adverse effects may also arise from a similar understanding in relation to other activities outsourced by us.

Raízen is subject to risks arising from legal proceedings based on claims related to alleged breaches of the intellectual property rights of third parties.

Raízen is subject to risks arising from legal proceedings based on claims related to alleged breaches of the intellectual property rights of third parties. Raízen may alter the way in which it produces, in whole or in part, products which third parties allege infringe their intellectual property rights and/or pay significant indemnification amounts, royalties or licensing fees in connection with the use of third parties’ patents or copyrighted materials. The filing of a lawsuit or the review of a product that is in violation of third parties’ intellectual property rights may adversely affect Raízen’s reputation and the demand for our products. In addition, new lawsuits require the attention of Raízen’s management, as well as additional defense costs and, in certain cases, the establishment of provisions that could affect our results.

Any mismatches between the cash outflows for the payment of litigation costs of Raízen and the time of receipt of the related reimbursement by the Joint Venture’s shareholders may lead to pressures on Raízen’s cash flows.

Pursuant to the agreement entered into in the context of the formation of the Raízen joint venture, we agree that we will reimburse our shareholders or be reimbursed by them, as the case may be, for any amounts received or paid in relation to the lawsuits, provided that the events triggering such payments or receipts have occurred prior to the formation of the Raízen joint venture on June 1, 2011, and provided such amounts have actually been paid or received.

The agreement also provides that our controlling shareholders are required to indemnify us for any expenses related to litigation (tax, labor, civil and others) that have been caused by events prior to the formation of the Raízen joint venture. Any mismatch between cash outflows to pay litigation costs and the timing of receipt of the related reimbursement by our shareholders, or any failure by our shareholders to reimburse us, could lead to pressure on our cash flows.

In addition, Brazilian courts, in some circumstances, understand that a controlling shareholder, a successor entity of another company, a company assignee of another company’s assets and other companies subject to the common control of the assignor or predecessor company must all be liable, jointly and separately for, among other obligations, labor, social security, civil, tax or environmental obligations of the assignor, assignee or predecessor. Therefore, we may be liable for obligations of our controlling shareholders for which we have not made and do not intend to make any provisions, which could adversely affect our business, financial condition and results of operations.

Crop disease and pestilence may strike our crops which may result in destruction of a significant portion of the harvest.

Crop disease and pestilence can occur from time to time and have a devastating effect on Raízen’s crops, potentially rendering useless or unusable all or a substantial portion of affected harvests. Even when only a portion of the crop is damaged, Raízen’s business, financial condition and results of operations could be adversely affected because we may have incurred a substantial portion of the production cost for the related harvest. The cost of treatment of crop disease tends to be high. Any serious incidents of crop disease or pestilence, and related costs, may adversely affect Raízen’s production levels and, as a result, our net sales and overall financial performance.

Significant competition in Brazil, Argentina and Paraguay, as well as anticompetitive and illegal practices, may distort prices and adversely affect our market share, our operations and our profitability.

The fuel distribution markets in Brazil and Argentina are highly competitive within both the wholesale and retail segments. Raízen competes with small and large domestic fuel distributors. Large players may be more flexible than Raízen in responding to volatile industry or market conditions, such as shortages of crude oil and other raw materials or intense price fluctuations. In addition, Raízen competes with producers and traders in other industries that provide alternative forms of energy and fuel to satisfy the requirements of our industrial, commercial and retail customers.

Certain measures currently being taken by participants in the fuel distribution market, including the expansion of their distribution networks, as well as the arrival of new participants or the offer of alternative forms of energy and fuel, may result in an increase in competition and/or fuel supply and a consequent decrease in fuel prices, which could have an adverse effect on our business, financial condition and results of operations.

Intense competition and the actions of Raízen’s competitors could lead to reduced profit margins for the products we sell, as well as reductions in sales volumes, which could have a material adverse effect on our business, financial condition and results of operations. In recent years, anticompetitive practices have been one of the main problems affecting fuel distributors in Brazil. Generally these practices have involved a combination of tax evasion and fuel adulteration, such as the dilution of gasoline by mixing solvents or adding anhydrous ethanol in an amount greater than that permitted by applicable law (the overall taxation of anhydrous ethanol is lower than hydrated ethanol and gasoline).

Taxes constitute a significant portion of the cost of fuels sold in Brazil. For this reason, tax evasion by some fuel distributors has been prevalent, which allows them to lower the prices they charge. These practices have enabled certain distributors to supply large quantities of fuel products at prices lower than those offered by the major distributors, including us, which has resulted in a considerable increase in the sales volumes of the distributors who have adopted these practices. The final prices for fuels are calculated based on the taxes levied on their purchase and sale, among other factors. If such practices become more prevalent, it could lead to lower prices or reduced margins for the products Raízen sells, which could have a material adverse effect on our business, results of operations or financial condition.

Disruption of Raízen’s transportation and logistics services or insufficient investment in public infrastructure could materially adversely affect our operating results.

One of the principal disadvantages of the Brazilian agriculture sector is that key growing regions lie far from major ports. As a result, efficient access to transportation infrastructure and ports is critical to the growth of Brazilian agriculture as a whole and of our operations in particular. As part of its business strategy, Raízen is investing in areas where existing transportation infrastructure is underdeveloped.

A substantial portion of Brazilian agricultural production is currently transported by truck, a means of transportation significantly more expensive than the rail transportation available to U.S. and other international producers. Raízen’s dependence on truck transport may affect our position as a low-cost producer, such that its ability to compete in world markets may be impaired. Furthermore, Raízen’s supply chain is dependent on road transport and may be adversely affected by weather conditions which require a decrease or stoppage in road transport. Any such impediments to road traffic along the routes typically used within Raízen’s supply chain could require it and its suppliers to use alternative routes, which may result in delays and have a material adverse effect on Raízen’s business, financial condition and results of operations.

Given that a significant part of Raízen’s sales are exported to countries other than Brazil (both with regards to sugar and ethanol), we may be adversely affected by the lack of port capacity or an increase in the costs of such port capacity as a result of limitations in supply.

Raízen currently outsources the transportation and logistics services necessary to operate its business. Any disruption in these services, or any obligation to take over these services from existing service providers as a result of judicial orders banning the outsourcing of these services, could result in supply problems at Raízen’s processing plants and impair its ability to deliver processed products to our customers in a timely manner. In addition, a natural disaster or other catastrophic event could result in disruption in regional transportation infrastructure systems affecting Raízen’s third-party transportation providers.

Even though road and rail improvement projects have been considered for some areas of Brazil, and in some cases have been implemented, substantial investments are required for road and rail improvement projects, which may not be completed on a timely basis, if at all. Any delay or failure in developing infrastructure systems could hurt the demand for our products, impede our delivery of products or impose additional costs on Raízen.

Raízen depends on third parties to provide its customers and Raízen with facilities and services that are integral to its business. Additionally, Raízen depends on the renewal of contracts with retail dealers that operate Shell-branded sites in Brazil and Argentina.

Raízen has entered into agreements with third-party contractors to provide facilities and services required for its operations, including fuel distribution, storage facilities and transportation services for Raízen's ethanol and sugar operations. Additionally, Raízen depends on contracts entered into with retail dealers that operate Shell-branded sites in Brazil and Argentina. The loss or expiration of Raízen's agreements with third-party contractors and retail dealers, or Raízen's inability to renew these agreements or to negotiate new agreements with other suppliers and retail dealers at comparable rates could harm its business and financial performance. Raízen's reliance on third parties to provide essential services on its behalf, and retail dealers that operate Shell-branded sites in Brazil and Argentina, also gives Raízen less control over the costs, efficiency, timeliness and quality of those services. Contractors' negligence could compromise the safety of the transportation of ethanol from Raízen's production facilities to its export facilities and expose Raízen to the risk of liability for environmental damage caused by such third parties. Raízen is expected to be dependent on such agreements for the foreseeable future, and if Raízen enters any new market segments, Raízen will need to have similar agreements in place.

Brazilian labor authorities, based on case law, previously prohibited the outsourcing of activities considered to be part of an entity's core business. Noncompliance with this prohibition could result in fines and a requirement that the outsourcing be terminated. Recent decisions by the Brazilian Federal Supreme Court (*Supremo Tribunal Federal*), or the "STF," and recently enacted labor laws, have permitted the outsourcing of activities considered part of an entity's core business, provided certain conditions are met. Raízen faces the risk that (1) it may be held indirectly liable when third-party contractors fail to comply with their labor obligations, and (2) it is held jointly and severally liable with its third-party contractors where they fail to comply with their labor obligations if it is proved that there was a direct relationship between Raízen and the outsourced employees, or in cases of fraud. Any such developments could materially adversely affect Raízen and, consequently, us.

Raízen's international operations expose Raízen to political and economic risks in other countries.

Raízen's international activities expose it to risks not faced by companies that operate solely in Brazil. Risks associated with Raízen's international operations include: (i) foreign exchange controls; (ii) changes in the political or economic conditions in a specific country or region, especially in emerging markets such as Argentina; (iii) potentially negative consequences resulting from changes to regulatory requirements; (iv) difficulties and costs associated with our compliance with different laws, treaties and complex international regulations; (v) tax rates that may exceed those applicable in Brazil or Argentina and other countries or gains that may be subject to withholding regimes and an increase in repatriation taxes; (vi) the imposition of trade barriers; and (vii) limitations on the repatriation of undistributed profits. The realization of any of these risks may materially adversely affect Raízen's business, results of operations or financial condition.

The ongoing war between Russia and Ukraine may have a material adverse effect on Raízen's business and our own. Raízen has limited sales operations into Russia and Ukraine. However, as a result of the war, Raízen may be unable to obtain fertilizer (in particular nitrate) on favorable terms, sufficient quantities or at all, which could make agricultural production less efficient (potentially resulting in reduced output) or result in increases in costs (including as a result of the need to purchase other types of fertilizers). While as of the date of this annual report there have not been any material impacts from the ongoing war between Russia and Ukraine on Raízen's business, we are continuously monitoring the developments to assess any potential future impacts that may arise as a result of the ongoing war. The ongoing war between Russia and Ukraine, and/or economic sanctions and import and/or export controls to be imposed by the United States, the UK, the EU or others, and their adverse effects on the wider global economy and market conditions could have a material adverse effect on Raízen's and our business, financial condition and results of operations.

We and Shell have joint control over Raízen

Raízen is controlled by two different shareholders, Cosan and Shell. Pursuant to the Raízen shareholders’ agreement, several matters require the approval of its board of directors, which consists of eight members: two independent members and six members appointed by the two controlling shareholders (three each). Decisions of Raízen’s board of directors require majority approval, which could result in delays in making important decisions related to Raízen’s business if there is any misalignment between our interests and those of Shell.

The shared control may result in deadlocks and disputes between us and Shell regarding strategy, control and other important matters. Any such deadlocks and disputes could have a material adverse effect on Raízen’s and therefore, our business, financial condition and results of operations.

The shareholders’ agreement and other agreements, related to Raízen, into which we have entered with Shell are subject to put and call options and termination provisions.

We and Shell have entered into certain agreements with respect to Raízen that are subject to put and call options (ranging from general to specific events) and termination provisions that, if triggered, would cause a change in the control structure of Raízen.

If any of these events or similar provisions are triggered under the terms of the agreements relating to Raízen, or if certain rights that we or Shell hold in connection therewith are exercised, our interest in Raízen may be liquidated prior to scheduled termination, which could have a materially adverse effect on our business, financial condition and results of operations.

The sale of fuel products refineries in Brazil by Petrobras may have a material adverse effect on our business, financial condition and results of operations.

The cease and desist agreement (*Termo de Compromisso de Cessação*), or “TCC,” entered into by Petrobras and the Brazilian Antitrust Authority regarding the divestment of Petrobras’ refineries marks a significant change to the Brazilian government’s historical approach to the oil and gas industry. The TCC was signed on June 8, 2019, and reflects a focus on promoting market competition and reducing the government’s intervention in the economy. The TCC requires Petrobras to sell its refineries to third-party companies, which is expected to increase competition in the oil market and promote a more dynamic and efficient sector. Competition in the fuel distribution industry may be increased if the oil product refineries that are currently being sold by Petrobras are acquired by third parties. Similarly, Raízen may be impacted by the acquisition of Petrobras’ refineries by private investors that practice more restrictive pricing and supply policies, limiting access to petroleum products from these locations. Additionally, we cannot assure you that Raízen would be successful if it acquires, directly or indirectly, any of the refineries that are being sold, which may have a material adverse effect on Raízen’s and our business, financial condition and results of operations. On the other hand, there is a possibility that the newly elected Brazilian government administration decides to abandon the plan to sell Petrobras’ refineries, despite the TCC having been entered into by Petrobras and the Brazilian Antitrust Authority. This decision would represent a significant shift in the government’s approach to the oil and gas industry, and it would likely face resistance from market participants and regulators. There is a possibility that the sale of Petrobras’ refinery assets is put on review by the newly elected Brazilian government administration; however, such scenario may help to maintain current market conditions in favor of Raízen. Any of the adverse developments referred to above as well as the ongoing uncertainty with respect to the sale of fuel products refineries may have a material adverse effect on our business, financial condition and results of operations.

The high concentration of the Brazilian aviation market in a small number of airlines could have a material adverse effect on Raízen's and our business, financial condition and results of operations should any of these companies face financial difficulties.

Raízen supplies fuel to the Brazilian aviation market, which is highly concentrated in a few airlines. LATAM, Gol and Azul, according to the Brazilian National Civil Aviation Agency (*Agência Nacional de Aviação Civil*), are the three biggest national airlines in terms of number of passengers. If any of these airlines were to encounter financial difficulties, this could have a material adverse effect on our business, financial condition and results of operations and those of our subsidiaries, including Raízen's.

Considering the high concentration in commercial aviation, the migration of any of the large domestic airlines to another distributor of fuel could also have a material adverse effect on Raízen's and our business, financial condition and results of operations.

Risks Related to Gas and Power

The loss of our existing concessions may have a material adverse effect on our business and results of operations.

In Brazil, gas distribution services are provided through concessions granted by governmental authorities. Pursuant to Law No. 8,987 dated February 13, 1995, as amended, or the Concessions Law, natural gas concessions are subject to early termination in certain events. Concession agreements may be terminated as a consequence of the following: (i) expiration of the contractual term; (ii) expropriation of the concessions in the public interest (i.e., *encampação*); (iii) forfeiture (*caducidade*); (iv) termination; (v) annulment of the concession agreement to the extent irregularities in the bidding process or the granting of the concession are identified; or (vi) the bankruptcy of the concessionaire or expiration of the concession-holding entity.

Upon termination of a concession, the concession assets revert to the granting authority. Any compensation received by the concession holder upon termination may not be sufficient to offset investments made in, or the implied rate of return and the loss of future profits of, the concession. In addition, a termination of a concession would not relieve us of liability for any damages caused to third parties in connection with the provision of services or of our obligations to creditors.

If we fail to provide adequate services or if we fail to comply with applicable legal and regulatory norms and contractual clauses, including, without limitation, as a result of a negative outcome in ongoing legal proceedings, our concession agreements may be terminated, and the amount of compensation to be paid by the granting authority may be reduced as a result of the imposition of fines or other penalties, which may have a material adverse effect on our business and results of operations.

Raw material and supply service costs are subject to fluctuations that could have a material adverse effect on Comgás's results of operations.

