

Risk management

Boliden operates in a global market that is exposed to changes in both metal prices and exchange rates. Our operations affect the surrounding environment, and many processes are associated with occupational health and safety risks. Boliden has a crisis management group with procedures for managing crises and complex events. By for example performing scenario analyses, we work to reduce risks and constantly monitor them from a process and product perspective in order to identify potential improvement opportunities at an early stage.

In the model below, the closer the identified risks are located to the center, the higher we assess the likelihood of their occurrence with a resulting negative impact on Boliden. The tables on pages 55–57 describe the risks and how we manage them.





OPERATIONAL RISKS

Description of risk

Health and safety

We handle large material flows both under and above ground, and from time to time our employees and contractors are exposed to heavy machinery, lifting, high temperatures and hazardous substances. Furthermore, many people work in shifts, which increases psychosocial risks. Deviations from established procedures, inadequate planning and deficient resource assignment can create dangerous situations and increase the risk of injury.

Environmental impact

Our operations impact both the global climate and the local environment. For both operational and decommissioned sites, considerable risks can be linked to emissions to air and water, the storage of waste, energy consumption and the significance of land use for biodiversity. Because government agencies impose ever more stringent demands for reclamation measures for slag and mining waste, these risks are potential cost drivers. Financial risks can also be linked to historical waste and the failure to obtain new permits for mineral extraction.

Water management and dam safety

Tailings ponds and their dam structures are a major mining industry risk with the greatest potential for damage to the environment in the event of a failure. Furthermore, the risk varies with extreme weather conditions and changes in average rainfall.

Climate change

Global warming increases the risk of more extreme weather phenomena. Related operating risks include changes in precipitation that lead to heavy rain, snowfall or flooding.

Unscheduled production stoppages

Our environmental performance and financial results can both suffer from unplanned production disruptions, for example due to technical problems, injuries, accidents or strikes. The pandemic years also demonstrated the risk of production disruptions due to societal restrictions and disturbances in our supply chains.

Skills supply

In general, competition for skilled labor remains high in many of the places where we operate, partly as a result of new business start-ups in the industrial sector. Meanwhile, a major technology shift is taking place, with an increase in digitization, process development and automation, which risks leading to skills shortages in many different occupational groups.

Cyber risks

The risk of intrusion into the IT environment with ransomware or similar, which can bring IT systems to a halt, thus stopping production or other operations.

Management and comments for the year

In order to achieve our target of completely accident-free operations, we focus on risk reporting and learning from best practice both internally and externally, and we continue to work on strengthening our values-based behavior and culture.

During the year, the implementation of safety review visits at eight business units was a new feature in our proactive work. More than 80 interviews were conducted with Boliden employees and contractors to better understand their perspective on what could improve trust, commitment and safety in the operation.

Compliance with our emissions targets is closely monitored, and emissions generated by the operations are managed using the Best Available Technology and according to each unit's environmental permit. Emergencies are prevented through continuous monitoring and systematic maintenance. At the same time, we conduct continuous research and implement new technical solutions, for example extensive electrification, to reduce our emissions.

Boliden has an ample dam safety organization and each operating unit with dams has a dam safety manager, and managers in charge of tailings pond operations. Models have been developed to improve resource utilization and safety margins against emergency water discharges, and as a member of ICMM (The International Council on Mining and Metals), we always implement the latest international guidelines in this area.

While the Group's common climate strategy, see pages 32–33, seeks to further reduce our overall carbon footprint, each unit evaluates its own weather-related operational risks. For example, one part of the investigative work consists of scenario analyses on the effects of changing climate conditions during a mine's life cycle and reclamation phase.

All Boliden units carry out preventive maintenance with the aim of minimizing the total cost for the Group. Major maintenance shutdowns are carried out every year in the smelting operations, while maintenance work forms an integral part of day-to-day operations in mines. The risk of unscheduled production stoppages is also managed through continuous evaluation of the Group's insurance solutions.