Raw materials used in Comgás's business and the cost of services it engages for the distribution of natural gas are subject to wide fluctuations depending on market conditions and government policies. These prices are influenced by several factors over which we have little or no control, including, but not limited to, international and national economic conditions, regulations, government policies (including those applicable to the pricing policies of Petrobras, which is our main gas supplier), tariff adjustments and global effects of supply and demand, particularly in commodity prices. We cannot assure you that Comgás's tariff adjustment will be conducted in a timely manner or be sufficient to reflect and/or offset increases in inflation, operation costs and expenses, amortization of investments and taxes. As a result, Comgás might not be able to pass on the increased costs to its customers, which could decrease its profit margin and result in a material adverse effect on Comgás's and our business, financial condition and results of operations.

The transportation and storage of natural gas, the import of liquefied natural gas (LNG), regasification and distribution of natural gas are inherently hazardous.

Through Compass's subsidiaries, our activities involve a variety of inherent hazards and operational risks, including leaks, accidents and mechanical problems. These risks could result in personal injury and death, severe damage to or destruction of property and equipment, pollution and environmental damage and a suspension of operations, which could result in significant lost revenue and other penalties. Compass's subsidiaries do not carry insurance against all the risks and losses to which they are exposed. In addition, insurance proceeds, if available, may be insufficient to cover all losses. The location of pipelines near populated areas, including residential areas, commercial business centers and industrial sites, could increase the level of damages resulting from these risks. The occurrence of any of these events could adversely affect our image, reputation, results of operations, cash flows and financial condition.

Variations in the price of natural gas may affect the operating costs and competitive positions of our businesses, which could adversely affect our results of operations, cash flows and financial condition.

Natural gas prices historically have been volatile and may continue to be volatile in the future. Prices for natural gas are subject to a variety of factors that are beyond our control. These factors include, but are not limited to, the level of consumer demand for, and the supply of, natural gas, processing, gathering and transportation availability, statutory gas supply purchase obligations, price and availability of alternative fuel sources, weather conditions, natural disasters and political conditions or hostilities in natural gas producing regions.

In addition, the amounts we pay under our natural gas supply agreements are composed of two components: (i) one that is indexed to a basket of combustible oils in the international market that is adjusted quarterly and (ii) one that is adjusted annually based on the inflation rate. We have no control over either of these components. Furthermore, natural gas supply agreements often take the form of a "take or pay" agreement, pursuant to which we might be required to pay the difference in amounts between actual consumption and the contract amount. Variations and uncertainties in the price and demand of oil and gas are beyond our control and may adversely affect our results of operations.

We may be unable to renew the term of our concession agreements, or the terms of the concession agreements may be renewed on terms that are less favorable to us, which may have a material adverse effect on our business and results of operations.

Comgás, Sulgás and Gasbrasiliano, all of which are indirect subsidiaries of Cosan and subsidiaries of Compass, carry out natural gas distribution activities pursuant to concession agreements entered into with the governments of the state of São Paulo and Rio Grande do Sul, respectively. The concession agreement of Comgás and Gasbrasiliano in the state of São Paulo expires in 2049 and 2029 respectively, and the concession agreement of Sulgás in the state of Rio Grande do Sul expires in 2044.

Due to the discretionary power of the government of the states of São Paulo and Rio Grande do Sul in granting the renewal of the concession agreements, we cannot assure you that the concession agreements will be renewed, that they will be renewed on the same terms or that, to the extent they are renewed, that the amount of compensation Compass's subsidiaries receive will be sufficient to cover the full value of our investment, all of which may have a material adverse effect on Compass's and our business, results of operations and financial condition.

Moreover, if (1) there are any changes in applicable legislation; (2) we are unable to extend any of our concessions; (3) any extension is subject to certain conditions precedent or the applicable concessions are extended on terms less favorable than those currently in place; or (4) state concession programs are cancelled, our results of operations, the implementation of our growth strategy and the normal course of our business may be materially adversely affected.

We cannot guarantee that the results of tariff reviews pursuant to our concession agreements will be supportive of our strategy. These tariff results may be affected by administrative or judicial decisions.

The principal rights and obligations on our natural gas distribution subsidiaries are contained in the applicable concession agreements and in the regulations established by the applicable regulatory agencies. The concession agreements provide for tariff reviews, which should ordinarily occur in five-year cycles, setting the maximum margin for the prospective cycle and the rates that will apply for each segment. Any delays, disagreements with respect to tariffs or inadequate tariff adjustments relative to our costs could have a negative impact on our results of operations.

Given the margins established in the concession agreements are prospectively set and approved by the applicable regulatory agencies and consider, among others, the costs, the asset base, investments, rate of remuneration, depreciation and projections for each tariff cycle, the results of prior, current and future tariff cycles may not be supportive of our strategy and/or may be challenged or amended, including as a result of third-party judicial and/or administrative proceedings.

As part of the tariff review processes, our natural gas distribution subsidiaries and third parties initiated certain procedures and appeals with the applicable regulatory agencies, which are currently pending. They relate to certain material and formal aspects of the tariff review procedures, including with respect to required revenue formation and asset base forecast, and they could potentially result in new judicial and/or administrative proceedings related to past tariff reviews and/or could reduce our margins and adversely affect the balance of the concession, including our ability to generate revenues, our investment capacity and our operations.

The liberalization of the gas market in Brazil depends on compliance by Petrobras with a cease and desist agreement (Termo de Compromisso de Cessação). Any noncompliance or delay in the implementation of the TCC may hinder or prevent the development of the natural gas market, which may have a material adverse effect on our business.

As of the date of this annual report, Petrobras dominates the Brazilian gas market. In 2019, Petrobras entered into the TCC with the Brazilian Antitrust Authority. The liberalization of the Brazilian gas market and our participation in it may be adversely affected to the extent that Petrobras does not comply with the terms of the TCC and Petrobras's dominant position in the gas sector is not reduced in the coming years, including through (1) the release of contracted and unused capacity in pipelines; (2) access to all essential natural gas infrastructure; (3) the sale of holdings in transportation and distribution companies; and (4) the leasing of liquefied natural gas regasification terminals. Any such developments may limit our participation and the participation of other players in the natural gas market by limiting opportunities for developments, investments, and for the negotiation of gas supply and distribution.

Any failure by Petrobras to comply in whole or in part with the terms of the TCC may adversely affect the liberalization of the Brazilian gas market, which may have a material adverse effect on our business.

We cannot assure you that our natural gas supply contracts will be renewed or extended, or that we will be able to replace these contracts with agreements with alternative suppliers on favorable terms or at all.

Our natural gas supply contracts have a definite term, which is on average 20 years. We could be adversely affected if we are unable to renew or extend these contracts, or to replace them with new agreements with alternative suppliers, on favorable terms or at all. In recent years, additional participants have entered the Brazilian natural gas market, and this increase in competition has also increased the uncertainty around the renewal and/or extension of existing agreements. Failure to renew, extend or replace our natural gas supply contracts on favorable terms, or at all, could have a material adverse effect on our business, financial condition and results of operations.

We may be forced to buy or sell energy at prices that may generate additional costs.

Our energy trading activities require us to estimate future market demand for electricity. We may be adversely affected to the extent that we overestimate or underestimate such demand.

If we underestimate demand and buy less electricity than we need, we may be forced to buy additional electricity in the spot market at substantially higher prices than those provided for in long-term purchase contracts. We may also be unable to pass on these additional costs to our customers and would be subject to penalties pursuant to applicable regulations. On the other hand, if we overestimate demand and buy more electricity than we need (if, for example, a significant portion of our customers start purchasing electricity directly in the open market), we may need to sell the surplus at substantially lower prices. Any significant divergence between our anticipated needs and demand for electricity may adversely affect our results of operations.

Market activities are subject to potential losses due to short-term changes in spot market prices, and may not be able to purchase sufficient electricity to honor the sales contracts.

We may be unable to purchase the electricity we need to fulfill our sales contracts, which may expose us to short-term market prices that are significantly higher than the prices set by our medium and long-term contracts. Free market contracts are subject to possible mismatches between the volume of generated or purchased electricity (supply) and the volume of electricity sold or consumed (demand). These volume mismatches are settled by the CCEE at the differentiated settlement price (*Preço de Liquidação das Diferenças*), or the PLD. The PLD is calculated weekly and is based on the Marginal Cost of Operation, or the CMO, and is limited to minimum and maximum values, which are reviewed and set by the ANEEL annually. Changes in short-term market prices can lead to potential losses in our market activities. The PLD may be impacted by (1) variations in expected and verified loads; (2) variations in the levels of hydroelectric plant reservoirs; (3) decreases/increases in expected and verified inflows; (4) an advanced or delayed start of operations of new generators and/or transmitters; and (5) variations in expected and verified generation of small plants. The occurrence of any of these events could lead to a significant variation in the PLD, which could result in increased costs or reduced revenue from energy sales in the short-term, and could adversely affect our cash flows.

In addition, the purchase and sale of electricity transactions are conducted bilaterally between agents, and we are exposed to the credit risk of our counterparties. A default by one of our counterparties will expose us to market prices at that time, which could adversely affect our projected results of operations.

We may not be successful in executing our business strategy, which may have a material adverse effect on us.

Our business strategy and financial performance depend on the successful implementation of various strategies and on a multitude of factors, including the ability to undertake successful expansions, acquisition opportunities, approval of projects by the competent authorities, variations in the cost of construction, favorable macroeconomic factors, access to financing on attractive terms and increased consumer capacity, among others. We cannot assure you that our strategy will be executed successfully or at all, which may have a material adverse effect on us.

Moreover, we are unable to predict whether or when acquisitions or strategic alliances will occur or the likelihood that any particular transaction will be completed on favorable terms and conditions to us. In addition, we cannot assure you that we will be able to obtain the necessary financing to make any such acquisitions, whether on favorable terms or at all.

Acquisitions, particularly those involving large companies, may bring managerial and operational challenges, including diverting management’s attention from existing operations and difficulties in integrating operations and personnel. Any material failure to integrate new businesses or manage new alliances could adversely affect our business, financial condition and results of operations. Acquisitions may also expose us to potential legal proceedings relating to liabilities involving any acquired company, its directors or officers or contingent liabilities incurred prior to the acquisition. Material liabilities associated with an acquisition, such as labor or environmental liabilities, could materially and adversely affect our reputation, business, results of operations or financial condition and reduce the benefits expected to accrue from such acquisition.

In addition, if we try to expand our current operations, we may face difficulties in obtaining appropriate permits for expansions and installation of new projects. In addition, any major acquisition we envisaged may be subject to antitrust and other regulatory approvals, and we may not be successful in obtaining such approvals on a timely basis or at all. Failure to obtain such approvals may result in fines or penalties for us. In addition, the expansions may not achieve the level of revenue and profitability in the time frame we estimate and, consequently, may adversely affect our profitability, which could have a material adverse effect on us.

Finally, we may not be able to fully implement our business strategy as projected, which may result in increased investments and operating expenses that may not be offset by the expected increase in revenue (if such an expected increase materializes in full or at all, which we cannot guarantee), resulting in a decrease of our operating margins. Failure to implement our strategy may have a material adverse effect on our business, financial condition and results of operations.

Compass is subject to regulatory risks arising from the different state regulatory regimes to which its operations are subject.

Several Brazilian states have local regulatory agencies that conduct tariff reviews and regulate gas distribution services. There is a risk that tariff reviews in certain states may be delayed, or that such states may apply the provisions of the concession contracts in a manner which we consider to be incorrect, since reviews occur (or should occur) annually for all distributors operating under the cost plus model. A delay of six to eight months in the conclusion of a tariff review process may impact the revision of the following year, given the proximity of the tariff updates.

We also cannot assure you that state regulatory agencies will conduct their policy-making decisions and reviews in a manner which is consistent across all of the states in which we operate. This may result in divergent regulatory standards across states, which could increase our compliance costs. State governments may also from time to time appoint or remove senior civil servants from these regulatory agencies, which may affect the agencies’ decision-making process and decisions, and thereby have a material adverse effect on Compass.

Furthermore, certain of these state regulatory agencies are relatively new and do not therefore have established regulatory review processes and methods. Accordingly, they tend to base their decisions on precedents from other state regulatory agencies. There is therefore a risk that a precedent decision that is adverse to us in one state (for example, about tariff calculation, or the recognition of operating expenses and/or capital expenditure items) may adversely affect our business other states as well.

The administrative penalties and sanctions applied by these regulatory agencies may range from a simple warning to forfeiture of the concession, depending on (i) the scope and severity of the violation; (ii) the size of the damage; (iii) the advantage gained through the violation; (iv) the company's record; and (v) the duration of the violation.

Any delays in the exploration, development, negotiation or other issues related to the supply of gas from the pre-salt gas fields and Bolivia, as well as delays in negotiations or operational issues that create compliance issues with the expected timetables for the supply of gas through the importation of liquefied natural gas, may affect the plans and profitability of our activities and those of our subsidiaries.

The success of our and our subsidiaries' strategies depends on our ability to access different sources of natural gas supply to be competitive and expand our supply options for consumption in the Brazilian market.

There are currently alternatives for accessing natural gas, such as pre-salt, mainly from the Santos basin in Brazil, gas from Bolivia imported via pipelines, and liquefied natural gas ("LNG") imported into Brazil from overseas and made available to customers after regasification in terminals such as the Terminal de Regaseificação de GNL de São Paulo S.A., or "TRSP." Each of these sources has different risks related to exploration, development and supply. Operational issues that hinder access or delay negotiations for the supply of natural gas, or additionally in the case of LNG, the expected timetable for the TRSP project or the importation of LNG, may adversely affect our strategy and operations, and could have a material adverse effect on our business, financial condition and results of operations.

In addition, a public hearing before the ANP is underway in Brazil to implement changes to the process for obtaining licenses and authorizations to operate in the LNG market in Brazil. Depending on the results of such public hearing, there may be adverse impacts to operators working with this type of fuel, including on our business, financial condition and results of operations.

Compass's future performance is uncertain considering the degree of maturity of projects and assets recently incorporated into its portfolio, which may adversely affect our business plan.

Compass has been developing a number of projects and incorporating a number of assets into its portfolio. It is therefore subject to risks, expenses and uncertainties associated with the implementation of Compass's business plan, as it may be unable to conclude such projects or obtain the expected benefits from them and the newly incorporated assets. Unlike Comgás, Compass has other companies in their early stages of development, some of them in the pre-operational stage, which involves significant business risks and could result in significant losses. For these initiatives, Compass may face challenges and uncertainties in financial planning due to the absence of available historical data for its newly incorporated assets and uncertainties regarding the nature, scope and results of its future activities.

It is possible that Compass may not be successful in implementing its business strategies, integrating newly acquired assets or completing the development of the structure necessary to conduct its business as planned. If one or more of its projects fails to be completed, or is delayed or cancelled, if Compass is unable to successfully integrate new assets, or if material liabilities relating to such new assets were to materialize, Compass's and our business, financial condition and results of operations may suffer a material adverse effect. Compass's projects may be delayed or cancelled for various reasons, including political instability, governmental regulatory action or supervening legislation, revocation, loss of or not obtaining environmental permits, insufficient capital, natural disasters, engineering failure or changes in business policy. As a result of industry factors or factors relating specifically to Compass, it may be necessary to change its methods of conducting business, in which case its financial condition and results of operations will be adversely affected.

Any such developments could have a material adverse effect on Compass's and our business, financial condition and results of operations.

The supply of natural gas is highly concentrated among a few suppliers. Any decisions by these suppliers regarding the energy portfolio and policies may adversely affect the revenues and operating results of Compass.

The supply of natural gas that our subsidiaries sell is highly concentrated among a few suppliers, which directly impacts Brazil's energy mix. Our subsidiaries remain exposed to this matrix and may have their revenues and operating results adversely impacted due to decisions about the energy portfolio and/or commercial policies adopted by such suppliers.

In addition, a significant interruption of natural gas supply from one of these suppliers could occur in the event of a disruption in their operations or in the event of a commercial disagreement with our subsidiaries, affecting their ability to sell natural gas to their customers and making them more dependent on other suppliers. Thus, if they are unable to obtain an adequate supply of natural gas, our subsidiaries may be forced to meet their demands by purchasing on the international market, which could adversely affect our subsidiaries' revenues and, consequently, those of Compass. Any such developments could have a material adverse effect on Compass's and our business, financial condition and results of operations.

Risks Related to Moove

Moove's international operations expose it to political and economic risks in other countries.

Our lubricants business, "Moove" (consisting of Cosan Lubrificantes e Especialidades S.A., or "CLE," Tirreno Indústria e Comércio de Produtos Químicos Ltda., or "Tirreno," Stanbridge Group Limited, or "Stanbridge," Moove Lubricants Limited, or "Moove Lubricants" (previously known as Comma Oil Chemicals Limited), TTA – SAS Techniques et Technologie Appliquées, or "TTA," LubrigrupoII– Comércio e Distribuição de Lubrificantes, S.A., or "LubrigrupoII," Cosan Lubricantes S.R.L, or "Cosan S.R.L.," Commercial Lubricants Moove Corp, or "Moove Corp" (previously known as Commercial Lubricants, LLC (d/b/a Metrolube), or "Metrolube," and Millennium Moove Corp, or "Millennium," which is the holding company of the PetroChoice subgroup within our group) derives 6% of its gross sales from exports, as it distributes and sells Mobil brand products manufactured in Brazil and sold in Bolivia, Paraguay, Uruguay and Argentina. In addition, in July 2012, we acquired Moove Lubricants, which produces and distributes lubricants throughout Europe and Asia. On November 1, 2017, we also acquired Stanbridge, which distributes lubricants and fuels in the United Kingdom. In addition, Moove has started a new distribution operation under the Mobil brand in Spain, France, Portugal, the United States and Argentina, aligned with its strategy to leverage the ExxonMobil partnership and expand abroad. In the end of 2018, Moove also acquired Moove Corp, which distributes lubricant in the United States, in the states of New York and New Jersey. In May 2022, Moove also acquired Tirreno, a Brazilian specialties manufacturer, to complement Moove's portfolio in the Brazilian market. In addition, in line with our expansion strategy, Moove acquired PetroChoice, a distributor and marketer of lubricants under the Mobil brand and other proprietary brands in the United States, which annually distributes approximately 62 million gallons of lubricants and has assets across 25 states, with two lubricant blending plants and more than 50 distribution centers.

Moove's international activities expose us to risks not faced by companies that operate solely in Brazil. Risks associated with our international operations include: (i) foreign exchange controls; (ii) changes in the political or economic conditions in a specific country or region, especially in emerging markets; (iii) potentially negative consequences resulting from changes to regulatory requirements; (iv) difficulties and costs associated with our observance of different laws, treaties and complex international regulations; (v) tax rates that may exceed those applicable in Brazil and other countries or gains that may be subject to withholding regimes and an increase in repatriation taxes; (vi) imposition of trade barriers; and (vii) limitations on the repatriation of undistributed profits. The realization of any of these risks may have a material adverse effect on Moove's and our business, results of operations or financial condition.

Moreover, Moove exports certain of its products to Russia and Ukraine. These export sales were suspended during the first quarter of 2022. While as of the date of this annual report there have not been any material impacts from the ongoing war between Russia and Ukraine on Moove's business, we are continuously monitoring the developments to assess any potential future impacts that may arise as a result of the ongoing war. The ongoing war between Russia and Ukraine, and/or economic sanctions and import and/or export controls to be imposed by the United States, the UK, the EU or others, and their adverse effects on the wider global economy and market conditions could have a material adverse effect on Moove's and our business, financial condition and results of operations.

We may not be able to maintain or renew certain agreements with third parties which are important to our business.

Our business, financial condition and results of operations may be materially and adversely affected if we are unable to maintain or renew certain agreements (including, without limitation, supply agreements, service contracts, licensing agreements, distribution agreements, joint ventures, partnerships and others) with third parties which are important to our business and operations.

On November 1, 2017, we acquired Stanbridge, which distributes lubricants and fuels in some regions of the United Kingdom. The company, via its subsidiaries, had a non-exclusive supply and service agreements for supply and delivery of ground fuel with the company operating Heathrow Airport. Such agreements had been extended until Airport Energy Services Limited (a subsidiary of Stanbridge) was awarded on July 30, 2020 a new agreement with Heathrow Airport Limited for the supply and delivery of ground fuel at Heathrow Airport. This agreement commenced on August 1, 2020 and will continue in full force and effect until March 31, 2025.

We, through our subsidiary Moove, are the manufacturer and exclusive distributor of lubricants in Brazil based on formulas that have been provided under the terms of the Principal Lubricants Agreement that we have entered into with ExxonMobil. On March 19, 2018, we entered into an agreement with ExxonMobil Lubricants Trading Company which grants our subsidiary Moove the exclusive production, import, distribution and marketing rights in Brazil, Bolivia, Paraguay and Uruguay of lubricants and certain other related products under the Mobil brand until November 30, 2038. This agreement came into force on December 1, 2018. The termination or failure to renew these agreements, or the failure by ExxonMobil to adequately maintain and protect its intellectual property rights, could materially and adversely affect our results of operations or could require significant unplanned investments by us if we are forced to develop or acquire alternative technology. In the future, it may be necessary or desirable to obtain other third-party technology licenses relating to one or more of our products or relating to current or future technologies to enhance our product offerings. However, we may not be able to obtain licensing rights to the needed technology or components on commercially reasonable terms or at all.

Risks Related to Logistics

Rumo depends on a few major customers for a significant portion of its revenue.

The majority of the cargo Rumo transports is for the agricultural commodities industry. Rumo’s major clients are export companies participating in this market, such as Bunge, Cargill, ADM, COFCO, Louis Dreyfus and Amaggi. Those clients accounted for a significant share of Rumo’s total net revenue. We cannot guarantee that Rumo will obtain similar revenue from its major clients in the future. Any change by Rumo’s major clients in their demand for transportation services, including logistics services, may have a material adverse effect on Rumo’s business, financial condition and results of operations. Moreover, Rumo’s revenue predominantly derives from transportation agreements between Rumo and its clients. We cannot guarantee that these transportation agreements will be renewed once they have expired. Failure to renew or otherwise extend these agreements may adversely affect Rumo’s and our business, financial condition and results of operations. For further information, see “Item 4. Information on the Company—B. Business Overview—Logistics—Overview—Major Customers.”

Rumo’s significant indebtedness could adversely affect its financial health and prevent it from fulfilling its indebtedness obligations, which would have a material adverse effect on us, our financial condition and reduce our ability to raise capital to finance our investments and our results of operations and would adversely impact our ability to recover from economic changes.

As of December 31, 2022, Rumo’s (Logistics) gross indebtedness (loans, borrowings and debentures - current and non-current liabilities) was R$16,758.1 million (of which R$1,357.0 million was current liabilities). As of December 31, 2021, Rumo’s (Logistics) gross indebtedness was R$21,178.7 million.

Rumo’s indebtedness level and the composition of its indebtedness could have important consequences to its business. For example, it could: (i) require Rumo to reserve a substantial part of its operational cash flows to pay principal and interest on Rumo’s indebtedness, which will reduce the availability of its cash flow to fund working capital, capital expenditures, acquisitions and investments; (ii) limit its flexibility in planning for, or reacting to, changes in our business and the industry in which we operate; (iii) limit its ability to borrow additional funds, obtain bank guarantees or collateral insurance and generally increase its borrowing costs; and (iv) place Rumo at a competitive disadvantage compared to our competitors that have less indebtedness. We cannot assure you that Rumo will be able to refinance any such indebtedness on terms satisfactory to it or at all.

In addition, certain of Rumo’s financing agreements are subject to early maturity due to cross default and cross acceleration provisions in case Rumo fails to comply with certain nonfinancial covenants or defaults on certain of its financial obligations under such financing agreements.

Any of the aforementioned developments could have a material adverse effect on Rumo as well as on us, our financial condition and results of operations.

Rumo is subject to certain global and domestic market forces that could have an adverse effect on its business and results of operations.

The transportation and logistics industries are highly cyclical and generally subject to fluctuations in the global economy. As a result, Rumo’s operations are subject to a number of risks that could adversely impact its results of operations, including, among others: (i) global and Brazilian macroeconomic conditions, (ii) global demand for agricultural and other commodities, (iii) Brazil’s competitiveness versus other countries for the supply of agricultural commodities, (iv) the competitiveness of domestic transport and logistics providers in Brazil, (v) local demand for transportation of agricultural commodities to foreign markets, (vi) efficient operation of its railroad to meet transportation demand, (vii) shutdowns, blockades, demonstrations, changes in legislation or strikes that interfere with Rumo’s operations and the operations of its business partners, whether on the highway, railroad or port, (viii) specific market factors, and (ix) changes in demand from customers that operate in highly cyclical industries, such as oil and gas and agriculture.

In addition, the ongoing war between Russia and Ukraine may have a material adverse effect on Rumo’s business and, consequently, our own. Rumo has purchased railroad tracks from Russian companies in the past. While we expect that Rumo will be able to source these tracks from other, non-Russian suppliers if needed, the prices charged and terms demanded by these alternative suppliers may not be as favorable as those which Rumo has obtained in the past. In addition, Brazil depends to a significant extent on imports of Russian and Belarusian fertilizer, which have been severely disrupted. Failure to obtain sufficient amounts of fertilizer may result in a reduction in grain production, which could affect Rumo’s transported volumes. While as of the date of this annual report there have not been any material impacts from the ongoing war between Russia and Ukraine on Rumo’s business, we are continuously monitoring the developments to assess any potential future impacts that may arise as a result of the ongoing war. The ongoing war between Russia and Ukraine, and/or economic sanctions and import and/or export controls to be imposed by the United States, the UK, the EU or others, and their adverse effects on the wider global economy and market conditions could have a material adverse effect on Rumo’s and our business, financial condition and results of operations.

Rumo’s concessions to operate port terminals are subject to expiration, limitation on renewal and early termination by granting authorities.

Rumo also holds equity interests in: (i) Terminal XXXIX and the adjacent areas for moving agricultural products and bulk, as well as other goods capable of being transported in those port installations, through a port lease agreement due to expire in 2050; (ii) facilities, equipment and track for rail transport of goods and import/export through the right bank of the port of Santos, by means of a lease agreement with Portofer Transporte Ferroviário Ltda., or Portofer, due to expire in 2025; (iii) Terminal de Granéis do Guarujá, or “TGG,” located on the left bank of the port of Santos, for the transport of solid and liquid bulk, through an area used by Rumo Malha Norte S.A., or “Malha Norte,” via a leasing agreement due to expire in 2027; (iv) Terminal Marítimo do Guarujá, or “TERMAG,” located on the left bank of the port of Santos, mainly for the transport of solid and liquid bulk, through an area used by Malha Norte via a lease agreement due to expire in 2027; and (v) 20% of the shares of Elevações Portuárias S.A., or “EPSA,” as of the date of this annual report, following Rumo’s sale of 80% of its shares in EPSA for R$1,394.7 million on November 14, 2022.

There is an ongoing legal proceeding regarding whether the lease agreements (as amended) relating to Terminal XXXIX, TGG and TERMAG should be subject to the public bidding procedures. This proceeding is currently under appeal in the Brazilian superior courts (*Superior Tribunal de Justiça* and *Supremo Tribunal Federal*). Rumo’s business could be adversely affected as a result of such lawsuits, since all revenues from the movement of solid bulk in relation to the contract in question may no longer be earned if the relevant lease agreement is declared void. With regard to the Portofer lease agreement, there is a public civil action filed by the Brazilian Federal Prosecutors’ Office, to challenge the legal validity of the agreement. See “Item 8. Financial Information—A. Consolidated Statements and Other Financial Information—Legal Proceedings—Possible Losses—Portofer lawsuit.”

If Rumo’s subsidiaries fail to comply with the applicable regulatory rules or contractual obligations relating to their terminals, their leases may be terminated early pursuant to the Concession Law (Law No. 8,987/1995), which applies to port leases. Below is a list of the termination events applicable to Rumo’s subsidiaries’ port lease agreements:

- the expiration of Rumo’s lease (currently in 2036, which can be legally extended up to 2066 through new investments);
- *encampação*, which is the possibility of expropriation of the port concessions by the granting authority during the contractual term. Such expropriation must be in the public interest, performed pursuant to applicable authorizing law and requires the payment of an indemnity for investments not yet depreciated, if applicable;
- a statement of forfeiture, which occurs, at the granting authority’s sole discretion, in case of total or partial non-performance of the lease, without prejudice to the application of other contractual penalties. The forfeiture may be declared under the following circumstances: (1) the service is not being provided adequately (i.e., there has been a breach of the minimum transport requirements); (2) failure to undertake the investments stipulated in the agreement; (3) breach of contractual obligations; (4) transfer of the agreement without prior consent from the granting authority; (5) obstruction of audits carried out by the granting authority; (6) changes to the contractual objective; (7) failure to maintain or conserve the leased facilities; (8) default in financial obligations set out in the agreement; or (9) loss by us of the economic, technical and operating conditions required for the adequate provision of services set out in the agreement. The forfeiture must be preceded by the verification of the default in an administrative proceeding in connection with which we have a right of defense;
- termination by the lessee in the event of breach of contractual provisions or rules established by the granting authority by means of judicial action for this specific purpose;
- annulment; and
- bankruptcy or extinction of the lessee.

The lease agreements and applicable legislation confer several rights of the granting authority pursuant to the specific rules and regulations for the industry. Accordingly, there are contractual provisions that allow, among other things, amendments to the agreement, assignment and/or transfer of the lease agreement (the latter subject to prior consent from the granting authority), provided, however, that all amendments to the agreement must abide by the rules and proceedings set out in the specific law or regulation.

Termination of Rumo’s port lease agreements may adversely impact Rumo’s transportation costs and the turnaround time for the export of Rumo’s products, as well as Rumo’s revenues from service agreements related to Rumo’s port facilities.

In addition, port assets deemed essential to the continuity of port operations will revert to the granting authority upon expiration of the concession. The reversion following expiration is subject to indemnification for investments in assets not yet amortized or depreciated which were undertaken to guarantee service continuity. Upon termination of the concession, it is possible that the investments made in those assets will have not been entirely amortized or depreciated. In this case, Rumo and the granting authority will negotiate the amount of any indemnification for such investments, to the extent such investments have been previously approved by the granting authority. As the final decision on this amount will be made solely by the granting authority, Rumo’s financial condition may be negatively impacted if indemnification eventually approved is not sufficient to compensate us for the investments made.

Any of the aforementioned developments could have a material adverse effect on Rumo as well as on us, our financial condition and results of operations.

We cannot estimate the impact of new regulations applicable to port operations in Brazil.