We work continuously to attract and retain the right skills, for example by communicating Boliden's purpose, values and its role as an enabler of the climate transition. During the year, we continued charting the need for skills linked to technological development. We have further strengthened our collaborations within the industry and with relevant universities and have also created a trainee program. The development of our firmwide management and talent programs, as well as local development initiatives, also help safeguard our future skills supply.

Since 2021, Boliden runs a program to systematically raise its security level. The program runs for three years and is based on the NIST framework, which includes to identify and protect against intrusions, as well as detection, management and recovery in the event of an intrusion. The program addresses both administrative IT and production IT.

While the general threat from cyber attacks was considered to have increased during the year, we deem the risk to Boliden to be unchanged from previous years due to our systematic cyber security work.

MARKET AND COMMERCIAL RISKS

Description of risk

Metal prices

Changes to metal prices are a significant risk for Boliden's profit and cash flow.

Treatment charges

Treatment charges are determined by the supply and demand for metal concentrates, which represents a risk since they constitute a large part of the smelters' gross profit.

Customers

We are dependent on a few large customers for part of our product portfolio, and reduced demand from industrial customers would increase the risk of sales via the London Metal Exchange, resulting in reduced margins.

Credit risks in trade receivables

The risk that our customers fail to fulfill their obligations constitutes a credit risk.

Raw materials supply

A stable, reliable raw materials supply is needed to enable the smelters to produce at high levels of capacity utilization and consistent quality. The implementation of barriers that inhibit international trade in metal concentrates is a related risk.

Supply of goods and services

Our operations depend on an ongoing supply of equipment, consumables and services, and as a consequence, sensitivity to disruptions in suppliers' production and supply chains is a risk for Boliden.

Energy prices

Because energy accounts for around 17 percent of operating costs, changes in energy prices constitute a significant risk for our financial performance.

Management and comments for the year

Group policy is not to hedge metal prices, but rather to allow changes to be reflected in profits. However, in addition to process inventories, we hedge smelter metal price exposure in the period between the purchase of raw material and the sale of the corresponding metal. See note 28 for a sensitivity analysis.

Treatment charges are negotiated annually by the major players in the mining and smelting industries. These terms are applied to our internal purchases, and in most contracts with external metal concentrate suppliers. See note 28 for a sensitivity analysis.

We manage this risk through a diversified portfolio with long-term customer relationships and regard for exposure to different end-user segments. At the same time, there are plans in place to convert production to products suited to the London Metal Exchange, if necessary.

The risk is considered to have increased during the year as a result of the potential impact of an approaching recession on the production rate and liquidity of industrial customers.

Boliden manages credit risks in trade receivables through an established credit rating process, active credit monitoring, short credit periods and, in certain cases, credit insurance. We have daily procedures for monitoring payments and we also constantly monitor the necessary provisions for expected credit losses. The quality of trade receivables is deemed to be good and impairments on outstanding receivables during the year occurred only in limited amounts. Further information provided in note 20.

We manage risks with raw materials supply through long-term contracts and relationships with reliable external suppliers of metal concentrate and secondary materials, who also demonstrate high performance in sustainability issues. We collect information on suppliers' greenhouse gas emissions to promote reduction measures and to plan for possible changes in future trade flows.

During the year, the risk to our supply of raw materials is considered to have increased as a result of the potential implementation of the EU's Carbon Border Adjustment Mechanism, which would increase the cost of raw material purchases from outside the union.

While disruptions caused by the pandemic abated at the beginning of the year, the situation deteriorated again due to Russia's invasion of Ukraine. The sanctions imposed have removed large volumes of Russian steel, fuel and coal from the market, which combined with the shortage of natural gas in Europe, has led to significant disruptions at a level greater than experienced during the pandemic. To manage these and prevent further disruptions, the measures taken during the pandemic have continued and have in some cases been strengthened. We work actively to reduce price and supply risks by having multiple qualified suppliers in each category and area. In cases where there is only one supplier, we reduce the risk through buffer stocks and by identifying alternative supply solutions. In this regard, the organization's ability to adapt rapidly has been a success factor.