Until December 6, 2012, port operations in Brazil were governed by Federal Law No. 8,630/1993, or the Ports Modernization Law, which provided the legal framework applicable to the development and operation of government-owned port terminals and facilities in Brazil. In view of the need to improve the applicable legislation, the Brazilian government implemented Law No. 12,815/2013, as amended by Law No. 14,047, dated August 24, 2020, or the “Ports Law,” which expressly revoked the Ports Modernization Law and established a new legal framework with respect to port operations in Brazil. As a result, public ports are regulated by the Ports Law and by specific complementing regulations, such as Decree No. 8,033/2013.

According to the provisions of the Ports Law, there are no more distinctions between third-party and own cargo handled at private port terminals. As a result, public ports are expected to face higher competition. Accordingly, it is possible that Rumo may not be able to reach the minimum cargo movement provided for in its concession agreement for the exploitation of public port terminals, which may subject it to fines and, upon repeated violations, to the early termination of the concession. Even though the Ports Law does not provide for the adjustments of the terms of any concession agreement currently in place, it is possible that new regulations may include such provision. New regulations applicable to port operations in Brazil that might cause an adjustment of the terms in Rumo’s concession agreements may adversely affect our results of operations.

The loss of Brazilian railway concessions may have a material adverse effect on our business.

Brazilian railway concessions are subject to early termination in certain circumstances, including the Brazilian authorities reassuming control of the service pursuant to applicable law or by the termination of the relevant concession for breach of any underlying contractual agreements, in particular the inadequate provision of rail transportation services provided for in the concession agreements. Pursuant to Law No. 8,987 of February 13, 1995, or the “Concession Law,” concession agreements may be terminated as a consequence of: (i) expiration of the contractual term; (ii) expropriation of the port concessions in the public interest (i.e., *encampação*); (iii) forfeiture (*caducidade*); (iv) termination; (v) annulment; (vi) bankruptcy; or (vii) expiration of the concession-holding entity.

Encampação is the seizure of the service by the granting authority during the concession term to the benefit of public interest, by means of a specific authorizing law and after payment of an indemnity. The granting authority may declare the forfeiture of the agreement in the cases in which the concessionaire recurrently defaults on its obligations, or annulment in the cases that the bidding documents for the concession or the concession agreement are tainted by unlawful provisions, or declare penalties, due to total or partial non-performance of the agreement. The granting authority may forfeit the concession when, among other events: (i) the service is being rendered in an inadequate or insufficient manner, according to the norms, criteria, indicators and parameters defining the quality of the service; (ii) the concessionaire breaches contractual, regulatory or legal provisions concerning the concession; (iii) the concessionaire interrupts the service other than for acts of god or force majeure events; (iv) the concessionaire no longer possesses the economic, technical or operational conditions required to adequately render the services under the concession; (v) the concessionaire does not comply with the penalties imposed for breaches within the established deadlines; (vi) the concessionaire fails to comply with the subpoena of the granting authority in order to regularize the service providing; and (vii) the concessionaire does not comply with the subpoena of the granting authority to, within 180 days, present the documentation related to fiscal regularity, in the course of the concession, as provided by law.

Upon termination of a concession, the leased or operated assets revert to the granting authority, and the amount of compensation received may not be sufficient to cover the losses incurred by us as a result of such early termination. In addition, certain creditors may have priority with regard to such compensation.

In addition, pursuant to the terms of Rumo’s concession agreements, the granting authority may intervene in the concession to ensure that the relevant services are being provided as well as to ensure compliance with the applicable contractual clauses and legal and regulatory norms.

An early termination of Rumo’s concession agreement, as well as the imposition upon Rumo of penalties associated with such termination and interventions in our management, may have a material impact on Rumo’s operating results and affect our payment capacity and ability to meet our financial obligations, as well as damage our reputation.

Certain of Rumo’s assets are involved in the provision of public rail transport services and, as a result, would not be available to honor Rumo’s obligations in the event of execution, liquidation or insolvency, which may have an adverse effect on Rumo’s business.

A substantial part of Rumo’s assets is involved in the provision of public services. Such assets will not be subject to liquidation in the case of Rumo’s bankruptcy nor may they be the subject of an order to guarantee the execution of a judicial sentence. Pursuant to legislation currently in force and to the concession agreements to which Rumo is a party, upon the maturity of the respective concession agreements or upon their early termination, Rumo’s assets involved in the provisions of public rail transport services will revert to the granting authority free and clear of any liens or encumbrances and may not be subject to attachment or liquidation. Accordingly, if any indemnities to be paid by the granting authority to us for these reversions are lower than the market value of the reverted assets, the amounts available for distribution to Rumo’s shareholders, including us, may be significantly reduced.

Rumo may not obtain an early renewal of the Rumo Malha Sul S.A., or “Rumo Malha Sul,” concession agreement, currently under review by the Brazilian Transportation Authority (Agência Nacional de Transporte Terrestre), or ANTT, which may have a material adverse effect on Rumo’s investment plan and growth strategy.

The concession agreement for Malha Sul expires in 2027. Rumo has already filed a formal request for an early renewal of the term of this concession agreement, similarly to the request made in connection with the renewal of the Rumo Malha Paulista S.A., or “Rumo Malha Paulista,” concession agreement already approved by ANTT. See “—Rumo made certain commitments in connection with the Rumo Malha Paulista early renewal agreement and may incur additional liability if it fails to comply with them.”

In the meantime, Law No. 13,448/2017 was enacted following the conversion into law of Provisional Measure No. 752/2016 which defines the general rules governing extensions of concessions, including early renewals, as well as re-bidding of partnership contracts of the federal public administration pursuant to the provisions of Law No. 13,334/2016, in the road, rail and airport sectors. Pursuant to the terms of the new law, the granting authority will perform re-bidding if there is a breach of contract or if the concession holders are no longer capable of fulfilling the contractual and financial obligations originally undertaken. In the case of early renewals, rail concession holders must demonstrate provision of adequate services, including compliance with production and safety targets or of safety targets set forth in the applicable contracts, pursuant to the provisions of article 6, paragraph 2 of Law No. 13,448/2017. In addition, contract amendments must contain a timeline for required investments and include measures to discourage potential noncompliance or delay in complying with obligations (such as the annual rebalancing discount and the additional grant payment).

We cannot guarantee that Rumo’s requests for renewals will be successful or that they will occur within the timeframe which we anticipate. In addition, any early renewal may be subject to certain conditions precedent or the applicable concessions may be renewed on terms less favorable than those currently in place. Rumo may also face significant competition from third parties if the granting authority decides to subject our maturing concessions to a re-bidding process.

Rumo made certain commitments in connection with the Rumo Malha Paulista early renewal agreement and may incur additional liability if it fails to comply with them.

The concession contract for Malha Paulista was initially going to expire in 2028. In September 2015, Rumo filed a formal request with ANTT for an early extension of the term of this contract. Such request resulted in the signature of the Second Addendum to the Concession Agreement of Rumo Malha Paulista of December 30, 1998 and its respective attachments. On May 27, 2020, Rumo entered into an amendment to the concession agreement relating to Rumo Malha Paulista with the ANTT. The amendment was reviewed and authorized by the Brazilian Federal Court of Accounts (*Tribunal de Contas da União*). As a result, the term of the Rumo Malha Paulista concession is expected to be extended to 2058, provided that Rumo complies with certain obligations such as investments to increase its operating capacity. Furthermore, the new value of the concession grant is of approximately R$3.4 billion (of which R$2.8 billion has already been paid), to be paid in quarterly installments during the term from 2038 until 2058, with estimated investments of R$6.1 billion (as of the signing of the contract).

Rumo may not be able to comply with all of the conditions imposed by the public authority in the Addendum, which could prevent Rumo from extending the concession to 2058. Failure to comply with such conditions may subject Rumo to sanctions.

Rumo's Brazilian rail tariffs are subject to a maximum rate established by the Brazilian government.

Under Rumo's rail network concession agreements, tariffs for our rail freight services are subject to a maximum rate. Maximum tariff rates that Rumo is allowed to charge are adjusted for inflation according to variations in the Price Index-Domestic Supply (*Índice Geral de Preços – Disponibilidade Interna*), or IGP-DI index (or a substitute index) in accordance with applicable Brazilian law or concession agreements. Currently, tariff adjustments are performed on an annual basis, at different months of the year, depending on the terms of each concession agreement. Additionally, the tariffs Rumo charges for rail freight services on our rail network can be revised upward or downward if there is a justified, permanent market and/or costs change that may alter the rail network concession agreements' economic and financial balance, or as determined by the Brazilian government every five years. The mechanisms for restoring the financial balance are defined in Brazilian law or in the agreements and must be requested by the non-breaching party along with adequate economic evidence.

In 2012, the ANTT implemented a review of reference rates that altered the original methodology for defining such rates. The use of revised rate charts could affect Rumo's capacity to generate revenues, as such review revised most rates downward and established a cap for Malha Norte, which originally was not subject to a cap.

ANTT may implement a review of the reference rates, changing the methodology for defining the tariffs originally established. Any application of revised tables may impact Rumo's revenues and we cannot guarantee that future tariffs will be set at a level that will allow Rumo to continue operating profitably.

We cannot predict the outcome of an investigation into the conduct of former employees of ALL – América Latina Logística S.A., or "ALL," prior to its acquisition by Rumo.

During 2016, Rumo became aware of certain press reports alleging that improper payments to government officials were made by former employees of ALL (prior to being acquired by Rumo) in connection with an investment by *Fundo de Investimento do Fundo de Garantia do Tempo de Serviço*, or "FI-FGTS," in Rumo's indirect subsidiary Brado Logística and in ALL. As a result of these allegations, Rumo hired external advisors to conduct an internal investigation. Upon completion of the investigation, in July 2016, we voluntarily submitted a report to the Public Prosecutor's Office, clarifying that the facts found refer to the period prior to our merger with ALL.

Rumo has been made aware that information regarding this investigation report was added to the records of a criminal investigative procedure initiated by the Federal Prosecutor's Office to investigate these and other facts. As of the date of this annual report, this investigative proceeding is ongoing.

In June of 2021 Rumo became aware of certain press reports alleging that a former chief executive officer of ALL (prior to being acquired by Rumo) had been involved in suspicious payments made in 2013 to companies connected to a certain politician. Rumo immediately investigated and informed the legal authorities. These payments had been also reported in 2016 to the legal authorities, as noted above. A criminal investigation is ongoing, but Rumo is not a party to this criminal investigation. As of the date of this annual report, we can neither predict the outcome of the criminal investigation, the consequences of any findings or any measures that may be taken by local authorities, any of which may have a material adverse effect on Rumo.

Rumo may not be successful in reducing operating costs and increasing operating efficiencies.

Rumo may not be able to achieve expected cost savings, which rely on several factors such as rail track prices, railroad ties, fuel, iron, engineering and other resources required for our operations. Given the competitive markets in which Rumo operates (in which prices are often set by global market conditions), it is possible that Rumo will not be able to pass increases in costs of materials onto the price of our services (including as a result of limits applying to our tariffs), which would materially and adversely affect its financial performance.

Downturns in certain cyclical market sectors in which Rumo's customers operate and seasonal trends could have a material adverse effect on Rumo's business.

The transportation and logistics industries are highly cyclical, generally tracking the cycles of the world economy. Accordingly, the transportation industry is affected by macroeconomic conditions and by various factors within each particular industry that may influence operating results. Some of Rumo's customers do business in highly cyclical markets (including as a result of harvest seasonality), including the oil and gas and agricultural sectors.

Soybean harvests generally occur between January and May, corn harvests (mainly for export) generally occur between April and July and sugar harvests generally begin in April or May and end in November or December. For this reason, Rumo typically transports larger volumes of goods in the second and third quarters of each year and lower volumes in the "off season" (i.e., the first and fourth quarters of each year).

Any downturn in these industries may have a material adverse effect on Rumo's business, financial condition and results of operations. In addition, some of the products Rumo transports have shown a historical pattern of price cyclicality, which has typically been influenced by the general economic environment, industry capacity and demand. Rumo is also subject to the risk that sugarcane mills may change their production mix in favor of ethanol if the relative prices of the two products swing that way. This could reduce the demand for sugar logistics and transport.

We cannot assure you that prices and demand for these products will not decline in the future, adversely affecting those industries and, in turn, Rumo's and our business, financial condition and results of operations.

Rumo operates in a competitive industry, and if it is unable to adequately address factors that may adversely affect its revenue and costs, Rumo's business could suffer.

An increase in competition may reduce Rumo's revenues and result in smaller profit margins or the loss of market share. Rumo's business, financial condition and results of operations may be adversely affected if we are not able to adequately compete in the market.

Competition in the transportation services industry is intense and includes:

- competition with other transportation modes, such as road freight;
- competition with alternative export options for agricultural products through other ports (particularly in the northern region of Brazil) to the detriment of the ports of Santos (State of São Paulo), Paranaguá (state of Paraná) and São Francisco do Sul (State of Santa Catarina);
- dependence on operating quality and port and terminal capacity;
- the limitations established by the maximum tariffs established by the ANTT;
- a reduction in road tariffs, particularly during times of declining growth rates in the economy or low demand from agricultural producers, which may limit Rumo's ability to maintain or increase rates, operating margins or growth of its business; and
- establishment of cooperative relationships by Rumo's competitors to increase their ability to address shipper needs.

Rumo’s main competitors are companies in the truck transportation business, which has historically been the main cargo transportation mode in Brazil. According to the CNT, trucks transported 65% of Brazil’s production in 2022, while only approximately 15% of that production was transported by rail and approximately 16% was transported on waterways, which includes coastal shipping and 4.5% was transported through pipelines. Although Rumo is expanding our intermodal services via truck transportation, any new measures by the Brazilian government that lower costs for road transportation, such as cheaper toll fares or permanent suspension of the toll-road concession program, may limit Rumo’s growth prospects.

New measures by the Brazilian government that benefit or reduce costs for road transportation, such as cheaper toll fares or permanent suspension of the toll-road concession program, may limit our growth prospects.

Increased competition may lead to decreases in Rumo’s revenues, smaller profit margins or loss of market share. This may adversely impact Rumo’s and our business, financial condition and results of operations.

Rumo operates in a regulated environment, and measures taken by public authorities may impact Rumo’s activities.

The rail services which Rumo provides are regulated and supervised by the Brazilian government and in particular by the Brazilian Ministry of Transportation, Ports and Civil Aviation, as well as the ANTT. The ANTT regulates various aspects of the business of companies active in the Brazilian rail sector, including with regard to requirements for investments, expenses, determination of revenue, and the setting of tariffs in order to guarantee regularity, continuity, efficiency, safety and affordability. These activities are intensely regulated through laws, decrees, provisional measures, ordinances, resolutions and other regulatory and legislative actions. Changes to legislation or regulation relating to the rail sector may adversely affect Rumo’s business, financial results and operating results.

In addition, Rumo’s railroad concession agreements have been entered into with the Brazilian Ministry of Transportation, Ports and Civil Aviation (currently known as the Brazilian Ministry of Infrastructure and acting as granting authority when the grants took place), later substituted by the ANTT after the enactment of Law No. 10,233/2001. Rumo’s operations take place in a highly regulated environment because concessions agreements are administrative contracts. Such contracts are therefore subject to public law, which gives the granting authority the right to: (i) amend the contracts unilaterally when in the public interest (while respecting the rights under the contract); (ii) unilaterally terminate the contracts in the instances provided for in Law No. 8,666/1993; (iii) supervise the execution of the contracts; and (iv) impose sanctions in the case of partial or complete noncompliance with the adjustment (among other instances).

Therefore, notwithstanding the concessionaire’s right to maintain the financial balance of the concession agreement, actions taken by the public administration in general may affect the services rendered by Rumo. For example, if (i) new obligations are imposed; (ii) additional investments not originally provided for in the concession agreements are required as a result of unilateral measures provided for in the statute or through the creation of new regulations by the ANTT; and (iii) the scope of the concession agreements is reduced or certain actions taken by us are rejected or not given effect (such as anticipated concession renewals, extensions of grants in force or extensions under conditions not favorable to us), Rumo’s economic and financial condition and operating results may be adversely affected.

We cannot predict which actions will be taken by the Brazilian federal government in the future and in which aspects such actions may affect Rumo. If Rumo is required to operate in a manner substantially different from that set forth in its business plans, Rumo’s and our business, financial condition and results of operations may be materially adversely affected.

The rail and port elevation services by Rumo and its partners is regulated and may be affected by measures taken by regulatory agencies.

The rail and port elevation services performed by Rumo and its partners are extensively regulated and supervised by the Brazilian federal government, especially through the Brazilian Ministry of Transportation and Ministry of Ports and Airports, as well as ANTT and ANTAQ, which have their activities intensely regulated through laws, decrees, provisional measures, ordinances and resolutions, among other legislative and regulatory acts. Thus, changes in the legislation or in the regulation related to the railway and port sectors may adversely affect our business and the financial and operational results.

The concession contracts are administrative contracts, governed by public law rules, which give the applicable public administration the right to unilaterally modify, terminate and supervise them as well as to apply sanctions. Accordingly, the actions of the public administration may adversely affect the services provided by Rumo if, for example, (i) there is the imposition of new obligations, (ii) there is the imposition of a requirement to make additional investments not originally provided for in the concession agreements, or (iii) the scope of the concession agreements is reduced or certain provisions are not enforced (such as the possible early extension, the extension of the term of the concessions in force or their execution under conditions that are not favorable to us). Any such developments could have a material adverse effect on Rumo’s business, financial condition and results of operations.

We cannot predict which actions will be taken by the Brazilian federal government in the future and in which aspects such actions may affect Rumo. If Rumo is required to operate in a manner substantially different from that set forth in its business plans, Rumo’s and our business, financial condition and results of operations may be materially adversely affected.

Risks Related to Cosan Investments

Owning and managing rural properties involves significant risks.

We own a rural properties management business, which manages 318,328 hectares of land in eight Brazilian states, all of which are leased to third parties. The risks involved in owning and managing rural properties include:

- the value of rural properties can fluctuate based on various factors, such as commodity supply and demand, government policies, economic conditions and weather patterns. Therefore, there is a risk that the value of the rural properties may fluctuate, which could result in gains/losses on the investment; and
- lease payments are made in Brazilian *reais* and are based on a fixed amount of commodity (sugar or soybean bags). As a result, the revenue could be impacted by the following market factors:
  - commodity prices and exchange rates as the lease model is based on the Brazilian domestic market price. Accordingly, global supply and demand and exchange rate fluctuations will directly impact local prices, and therefore, lease revenue;
  - the yield is dependent on various environmental factors, such as weather conditions, pests and diseases. These factors can impact crop yield and quality which, in turn, can indirectly affect lease income. Additionally, the cost of production can increase due to unexpected events such as natural disasters, which can reduce profitability. The lease model prevents the landowner from being exposed to production risk; however, in the event of substantial loss, lease revenue could be impacted;
  - operating rural properties requires significant knowledge, skills and resources. There is a risk that the operators (whether they are farmers or other rural professionals) may not be able to manage the land effectively, resulting in decreased profitability or even crop failure. Similarly to production risk, the lease model also prevents the landowner from being exposed to operational risk; however, in the event of total loss, lease revenue could be impacted; and
  - legal and regulatory risk, in that agriculture is subject to various laws and regulations related to land use, water rights, labor and environmental protection, such as the Brazilian Forest Code. There is a risk that changes in law or regulations may impact the profitability of the rural properties investment.

We consider these risks before acquiring rural properties as investments. However, we cannot assure you that we will always be able to accurately assess these risks, or that other risks which we may not have anticipated will not materialize. Any such developments could have a material adverse effect on our business, financial condition and results of operations.

Risks Related to Our American Depositary Shares and Our Common Shares

Our ADSs may not be as liquid as our common shares.

Some companies that have issued ADSs on U.S. stock exchanges have experienced lower levels of liquidity in their ADSs than is the case for their equity securities listed on their domestic exchange. There is a possibility that our ADSs, listed on the NYSE, will be less liquid than our common shares listed on the B3.

There is no guarantee that an active public market in our ADSs will develop or be sustained. If an active market for our ADSs does not develop, the market price and liquidity our ADSs may be adversely affected.

Our maintenance of two exchange listings may adversely affect liquidity in the market for our common shares and ADSs and result in pricing differentials between the two exchanges.

Our common shares are listed on the B3 and our ADSs are listed on the NYSE. It is not possible to predict how trading will be conducted on such markets. The listing of our common shares and our ADSs on two distinct exchanges may adversely affect the liquidity of such shares in one or both markets and may adversely affect the development of an active trading market for our common shares on the B3 and for our ADSs on the NYSE. In addition, differences in the trading schedules, as well as the volatility in the exchange rate of the two trading currencies, may result in different trading prices for our common shares and our ADSs.

The market price of our common shares and ADSs may be volatile.

The market price of our common shares and ADSs may be volatile. Broad general economic, political, market and industry factors may adversely affect the market price of our common shares and ADSs, regardless of our actual operating performance. Factors that could cause fluctuation in the price of our commons shares and ADSs include:

- actual or anticipated variations in quarterly operating results and the results of competitors;
- changes in financial projections by us, if any, or by any securities analysts that might cover our common shares or ADSs;
- conditions or trends in the industry, including regulatory changes or changes in the securities marketplace;
- announcements by us or our competitors of significant acquisitions, strategic partnerships or divestitures;
- announcements of investigations or regulatory scrutiny of our operations or lawsuits filed against us;
- additions or departures of key personnel;
- volatility in global and Brazilian capital markets;
- variations in exchange rates and in particular the exchange rate between the Brazilian *real* and the U.S. dollar;
- other factors affecting the price of securities listed on the B3 and NYSE;
- the ongoing war between Russia and Ukraine, which may have repercussions on the world’s geopolitical and economic scenarios;
- the policies adopted or to be adopted by the new administration in Brazil following the 2022 presidential elections; and
- issuances or sales of our common shares or ADSs, including sales of shares by our directors and officers or our key investors.

Shareholders could be diluted in the future, which could also adversely affect the market price of our common shares and ADSs.

It is possible that we may decide to offer additional common shares or ADSs or securities convertible therein in the future either to raise capital or for other purposes. If our shareholders do not take up such offer or are not eligible to participate in such offering, their proportionate ownership and voting interests would be reduced. An additional offering could have a material adverse effect on the market price of our common shares and ADSs.

In addition, according to art. 172 of Law No. 6,404, of December 15, 1976, as amended, or the “Brazilian Corporation Law,” we may not be required to grant preemptive rights to our shareholders in the event of a capital increase through a public offering of shares or securities convertible into shares, which may result in a dilution of our current shareholders’ stake in our company.

Exchange controls and restrictions on remittances abroad may adversely affect holders of our ADSs.

Brazilian laws provide that whenever a serious imbalance in Brazil's balance of payments exists or is anticipated, the Brazilian federal government may impose temporary restrictions on the repatriation by foreign investors of the proceeds of their investment in Brazil and on the conversion of Brazilian currency into foreign currency. For example, for six months in 1989 and early 1990, the Brazilian federal government restricted all fund transfers that were owed to foreign equity investors and held by the Brazilian Central Bank, in order to preserve Brazil's foreign currency reserves. These amounts were subsequently released in accordance with Brazilian federal government directives. Although the Brazilian federal government has never exercised such a prerogative since, we cannot guarantee that the Brazilian federal government will not take similar actions in the future.

You may be adversely affected if the Brazilian federal government imposes restrictions on the remittance to foreign investors of the proceeds of their investments in Brazil and, as it has done in the past, on the conversion of the *real* into foreign currencies. These restrictions could hinder or prevent the conversion of dividends, distributions or the proceeds from any sale of shares, as the case may be, into U.S. dollars and the remittance of U.S. dollars abroad. We cannot assure that the government will not take this measure or similar measures in the future. Holders of our ADSs could be adversely affected by delays in, or a refusal to grant, any required governmental approval for conversion of *real* payments and remittances abroad in respect of the shares, including the shares underlying our ADSs. In such a case, the depositary will distribute *reais* or hold the *reais* it cannot convert for the account of our ADS holders who have not been paid.

Holders of our ADSs may face difficulties in serving process on or enforcing judgments against us and other persons.

We are organized under, and are subject to, the laws of Brazil, and substantially all our directors and executive officers and our independent registered public accounting firm reside or are based in Brazil. Substantially all of our assets and those of these other persons are located in Brazil. As a result, it may not be possible for holders of the ADSs to effect service of process upon us or these other persons within the United States or other jurisdictions outside Brazil or to enforce against us or these other persons judgments obtained in the United States or other jurisdictions outside Brazil. Because judgments of U.S. courts for civil liabilities based upon the U.S. federal securities laws may only be enforced in Brazil if certain conditions are met, our ADS holders may face greater difficulties in protecting their interests due to actions by us or our directors or executive officers than would shareholders of a U.S. corporation.

The relative volatility and illiquidity of the Brazilian securities markets may adversely affect holders of our common shares and ADSs.

Investments in securities, such as our common shares or ADSs, of issuers from emerging market countries, including Brazil, involve a higher degree of risk than investments in securities of issuers from more developed countries. The Brazilian securities market is substantially smaller, less liquid, more concentrated and more volatile than major securities markets in the United States and other jurisdictions, and may be regulated differently from the ways familiar to U.S. investors. There is also significantly greater concentration in the Brazilian securities market than in major securities markets in the United States.

The uncertainties caused by the outbreak of COVID-19 had an adverse impact on the global economy and global capital markets, including in Brazil, especially during 2020. As a result of this volatility, the B3's circuit breaker mechanism was triggered eight times during March 2020. The prices of most securities traded on the NYSE and the B3, including the price of our common shares, were adversely affected by the COVID-19 pandemic. Impacts similar to those described above may reoccur, which may result in volatility in the price of our securities traded on the NYSE and on the B3. We cannot assure you that the price of our securities will not fall below the lowest levels at which our securities traded during the ongoing pandemic.

These features may substantially limit the ability to sell our common shares, including in the form of ADSs, at a price and time at which holders wish to do so. A liquid and active market may never develop for the ADSs, and as a result, the ability of holders of our ADSs to sell at the desired price or time may be significantly hindered.

Holders of our ADSs may face difficulties in protecting their interests because we are subject to different corporate rules and regulations than a U.S. company and holders of our ADSs may have fewer and less well-defined rights.

Holders of our ADSs are not our direct shareholders and may be unable to enforce the rights of shareholders under our by-laws and Brazilian law. Holders of our common shares are generally required under our current by-laws to resolve any disputes with us through arbitration. Our corporate affairs are governed by our by-laws and Brazilian law, which differ from the legal principles that would apply if we were incorporated in a jurisdiction in the United States, or elsewhere outside Brazil. Although insider trading and price manipulation are crimes under Brazilian law, the Brazilian securities markets are not as highly regulated and supervised as the U.S. securities markets or the markets in some other jurisdictions. In addition, rules and policies against self-dealing or for preserving shareholder interests may also be less well-defined and enforced in Brazil than in the United States and certain other countries, which may put holders of our ADSs at a potential disadvantage.

Holders of our ADSs do not have the same voting rights as our shareholders.

Holders of our ADSs do not have the same voting rights as holders of our common shares. Holders of our ADSs are entitled to the contractual rights set forth for their benefit under the deposit agreement. ADS holders exercise voting rights by providing instructions to the Depositary, as opposed to attending shareholders’ meetings or voting by other means available to shareholders. In practice, the ability of a holder of ADSs to instruct the Depositary as to voting will depend on the timing and procedures for providing instructions to the Depositary, either directly or through the holder’s custodian and clearing system.

Due to delays in notification to and by the Depositary, holders of our ADSs may not be able to give voting instructions to the Depositary or to withdraw our common shares underlying their ADSs to vote such shares in person, virtually or by proxy.

Despite our efforts, the Depositary may not receive voting materials for our common shares represented by ADSs in time to ensure that holders of such ADSs can either instruct the Depositary to vote our common shares underlying their ADSs or withdraw such shares to vote them in person, virtually or by proxy.

In addition, the Depositary’s liability to holders of ADSs for failing to execute voting instructions, or for the manner in which voting instructions are executed, will be limited by the deposit agreement for the ADSs. As a result, holders of our ADSs may not be able to exercise their rights to give voting instructions, or to vote in person, virtually or by proxy, and may not have any recourse against the Depositary or us if our common shares underlying their ADSs are not voted as they have requested or if our common shares underlying their ADSs cannot be voted.

An exchange of ADSs for common shares risks the loss of certain foreign currency remittance advantages.

Holders of our ADSs benefit from the certificate of foreign capital registration, which permits the Depositary to convert dividends and other distributions with respect to common shares into foreign currency, and to remit the proceeds abroad. Holders of our ADSs who exchange their ADSs for common shares will then be entitled to rely on the Depositary’s certificate of foreign capital registration for five business days from the date of exchange. Thereafter, they will not be able to remit non-Brazilian currency abroad unless they obtain their own certificate of foreign capital registration, or unless they qualify under Resolution No. 4,373/2014 of the CMN, which entitles certain investors to buy and sell shares on Brazilian stock exchanges without obtaining separate certificates of registration. There can be no assurance that the certificate of registration of the Depositary, or any certificate of foreign capital registration obtained by holders of our ADSs, will not be affected by future legislative or regulatory changes, or that additional Brazilian law restrictions applicable to their investment in our ADSs may not be imposed in the future.

Holders of our ADSs may not be able to exercise the preemptive rights relating to the common shares.

Holders of our ADSs may not be able to exercise the preemptive rights relating to the common shares underlying their ADSs unless a registration statement under the Securities Act is effective with respect to the rights or an exemption from the registration requirements of the Securities Act is available. We are not obligated to file a registration statement with respect to the shares or other securities relating to these preemptive rights, and we cannot assure holders of the ADSs that we will file any such registration statement. Unless we file a registration statement or an exemption from registration applies, holders of our ADSs may receive only the net proceeds from the sale of their preemptive rights by the Depositary or, if the preemptive rights cannot be sold, the rights will be allowed to lapse.

The holders of our common shares (including the common shares underlying the ADSs) may not receive dividends or interest on own capital.

According to our current by-laws, our shareholders are entitled to receive a mandatory minimum annual dividend equal to 25% of our annual net profit, calculated and adjusted under the terms of the Brazilian Corporation Law. Our current by-laws allow for the payment of intermediary dividends, to the retained earnings account or the existing earnings reserves in the last yearly or six-month balance, by means of the annual dividend. We may also pay interest on own capital, as described by Brazilian law. The intermediary dividends and the interest on own capital declared in each fiscal period may be imputed to the mandatory dividend that results from the fiscal period in which they are distributed. At the general shareholders’ meeting, shareholders may decide on the capitalization, on the offset of our losses or on the net profit retention, as provided for in the Brazilian Corporation Law, with the aforementioned net profit not being made available for the payment of dividends or interest on own capital.

In addition, Brazilian Corporation Law allows publicly-held companies, like us, to suspend the required minimum distribution of dividends. The payment of dividends may be suspended if our management reports at an annual shareholders' meeting that such distribution would be inadvisable in view of our financial condition and has provided the shareholders at the annual general shareholders' meeting with an opinion to that effect, which has been reviewed by our fiscal council, if installed. In addition, our management must submit a report to the CVM within five days following said meeting clarifying the reasoning for any such non-payment. If the abovementioned occurs, holders of the common shares (including the common shares underlying the ADSs) may not receive dividends or interest on own capital.

Judgments of Brazilian courts with respect to our shares will be payable only in reais.

If proceedings are brought in the courts of Brazil seeking to enforce our obligations in respect of the common shares, we will not be required to discharge our obligations in a currency other than *reais*. Under Brazilian exchange control limitations, an obligation in Brazil to pay amounts denominated in a currency other than *reais* may only be satisfied in Brazilian currency at the exchange rate, as determined by the Brazilian Central Bank, in effect on the date the judgment is obtained, and such amounts are then adjusted to reflect exchange rate variations through the effective payment date. The then-prevailing exchange rate may not afford non-Brazilian investors with full compensation for any claim arising out of or related to our obligations under the ADSs.

As a foreign private issuer, we have different disclosure and other requirements than U.S. domestic registrants.

As a foreign private issuer under the Exchange Act, we may be subject to different disclosure and other requirements than U.S. domestic registrants. For example, as a foreign private issuer, in the United States, we are not subject to the same disclosure requirements as a U.S. domestic registrant under the Exchange Act, including the requirements to prepare and issue quarterly reports on Form 10-Q or to file current reports on Form 8-K upon the occurrence of specified significant events, the proxy rules applicable to U.S. domestic registrants under Section 14 of the Exchange Act or the insider reporting and short-swing profit rules applicable to U.S. domestic registrants under Section 16 of the Exchange Act. In addition, we rely on exemptions from certain U.S. rules, which permit us to follow Brazilian legal requirements rather than certain of the requirements that are applicable to U.S. domestic registrants.

Furthermore, foreign private issuers are required to file their annual report on Form 20-F within 120 days following the end of each fiscal year, while U.S. domestic issuers that are accelerated filers are required to file their annual report on Form 10-K within 75 days following the end of each fiscal year. As a result of the above, even though, we are required to make submissions on Form 6-K disclosing the information that we have made or are required to make public pursuant to Brazilian law, or are required to distribute to shareholders generally, and that is material to us, you may not receive information of the same type or amount that is required to be disclosed to shareholders of a U.S. company.

We are a foreign private issuer and, as a result, in accordance with the listing requirements of the NYSE, we rely on certain home country governance practices from Brazil, rather than the corporate governance requirements of the NYSE.

We report under the Exchange Act as a non-U.S. company with foreign private issuer status. The NYSE rules provide that foreign private issuers are permitted to follow home country practice in lieu of certain NYSE corporate governance standards. The standards that are applicable to us are considerably different than the standards applied to U.S. domestic issuers. For instance, we are not required to:

- have a majority of independent members on our board of directors (other than as may result from the requirements for audit committee member independence under the Exchange Act);
- have a minimum of three independent members on our audit committee;
- have a compensation committee or a nominating and corporate governance committee; or
- have regularly scheduled executive sessions of our board that consist of independent directors only.

As a foreign private issuer, we may follow our home country practice in Brazil (including the rules and regulations of the B3 and the CVM) in lieu of the above requirements. Therefore, the approach to governance adopted by our board of directors may be different from that of a board of directors consisting of a majority of independent directors, and, as a result, our management oversight may be more limited than if we were subject to all of the NYSE corporate governance standards. Accordingly, you may not have the same protections afforded to shareholders of companies that are not foreign private issuers. See "Item 6. Directors, Senior Management and Employees—C. Board Practices—Summary of Significant Differences of Corporate Governance Practices."

Holders of Cosan ADSs may not be entitled to a jury trial with respect to claims arising under the deposit agreement, which could result less favorable results to the plaintiff(s) in any such action.

The deposit agreement governing the Cosan ADSs representing the Cosan common shares provides that holders and beneficial owners of Cosan ADSs irrevocably waive the right to a trial by jury in any legal proceeding arising out of or relating to the deposit agreement, the Cosan common shares or the Cosan ADSs or the transactions contemplated thereby, including claims under U.S. federal securities laws, against us or the Depositary to the fullest extent permitted by applicable law. The waiver continues to apply to claims that arise during the period when a holder holds the Cosan ADSs, whether the holder of Cosan ADSs acquired the Cosan ADSs pursuant to the Merger or in secondary transactions. If this jury trial waiver provision is prohibited by applicable law, an action could nevertheless proceed under the terms of the deposit agreement with a jury trial. To our knowledge, the enforceability of a contractual pre-dispute jury trial waiver in connection with claims arising under the U.S. federal securities laws has not been finally adjudicated by the United States Supreme Court. However, we believe that a jury trial waiver provision is generally enforceable under the laws of the state of New York, which govern the deposit agreement, by a court of the state of New York or a federal court in New York, which have jurisdiction over matters arising under the deposit agreement, applying such law. In determining whether to enforce a jury trial waiver provision, New York courts and federal courts will consider whether the visibility of the jury trial waiver provision within the agreement is sufficiently prominent such that a party has knowingly waived any right to trial by jury. We believe that this is the case with respect to the deposit agreement, the Cosan common shares and the Cosan ADSs and the transactions contemplated thereby. In addition, New York courts will not enforce a jury trial waiver provision in order to bar a viable setoff or counterclaim sounding in fraud or one which is based upon a creditor’s negligence in failing to liquidate collateral upon a guarantor’s demand, or in the case of an intentional tort claim (as opposed to a contract dispute), none of which we believe are applicable in the case of the deposit agreement, the Cosan common shares or the Cosan ADSs or the transactions contemplated thereby. No condition, stipulation or provision of the deposit agreement or Cosan ADSs serves as a waiver by any holder or beneficial owner of Cosan ADSs or by us or the depositary of compliance with any provision of the U.S. federal securities laws. If you or any other holder or beneficial owner of Cosan ADSs brings a claim against us or the Depositary in connection with matters arising under the deposit agreement, the Cosan common shares or the Cosan ADSs or the transactions contemplated thereby, you or such other holder or beneficial owner may not be entitled to a jury trial with respect to such claims, which may result in increased costs to bring a claim, and have the effect of limiting and discouraging lawsuits against us and/or the Depositary. If a lawsuit is brought against us and/or the Depositary under the deposit agreement, it may be heard only by a judge or justice of the applicable trial court, which would be conducted according to different civil procedures and may augur different results than a trial by jury would have had, including results that could be less favorable to the plaintiff(s) in any such action.

Although we believe we were not a passive foreign investment company (“PFIC”) for our taxable year ended December 31, 2022, there is a risk that we will be a PFIC for 2023 or any future taxable year, which could result in adverse U.S. federal income tax consequences to U.S. investors in the ADSs.

In general, a non-U.S. corporation will be a “passive foreign investment company,” or “PFIC,” for U.S. federal income tax purposes for any taxable year in which, after applying certain look-through rules, either (1) at least 75% of its gross income is “passive income” or (2) at least 50% of the average quarterly value of its assets consists of assets that produce “passive income” or are held for the production of “passive income.” For purposes of these calculations, a non-U.S. corporation that owns (or is treated as owning for U.S. federal income tax purposes), directly or indirectly, at least 25% by value of the stock of another corporation is treated as if it held its proportionate share of the assets of the other corporation and received directly its proportionate share of the income of the other corporation. On the other hand, an equity investment in a corporation representing less than 25% by value of that corporation is generally treated as a passive asset for purposes of the PFIC rules. Passive income for this purpose generally includes dividends, interest, royalties, rents and gains from foreign currency, securities and certain commodities transactions. In addition, the value of a company’s goodwill is an active asset under the PFIC rules to the extent attributable to activities that produce active income.

Based on the composition of our income and assets and the estimated market value of our assets, we believe that we were not a PFIC for our taxable year ended December 31, 2022. However, our PFIC status for any taxable year is an annual factual determination that can be made only after the end of that year and depends on the composition of our income and assets and the value of our assets from time to time. We hold significant minority investments in certain entities (representing less than 25% by value of the entity's equity). Accordingly, our PFIC status for any taxable year will depend in part on the value of those minority investments relative to the value of our active assets, including goodwill. The value of our goodwill may be determined, in large part, by reference to our market capitalization. If the value of our minority (less-than-25%-owned) equity investments were to increase relative to our active assets (in particular, if our market capitalization were to decline), we could be treated as a PFIC for our taxable year 2023 and/or future taxable years. Thus, we cannot assure you that we will not be considered a PFIC for any taxable year.

If we are a PFIC for any taxable year during which you hold common shares or ADSs, you generally will be subject to adverse U.S. federal income tax consequences, including increased tax liability on disposition gains and "excess distributions," and additional reporting requirements. This will generally continue to be the case even if we ceased to be a PFIC in a later taxable year, unless certain elections are made. See "Item 10. Additional Information—10.E. Taxation—U.S. Federal Income Tax Considerations—Passive Foreign Investment Company Rules."

Risks Related to the Countries in Which We Operate

Our international operations expose us to political and economic risks in other countries.

Our international activities expose us to risks not faced by companies that operate solely in Brazil. Risks associated with our international operations include: (i) foreign exchange controls; (ii) changes in the political or economic conditions in a specific country or region, especially in emerging markets such as Argentina; (iii) potentially negative consequences resulting from changes to regulatory requirements; (iv) difficulties and costs associated with our compliance with different laws, treaties and complex international regulations; (v) tax rates that may exceed those applicable in Brazil or Argentina and other countries or gains that may be subject to withholding regimes and an increase in repatriation taxes; (vi) the imposition of trade barriers; and (vii) limitations on the repatriation of undistributed profits. The realization of any of these risks may materially adversely affect our business, results of operations or financial condition.

Historically, the Brazilian government has influenced and continues to influence the economy of Brazil, which may negatively affect our business and financial performance.

Political and economic conditions directly affect our business and can result in a material adverse effect on our operations and financial condition. Macroeconomic policies imposed by the government can have significant impacts on Brazilian companies, including ourselves, Rumo, Moove and Compass, as well as market conditions and securities prices in Brazil.

The Brazilian economy has been characterized by frequent and occasionally extensive intervention by the Brazilian government and unstable economic cycles. The Brazilian government has often changed monetary, taxation, credit, tariff and other policies to influence the course of Brazil's economy. The Brazilian government's actions to control inflation have at times involved setting wage and price controls, blocking access to bank accounts, imposing exchange controls and limiting imports into Brazil.

Furthermore, 2022 was a presidential election year in Brazil, while 2023 is expected to be a year of transition among governments with different political and economic orientations. Historically, foreign investments in Brazil during periods immediately before and after presidential elections decrease and political uncertainty generates greater instability and volatility in the domestic market, which may adversely affect our business and results of operations.

Furthermore, the current President of Brazil was elected in October 2022, for a four-year term that began in January 2023. Following the 2022 election results, there were mass protests and demonstrations across Brazil by supporters of the former President of Brazil contesting the election results. On January 8, 2022, demonstrators invaded government buildings in Brasília, including the Brazilian Congress and the Brazilian Federal Supreme Court, which led the Brazilian Federal Supreme Court to order the arrest of participants and some politicians and resulted in new investigations. We cannot guarantee that such political and social tensions will dissipate or intensify in the coming months, while Brazil awaits the definition of the new government's political and economic agenda, which may contribute to an increase in macroeconomic and political instability. As a result of past corruption allegations against the current President of Brazil and his political party's involvement in the events that gave rise to the historic "Lava Jato" operation, his current presidency is subject to further political uncertainty. The uncertainties regarding the implementation, by the new government, mainly considering that the majority elected for the federal legislature is from the opposition party of the current President of Brazil, of changes related to monetary, fiscal and social security policies, as well as the political climate established after the elections, with massive demonstrations and/or strikes, can contribute to economic instability. These uncertainties and new measures may increase the volatility of securities issued by Brazilian companies such as us.

Our business, financial performance and prospects, as well as the market prices of our shares, may be adversely affected by, among others, the following factors:

- general, political, economic and social developments in Brazil, including any adverse impact of the ongoing war between Russia and Ukraine;
- inflation;
- exchange rate movements;
- exchange rate control policies;
- interest rate and exchange rate fluctuations;
- the further downgrade of Brazil's credit rating;
- liquidity available in the domestic capital, credit and financial markets;
- expansion or contraction of the Brazilian economy, as measured by rates of growth in gross domestic product, or "GDP;"
- oil and gas sector regulations, including price policies;
- ports, customs and tax authorities' strikes;
- changes in transportation market regulations;
- energy and water shortages and rationing;
- price increases of oil and other inputs;
- price instability;
- social and political instability, including allegations of corruptions against political parties, civil servants and others;
- the political climate leading up to and eventual outcome of the 2022 presidential elections in Brazil;
- disease outbreaks, such as the COVID-19 pandemic;
- fiscal policies;
- the ongoing COVID-19 pandemic, including novel and variant strains and vaccine development and roll-out, the Brazilian government's response to the COVID-19 pandemic, and the effects of the COVID-19 pandemic and the government's response to it on the economic, social and political situation in Brazil; and
- other economic, political, diplomatic and social developments in or affecting Brazil.

Instability resulting from any changes made by the Brazilian government to policies or regulations that may affect these or other factors in the future may contribute to economic uncertainty in Brazil and intensify the volatility of Brazilian securities markets and securities issued abroad by Brazilian companies. The President of Brazil has the power to define the policies and actions of the Brazilian government in relation to the Brazilian economy and thereby affect the operations and financial performance of Brazilian companies. The Brazilian government may be subject to internal pressure to change the current macroeconomic policies in order to achieve higher rates of economic growth. We cannot predict what policies will be adopted by the Brazilian government. Moreover, in the past, the Brazilian economy has been affected by the country's political events, which have also affected the confidence of investors and the public in general, thereby adversely affecting the performance of the Brazilian economy. Furthermore, any indecisiveness by the Brazilian government in implementing changes to certain policies or regulations may contribute to economic uncertainty in Brazil and heightened volatility for the Brazilian securities markets and securities issued abroad by Brazilian companies.

These factors, as well as uncertainty as to whether the Brazilian government will apply changes to its policy or regulations that may affect any of the abovementioned factors or other factors in the future, can lead to economic uncertainty and increase the volatility of the capital markets and the securities issued by Brazilian companies. Changes in such policies and regulations may have a negative impact on our operating results and financial position and the price of our common shares and ADSs.

The levels of economic activity, reflected in Brazilian GDP, can influence our distributed volumes. The growth rates in natural gas consumption may occur primarily by substituting other resources, notably fuel oil, gasoline and to a lesser extent other products derived from oil, depending on the prices of each kind of fuel.

We, our subsidiaries and our jointly controlled entities generally invoice our sales in reais, but a substantial portion of our, our subsidiaries' and our jointly controlled entities' net sales is from export sales that are billed in U.S. dollars. At the same time, the majority of our, our subsidiaries' and our jointly controlled entities' costs are denominated in reais. As a result, our operating margins are negatively affected when there is an appreciation of the real relative to the U.S. dollar. Additionally, we have indebtedness with fixed and floating rates, and we are thus exposed to the risk of fluctuations in interest rates. If there is a further increase in interest rates, our financial results may be affected.

The deterioration of economic and market conditions in other countries may have a negative impact on the Brazilian economy and on our business.

The market for securities issued by Brazilian companies is influenced, to differing degrees, by global economies and market conditions, especially those of Latin American countries and emerging markets. Investors' reactions to developments in other countries may have a negative impact on the value of Brazilian companies' securities. Crises or economic policies in other countries may reduce investor demand for Brazilian companies' securities, including ours and those of our subsidiaries, which may adversely affect the market price of their securities, and the capacity of obtaining financing. In the past, negative developments in the economic conditions of emerging markets led to significant withdrawals of resources from Brazil, and a drop in the amount of foreign capital in the country. Changes in the share prices of public companies, lack of available credit, cost-cutting, a slowdown in the global economy, exchange rate instability, interest rate increases in Brazil or abroad, and inflationary pressure may adversely affect the Brazilian economy and capital markets, which may reduce global liquidity and investor interest in Brazilian capital markets, which, in turn, may negatively affect the price of Brazilian companies' securities, including ours and those of our subsidiaries.

The Brazilian political environment has historically influenced and continues to influence the performance of the country's economy and the confidence of investors and the general public.

The Brazilian economy has been and continues to be affected by political events in Brazil, which have also had an impact on the confidence of investors and the general public, adversely affecting the performance of the Brazilian economy and increasing the volatility and lack of liquidity in the Brazilian capital market of securities issued by Brazilian companies. Recently, Brazil has undergone high levels of political and economic volatility and instability, including the contraction of its gross domestic product, strong fluctuations of the *real* against the U.S. dollar, increased unemployment, and lower levels of spending and consumer confidence.

In addition, the President of Brazil has the power to enact policies and issue orders relating to the Brazilian economy, including in the sector in which we operate, through specific regulations or through their control over Petrobras, our sole supplier of gasoline, diesel and certain other oil products, which could affect our operations and financial performance in Brazil. Political and economic uncertainty and any new policies or changes in current policies could have a material adverse effect on our business, operating results, financial condition and prospects. Any difficulty by the Brazilian government in obtaining a majority in the Brazilian Congress could result in congressional stalemate, political unrest and massive demonstrations and/or strikes that could adversely affect our operations. Uncertainties in relation to the implementation, by the current government, of changes related to monetary, fiscal and social security policies, as well as to the pertinent legislation, can contribute to economic instability. These uncertainties and new measures may increase the volatility of the Brazilian securities market.

These issues may be exacerbated by the results of the Brazilian presidential election held in October 2022, in which the former President (from 2003 to 2010) was reelected. There is uncertainty as to which policies will be adopted by the new government. We cannot assure you that the new government will maintain policies designed to promote macroeconomic stability, fiscal discipline and domestic and foreign investments, and failure on the part of the new government to do so may adversely impact Brazil’s economy, the prices of securities issued by Brazilian issuers such as us and ultimately our business, financial condition and results of operations.

Moreover, the Brazilian government may be subject to internal pressure to change its current macroeconomic policies in order to achieve higher rates of economic growth. We cannot predict what policies will be adopted by the Brazilian government. As has happened in the past, the Brazilian economy has been affected by the country’s political events, which have also affected the confidence of investors and the public in general, thereby adversely affecting the performance of the Brazilian economy. Furthermore, any indecisiveness by the Brazilian government in implementing changes to certain policies or regulations may contribute to economic uncertainty in Brazil and heightened volatility for the Brazilian securities markets and securities issued abroad by Brazilian companies.

Furthermore, Brazil’s federal budget has been in deficit since 2014. Similarly, the governments of Brazil’s constituent states are also facing fiscal concerns due to their high debt burdens, declining revenues and inflexible expenditures. While the Brazilian Congress has approved a ceiling on government spending that will limit primary public expenditure growth to the prior year’s inflation for a period of at least 10 years, local and foreign investors believe that fiscal reforms, and in particular a reform of Brazil’s pension system, which was approved in the last quarter of 2019, will be critical for Brazil to comply with the spending limit. Diminished confidence in the Brazilian government’s budgetary condition and fiscal stance could result in downgrades of Brazil’s sovereign debt by credit rating agencies, negatively impact Brazil’s economy, and lead to further depreciation of the *real* and an increase in inflation and interest rates, thus adversely affecting our business, financial condition and results of operations.

Brazilian markets have experienced also volatility due to uncertainties resulting from ongoing investigations conducted by the Brazilian Federal Police and the Brazilian Federal Public Prosecutor’s Office into corruption, money laundering and other allegations against public officials and senior management of certain Brazilian corporations, which have negatively impacted the Brazilian economy and political environment, and contributed to a decline in market confidence in Brazil. Any consequences arising from these investigations or other similar ones which may be conducted in the future may have a material adverse effect on the political and economic environment in Brazil, as well as on Brazilian companies, including us.

Finally, global economic conditions as well as internal developments may affect the Brazilian economy and demand for our products and services. We have indebtedness linked to certain interest rates and, therefore, are exposed to interest rate risk. Our financial results could be adversely affected if interest rates continue to rise. A global or local economic recession may lead to reduced demand for our products, either as a result of lower levels of consumption or as a result protectionist measures being put in place. In both cases, the result would be a decrease in the price of our products and a decrease in the volumes of products we sell, both within and outside Brazil. Moreover, in 2022, and early 2023 through the date of this annual report, markets and the global economy have been adversely affected by the ongoing war between Russia and Ukraine and the related sanctions imposed on Russia by the United States and its allies, the ongoing banking crisis in the United States and Europe, tensions between the United States and China and other global developments. Any such developments would have a material adverse effect on our business, financial condition and results of operations.

Economic, political and other conditions, as well as governmental measures, may negatively affect our business and results of operations and the market price of our shares.

The Brazilian economy has been characterized by frequent and occasionally extensive interventions by the Brazilian government as well as unstable economic cycles. The Brazilian government has frequently changed monetary, tax, credit, tariff, and other policies to influence the course of the economy in Brazil. In the past, government actions to control inflation have included wage and price controls, blocking access to bank accounts, exchange controls and restrictions on imports into Brazil. We cannot control or predict what policies or actions will be taken by the Brazilian government in the future.

Brazil has experienced extremely high rates of inflation in the past and has therefore implemented monetary policies that have resulted in one of the highest interest rates in the world. According to the General Market Price Index (*Índice Geral de Preços – Mercado*), or "IGP-M," a general price inflation index, Brazil recorded inflation of 23.1% in 2020, 17.8 % in 2021 and 5.45% in 2022. In addition, according to the National Extended Consumer Price Index (*Índice Nacional de Preços ao Consumidor Amplo*), published by the IBGE, the Brazilian price inflation rates were 4.6% in 2020, 10.1% in 2021 and 5.8% in 2022.

The Brazilian government's measures to control inflation have often included maintaining a tight monetary policy with high interest rates, thereby restricting availability of credit and reducing economic growth. Inflation, actions to combat inflation and public speculation about possible additional actions have also had significant effects on the Brazilian economy and contributed materially to economic uncertainty in Brazil and to heightened volatility in the Brazilian securities markets.

Unfavorable macroeconomic conditions in Brazil are expected to continue throughout 2023 as considerable economic and political uncertainty remains both in Brazil and globally, compounded by the ongoing war between Russia and Ukraine, which is contributing to further increases in the prices of energy, oil, gas, fertilizer, basic materials and other commodities and to volatility in financial markets globally, as well as a new landscape in relation to international sanctions. Uncertainty also remains as to the future course of the COVID-19 pandemic. It is unclear whether these challenges and uncertainties will be contained or resolved, and what effects they may have on the global political and economic conditions in the long term.

Brazil may experience high levels of inflation in future periods, and has recently experienced a significant increase in inflation. Periods of higher inflation may slow the rate of growth of the Brazilian economy, which could lead to reduced demand for our products in Brazil and decreased net sales. Inflation is also likely to increase some of our costs and expenses, which we may not be able to pass on to our customers and, as a result, may reduce our profit margins and net income. In addition, high inflation generally leads to higher domestic interest rates, and, as a result, the costs of servicing any floating-rate *real*-denominated debt may increase, resulting in lower net income. Inflation and its effect on domestic interest rates can, in addition, lead to reduced liquidity in the domestic capital and lending markets, which could affect our ability to refinance our indebtedness in those markets. Future Brazilian governmental actions, including interest rate decreases, intervention in the foreign exchange market and actions to adjust or fix the value of the *real*, may trigger increases in inflation and adversely affect the performance of the Brazilian economy as a whole. Any of the aforementioned developments may adversely affect the Brazilian economy as a whole, as well as our financial condition, operations and profits. Any decline in our net sales or net income and any deterioration in our financial performance would also likely lead to a decline in the market price of our common shares and ADSs.

High interest rates may adversely affect our operations and financial condition.

The Brazilian government's measures to control inflation have frequently included maintaining a restrictive monetary policy with high interest rates, thereby limiting the availability of credit and reducing economic growth. Official interest rates in Brazil at the end of 2022, 2021 and 2020 were 13.75%, 9.25% and 2.0% per year, respectively, as established by the monetary policy committee of the Brazilian Central Bank (*Comitê de Política Monetária*). As of the date of this annual report, the official interest rate in Brazil was 13.75%. Any increase of such interest rates may negatively affect our profits and results of operations, thereby increasing the costs of financing our operations.

High interest rates may impact our cost of obtaining loans and also the cost of indebtedness, resulting in an increase in our financial expenses. This increase may adversely affect our ability to pay our financial obligations, as it reduces our cash availability. Mismatches between contracted indexes for assets versus liabilities and/or high volatilities in interest rates may result in financial losses for us.

As of December 31, 2022, our consolidated indebtedness was either fixed or linked to interest rates based on the Interbank Deposit Certificate rate, or "CDI," the Long-Term Interest Rate, or "TJLP," and IPCA. We enter into certain financial instruments to mitigate our exposure to interest rate fluctuations.

Significant volatility in the value of the Brazilian real in relation to foreign currencies could harm our ability to meet our liabilities denominated in foreign currencies.

The Brazilian currency has historically experienced volatility against the U.S. dollar, Euro, Yen and other foreign currencies. In the past, the Brazilian government has implemented various economic plans and exchange rate policies, including sudden devaluations and periodic mini-devaluations, during which the frequency of adjustments has ranged from daily to monthly, fluctuation band exchange rate systems, exchange controls and dual exchange rate markets.

There have been significant fluctuations in the exchange rate between the Brazilian currency and the U.S. dollar and other currencies. In 2020, the *real* went from R$4.021 per U.S.$1.00, R$4.53 per €1.00 and R$0.04 per ¥1.00 at the beginning of the year to R$5.197 per U.S.$1.00, R$6.38 per €1.00 and R$0.05 per ¥1.00 on December 31, 2020, corresponding to a 28.9%, 41.6% and 35.7% depreciation against the U.S. dollar, the Euro and the Yen, respectively. In 2021, the *real* went from R$5.163 per U.S.$1.00, R$6.38 per €1.00 and R$0.05 per ¥1.00 at the beginning of the year to R$5.57 per U.S.$1.00, R$6.32 per €1.00 and R$0.05 per ¥1.00 on December 31, 2021, corresponding to a 7.4% depreciation against the U.S. dollar, and a 0.9% and 3.9% appreciation against the Euro and the Yen, respectively. In 2022, the *real* went from R$5.631 per U.S.$1.00, R$6.32 per €1.00 and R$0.05 per ¥1.00 at the beginning of the year to R$5.218 per U.S.$1.00, R$5.57 per €1.00 and R$0.040 per ¥1.00 on December 31, 2022, corresponding to a 7.33%, 11.9% and 18.4% appreciation against the U.S. dollar, the Euro and the Yen, respectively. There can be no assurance that the *real* will not depreciate or appreciate further against the U.S. dollar, the Euro or the Yen.

As of April 14, 2023, the exchange rate for *reais* into U.S. dollars was R$4.946 per U.S. $1.00, a 5.2% appreciation of the *real* against the U.S. dollar since December 31, 2022. As of April 14, 2023, the exchange rate for *reais* into Euros was R$5.430 per €1.00, a 2.5% appreciation of the *real* against the Euro since December 31, 2022. As of April 14, 2023, the exchange rate for *reais* into Yen was R$0.037 per ¥1.00, a 6.6% appreciation of the *real* against the Yen since December 31, 2022. There can be no assurance that the *real* will not depreciate or appreciate further against the U.S. dollar, the Euro or the Yen. For more information, see "Item 5. Operating and Financial Review and Prospects—Principal Factors Affecting Our Results of Operations—Currency Fluctuations."

Because our subsidiaries and jointly controlled entities generally invoice their sales in *reais*, devaluation of the *real* against foreign currencies may generate losses from our foreign currency-denominated liabilities as well as an increase in our funding costs with a negative impact on our ability to finance our operations through access to the international capital markets and on the market value of the shares. A strengthening of the *real* in relation to the U.S. dollar generally has the opposite effect, which may adversely affect our operating margins. In addition, our indebtedness has both pre-fixed and post-fixed rates and is therefore exposed to the risk of interest rate variations. If interest rates increase, our financial results may be adversely affected. Further devaluations of the Brazilian currency may occur and impact our business in the future. These foreign exchange and monetary gains or losses can be substantial, which can significantly impact our earnings from one period to the next. In addition, depreciation of the *real* relative to the U.S. dollar could (1) result in additional inflationary pressures in Brazil by generally increasing the price of imported products and services and requiring recessionary government policies to curb demand, and (2) weaken investor confidence in Brazil and reduce the market price of the shares. On the other hand, further appreciation of the *real* against the U.S. dollar may lead to a deterioration of the country's current account and the balance of payments and may dampen export-driven growth.

Furthermore, Brazilian law provides that, whenever there is a serious imbalance in Brazil's balance of payments or there are compelling reasons to foresee a serious imbalance, temporary restrictions may be imposed on remittances of foreign capital abroad. Any such restrictions on remittances of foreign capital abroad may limit our ability to receive dividends from our subsidiaries. We cannot assure you that such measures will not be taken by the Brazilian government in the future. Exchange rate fluctuation will affect the U.S. dollar value of any distributions we receive from our subsidiaries as well as the U.S. dollar value of any dividends or other distributions we make to our shareholders, which will be made in *reais*.

In addition, we are active in the capital markets, obtaining funds denominated in national and foreign currencies to finance our investments and working capital. Our foreign currency exposure related to gross indebtedness (loans, borrowings and debentures - current and non-current liabilities) as of December 31, 2022 was R$28,537.0 million compared to R$22,354.3 million at December 31, 2021. We manage a portion of our exchange rate risk through foreign currency derivative instruments. Our foreign currency debt obligations are not completely hedged, as a portion of our perpetual notes are unhedged. As a result, the possible depreciation of the *real* against the U.S. dollar could increase the cost of our obligations in foreign currency, and therefore significantly affect our income statement in the short term. The depreciation of the *real* may limit our access to international capital markets and may favor state intervention in the economy, including the imposition of potentially recessionary policies.

Infrastructure and workforce deficiency in Brazil may impact economic growth and have a material adverse effect on us.

Our performance depends on the overall health and growth of the Brazilian economy. Brazilian GDP growth has fluctuated over the past few years, with a contraction of 3.6% in 2016, an increase of 1.3% in 2017, an increase of 1.3% in 2018, an increase of 1.1% in 2019 and contractions of 4.1% in 2020 and 3.9% in 2021, and an increase of 2.9% in 2022. Continued growth is limited by inadequate infrastructure, including potential energy shortages and deficient transportation, logistics and telecommunication sectors, the lack of a qualified labor force and the lack of private and public investments in these areas, which limit productivity, as well as efficiency. Any of these factors could lead to labor market volatility and generally impact income, purchasing power and consumption levels, which could limit growth or result in contraction and ultimately have a material adverse effect on our business.

Furthermore, deficiencies in the road, rail or waterway network of the areas in which we operate, such as unpaved or maintenance-free roads and lack of railroads, especially in regions farthest from the ports, result in high logistics costs and, consequently, reduce the profitability of our sugarcane operations. Likewise, failure or malpractice in transportation handling, whether on trains, trucks or vessels, may lead to loss of production, waste of quantities or damage to sugarcane. Constant climate change, such as excessive rainfall, has led to a worsening of the conditions of the roads, which may lead to an increase in over-production losses. The aforementioned infrastructure deficiencies may make it more difficult for us to conduct our business in the areas in which we operate and thereby adversely affect us.

Developments and the perception of risk in other countries may adversely affect the Brazilian economy and market price of Brazilian issuers' securities.

The market value of securities of Brazilian issuers is affected by economic and market conditions in other countries, including the United States, European countries, and in other Latin American and emerging market countries. Although economic conditions in Europe and the United States may differ significantly from economic conditions in Brazil, investors' reactions to developments in these other countries may have an adverse effect on the market value of securities of Brazilian issuers. Additionally, crises in other emerging market countries may diminish investor interest in securities of Brazilian issuers, including our securities, as well as adversely affect the availability of credit to Brazilian companies in the international markets, with a significant outflow of capital from Brazil and a decrease in the amount of foreign currency invested in Brazil. In addition, negative events in the Brazilian financial and capital markets, any news or evidence of corruption in government, publicly traded companies and other issuers of securities, and the lack of rigorous application of investor protection rules or lack of transparency of information or potential crises in the Brazilian economy and in other economies may influence the Brazilian capital markets and negatively impact the securities issued in Brazil. This could adversely affect the market price of our securities, restrict our access to capital markets and compromise our ability to finance our operations in the future on favorable terms, or at all.

In recent years, there was an increase in volatility in all Brazilian markets due to, among other factors, uncertainties about how monetary policy adjustments in the United States would affect the international financial markets, the increasing risk aversion to emerging market countries and the uncertainties regarding Brazilian macroeconomic and political conditions. These uncertainties adversely affected us and the market value of our securities.

In 2022 and early 2023 through the date of this annual report, markets and the global economy have been adversely affected by the ongoing war between Russia and Ukraine and the related sanctions imposed on Russia by the United States and its allies. An escalation of the war between Ukraine and Russia or an escalation of the tensions between the United States and Russia could have a material adverse effect on the global and Brazilian economies, and ultimately on our business. A banking crisis is also ongoing in the United States and in Europe, which has adversely affected financial markets and the availability of credit globally. There have also been concerns over conflicts, unrest and terrorist threats in the Middle East, Europe and Africa, which have resulted in volatility in oil and other markets. The United States and China have recently been involved in disputes regarding Taiwan, rights to navigation in the South China Sea, alleged human rights abuses in China, as well as in a controversy over trade barriers in China that threatened a trade war between the countries. Sustained tension between the United States and China over these and other matters could significantly undermine the stability of the global economy. It is unclear whether these challenges and uncertainties will be contained or resolved, and what effects they may have on the global political and economic conditions in the long term.

A global economic slowdown, especially in the United States and countries in emerging markets, including as a result of the effects of the Russian-Ukraine war, the current banking crisis in the United States and Europe, tensions between the United States and China, the COVID-19 pandemic, or other factors beyond our control, may adversely affect the global and Brazilian economies and have a material adverse effect on our business.

In addition, we continue to be exposed to disruptions and volatility in the global financial markets because of their effects on the financial and economic environment, particularly in Brazil, such as a slowdown in the economy, an increase in the unemployment rate, a decrease in the purchasing power of consumers and the lack of credit availability.

Disruption or volatility in the global financial markets could further increase negative effects on the financial and economic environment in Brazil, which could have a material adverse effect on our business, financial condition and results of operations.

Events in other countries may have a negative impact on the Brazilian economy.

Global economic conditions may affect the Brazilian economy as well as the demand for our products. For example, a global recession may lead to a reduction in global demand for our products, either through lower consumption or via measures to protect local production. In both cases, the consequence could be to reduce prices for our products in the foreign market, affecting our financial performance. In addition, as a portion of our net sales is generated from export activities and normally billed in U.S. dollars and, at the same time, most of the costs are denominated in *reais*, the operating margins may be adversely affected when the *real* appreciates against the U.S. dollar or the currencies of any of the countries in which we operate or any currencies in which our indebtedness is denominated. In addition, we have indebtedness at pre-and post-fixed rates and, therefore, we are exposed to the risk of interest rate variations. If there is an increase in interest rates, our financial results may be affected.

In June 2016, the United Kingdom had a referendum in which the majority voted to leave the European Union (so-called “Brexit”). The announcement of Brexit caused significant volatility in global stock markets and currency exchange rate fluctuations. The United Kingdom formally withdrew from the European Union on January 31, 2020. A transition period, lasting until December 31, 2020, was put in place, during which the UK (1) continued to be subject to EU rules and (2) remained a member of the single market. The UK-EU Trade and Cooperation Agreement, or “TCA,” was signed on December 30, 2020, between the EU, the European Atomic Energy Community and the UK. It has been applied provisionally since January 1, 2021, when the transition period ended. This trade agreement, which provides that there will be no tariffs or quotas on the movement of goods between UK and EU, represents the UK’s departure from the EU customs union and single market. The trade deal, however, did not include agreements on certain areas, such as financial services. While the TCA between the UK and EU provided much needed certainty on trade, there continues to be uncertainty surrounding political and economic concerns, as the true effects of the TCA and future trade agreements outside of the EU begin to unfold, which developments we continue to monitor. Continued uncertainty around the terms of the UK’s relationship with the EU and the lack of a comprehensive trade agreement may negatively impact the economic growth of both regions. Similarly, an adverse effect on the UK and the EU may have an adverse effect on the wider global economy, market conditions and investor confidence. As a result, Brexit could impair our ability to transact business in the United Kingdom and in countries in the European Union. In particular, Brexit may have an adverse impact on the ability of our lubricants business, Moove, to conduct business within the European Union given that Moove has operations in both the United Kingdom and the European Union and that both Moove Lubricants and Stanbridge (subsidiaries of Moove) are headquartered in the United Kingdom. If the United Kingdom were to significantly alter its regulations affecting the lubricants industry, we could face significant new costs. It may also be time-consuming and expensive for us to alter our internal operations in order to comply with new regulations. We have no control over and cannot predict the effect of United Kingdom’s exit from the European Union nor over whether and to which effect any other member state will decide to exit the European Union in the future. The wider impact of Brexit on financial markets through market fragmentation, reduced access to finance and funding, and lack of access to certain financial market infrastructure, may affect our operations, financial condition and prospects and those of our customers. These developments, as well as potential crises and forms of political instability arising therefrom or any other as of yet unforeseen development, may harm our business and the price of our common shares and ADSs.

Uncertainty remains around the effect of the COVID-19 pandemic on demand in 2023, given the emergence of novel strains and variants across the world. Business operations across Asia, Europe and the United States are being affected by shortages of components, problems with supply chain, factory disruptions and closures, and quarantined workers, with a direct impact on the availability of goods and services. These disruptions to global supply chains could impact businesses generally and weaken demand from consumers. The effects cannot be foreseen and weak macroeconomic conditions may continue in 2023.

In 2022 and 2023 through the date of this annual report, the war between Russia and Ukraine is contributing to further increases in the prices of energy, oil and other commodities (including certain inputs on which we rely to conduct our operations), disruptions to global supply chains, and to volatility in financial markets globally, as well as a new landscape in relation to international sanctions. The considerable uncertainty generated by the war, its effects on inflation, supply chains, financial markets and economic conditions generally may have a material adverse effect on our business, financial condition and results of operations. See also “—The ongoing war between Russia and Ukraine may have a material adverse effect on the global and Brazilian economies as well as on us.”

Our international activities expose us to risks that competitors operating exclusively in Brazil do not face, including: (i) foreign exchange controls; (ii) changes in political or economic conditions in a specific country or region, especially in emerging markets such as Argentina; (iii) potentially negative consequences resulting from changes in regulatory requirements; (iv) difficulties and costs associated with our compliance with different complex international laws, treaties and regulations; (v) taxation at rates which may exceed those applicable in Brazil or Argentina and other countries or earnings that may be subject to withholding regimes and an increase in repatriation taxes; (vi) imposition of trade barriers; and (vii) limitations on repatriation of undistributed earnings; and (viii) adverse political, social or other developments in the countries in which we operate or affecting the global economy generally. The realization of any of these risks could adversely affect our business, results of operations or financial condition.

Additionally, economic conditions in Brazil may also be affected by political developments in the United States. We cannot assure you that any developments in the United States or elsewhere will not materially and adversely affect us in the future.

A reduction in the volume of foreign investments in Brazil may have a negative impact on us.

Any reduction in the volume of foreign investments in Brazil may have an impact on the balance of payments, which may force the Brazilian government to have a greater need to raise funds, both in the domestic and in the international markets, at higher interest rates. Likewise, any significant increase in Brazilian inflation rates and the current slowdowns of the European and American economies may have a negative impact on the Brazilian economy and affect interest rate levels, raising expenses on loans already obtained and costs of new funding from resources by Brazilian companies, including us.

Changes in taxes and other assessments may adversely affect us.

The legislatures and tax authorities in the tax jurisdictions in which we operate regularly enact reforms to the tax and other assessment regimes to which we and our customers are subject. Such reforms include changes in tax rates and, occasionally, enactment of temporary taxes, the proceeds of which are earmarked for designated governmental purposes. In addition, the interpretation of tax laws by courts and taxation authorities is constantly evolving. In Brazil, the tax system is highly complex and the interpretation of the tax laws and regulations is commonly controversial. The effects of these changes and any other changes that result from enactment of additional tax reforms or changes to the manner in which current tax laws are applied cannot be quantified and there can be no assurance that any such reforms or changes would not have an adverse effect upon our business.

The Brazilian government regularly implements changes to tax regimes that may increase the tax burden on us, our subsidiaries and jointly-controlled entity and their respective customers. These changes include modifications in the rate of assessments and the enactment of new or temporary taxes, the proceeds of which are earmarked for designated governmental purposes.

A proposed tax reform has been under review in the Brazilian Congress since 2003, with several proposals to make the tax system more transparent and simplify tax assessments and collection processes. Proposals have also been made for the taxation of dividend income, which is not currently taxed in Brazil. Discussions have intensified in 2019, when proposed constitutional amendments, or “PECs,” were introduced before the congressional houses for discussion. Each of PEC 45/2019 and PEC 110/2019 sets forth a simplification of the tax collection system in Brazil, the effects of which on our business have not yet been quantified and/or assessed. Furthermore, the final output of the Brazilian tax reform is outside of our control, and any failure to comply with new tax rules may adversely affect our business and results of operations.

Ongoing investigations relating to corruption and diversion of public funds that are being conducted by the Brazilian federal police as well as other Brazilian and non-Brazilian regulators and law enforcement officials may adversely affect the growth of the Brazilian economy and could have a material adverse effect on us.

Certain Brazilian companies active in the oil and gas, energy, construction and infrastructure sectors are facing investigations by the CVM, the SEC, the U.S. Department of Justice, the Brazilian Federal Police and the Brazilian Federal Prosecutor’s Office, the Comptroller General of Brazil and other relevant governmental authorities, in connection with corruption allegations and diversion of public funds, the largest of which is known as “*Operação Lava Jato*,” or “Operation Car Wash.” The Brazilian federal police is also investigating allegations of improper payments made by Brazilian companies to officials of the Board of Tax Appeals (*Conselho Administrativo de Recursos Fiscais*), or “CARF,” a tax appeals tribunal (the so-called “*Operação Zelotes*”). It is alleged that the purpose of such improper payments was to induce those officials to reduce or waive certain tax-related penalties imposed by the Brazilian federal revenue authority, which were under appeal in the CARF. Such investigations involve several companies and individuals, including representatives of various companies, politicians and third parties. Certain of these individuals are being investigated by the Brazilian Federal Police and others were formally charged and are facing criminal proceedings and/or have already been convicted by the Brazilian Federal Courts.

Depending on the duration and outcome of such investigations, the companies involved may face a reduction in their revenues, downgrades from rating agencies or funding restrictions, among other negative effects. Given the significance of the companies cited in these investigations in the Brazilian economy, the investigations and their fallout have had an adverse effect on Brazil’s economic growth prospects in the near, short to medium term. Furthermore, the negative effects on such companies and others may also impact the level of investments in infrastructure in Brazil, which may lead to lower economic growth or contraction in the near to medium term.

As a result of the allegations under the “Lava Jato” investigations and the economic downturn, Brazil was downgraded to non-investment grade status by Standard & Poor’s, or “S&P,” in September 2015, by Fitch Ratings, or “Fitch,” in December 2015, and by Moody’s Investors Service in February 2016, and was downgraded again by Fitch in May 2016. In addition, Brazil was further downgraded by S&P to BB- with a stable outlook in January 2018 as a result of the failure of the current Brazilian government to approve certain pension reforms. Brazil’s sovereign rating is currently rated by the three major risk rating agencies as follows: BB- by S&P and Fitch Ratings and Ba2 by Moody’s. Various major Brazilian companies were also downgraded. Such downgrades have further worsened the conditions of the Brazilian economy and the condition of Brazilian companies, especially those relying on foreign investments.

In addition, such investigations have extended to persons in high positions in the executive and legislative branches of the Brazilian government, which has caused considerable political instability. It is difficult to predict the effects of such political instability. Persistently poor macroeconomic conditions in Brazil resulting from, among other things, the “*Lava Jato*” investigations, their consequences and political instability could have a material adverse effect on us.

If we do not successfully comply with laws and regulations designed to prevent governmental corruption in countries in which we operate and sell our products (notably Brazil), we could become subject to fines, penalties or other regulatory sanctions, which could cause our sales and profitability to be materially reduced.

Our anti-corruption policies and procedures designed to prevent governmental corruption violations may not prevent our management, employees or third parties acting on our behalf in the countries in which we operate from taking actions that violate applicable laws and regulations on improper payments to government officials for the purpose of obtaining or keeping business or business advantages. Laws prohibiting such behaviors include (but are not limited to) laws relating to the OECD’s 1997 Convention on Combating Bribery of Foreign Public Officials in International Business Transactions, such as the U.S. Foreign Corrupt Practices Act and Brazilian Anticorruption Law No. 12,846/2013, or the “Anti-Corruption Act,” which has been in effect since January 29, 2014. Any breach thereof may have a material adverse effect on our business, financial condition and results of operations, including access to financing, as well as the acceleration of loans and financing.