In Norway, Odda has a long-term electricity agreement with inflation adjusted pricing clauses. The contract portfolios in Sweden, Finland and Ireland have shorter terms and the Group is partly more exposed to market prices, which has had a negative impact on the operating profit. We anticipate continued high price volatility in the electricity market, which is partly managed through longer electricity contracts in Sweden and Finland, which will be activated in 2023 and 2024. At the same time, we analyze opportunities for long-term contracts on an ongoing basis.

The risk is considered to have increased during the year as Russia's invasion of Ukraine led to instability in the European gas market, resulting in higher electricity prices.

FINANCIAL RISKS

Description of risk

Exchange rate and metal price risks

Pricing terms for products are based mainly on metal exchanges, and ours are priced largely in USD. As a result, transaction exposure arises from binding undertakings to our customers and suppliers, where the cost of raw materials and exchange rates may differ from the final sales value, or in fixed-price offers made in different currencies long before delivery. Changes in exchange rates and prices have a major impact on Boliden's profit and cash flow.

Management and comments for the year

Transaction exposure in conjunction with binding undertakings are hedged while the smelters' process inventories are not hedged. Forward exchange contracts are used to hedge the sales price and exchange rate when purchasing input raw material, or in fixed-price sales agreements. Hedge accounting is applied to forward exchange agreements to hedge fair values in the Income Statement.

We make constant calculations concerning the way in which changes in metal and exchange rate markets affect the Boliden's financial position. For major investments in other than the local currency, the Group may enter into contracts to hedge forecast sales from metal price and currencies. Hedge accounting is applied to the derivatives to hedge cash flows in Other comprehensive income. See note 27 and the sensitivity analysis in note 28.

The risk is considered to have increased during the year as we have seen large fluctuations in exchange rates, interest rates and metal prices. This was particularly noticeable in the nickel market, which experienced a very strained liquidity situation.



CONT. FINANCIAL RISKS

Description of risk

Currency risk in translation exposure

A translation difference arises when converting net investments in overseas operations into SEK in conjunction with exchange rate fluctuations, which risks impacting Other comprehensive income negatively within the Group.

Interest rate risk

Changes in market interest rates affect profits and cash flows.

Refinancing and liquidity risk

The risk that Boliden will be unable to obtain the requisite financing or meet its payment obligations due to insufficient liquidity.

Credit risks and financial operations

Credit and counterparty risk refers to the risk that a counterparty in a transaction may fail to fulfill their obligation, thus causing the Group to incur a loss. Financial exposure to counterparty risk mainly occurs when trading in derivatives.

Financial reporting

Inaccurate financial and operational reporting poses a risk to the Group.

Management and comments for the year

Under our finance policy, we do not actively eliminate the effect of translation exposure through equity hedging. However, if an external borrowing requirement exists, the liability in foreign currency is used as equity hedging against the foreign asset pool. The main borrowing currencies are SEK and EUR.

Our finance policy allows an average fixed interest term of up to four years. On December 31, 2022, the Group's loan portfolio had an average fixed interest term of 1.7 years (2.2). Interest rate swaps are used to extend the fixed interest term. Further information provided in note 29.

We limit refinancing risk through diversification of counterparties, financing sources and maturities, and through good governance to ensure compliance with loan agreement terms. Current liquidity is available in the form of unutilized credit facilities, and is reviewed regularly.

The average term of total loan limits was 3.4 years (2.6) at year-end, and net payment capacity totaled SEK 23,005 m (16,088).

The risk is considered to have increased during the year as banks in general have a lower risk appetite as a result of increased credit risks.

Our finance policy mandates a Standard & Poor's credit rating of A for financial counterparties when entering into new transactions, and sets a maximum investment of cash and cash equivalents per counterparty. Credit quality and the counterparty spread for derivatives were considered to have been good in 2022, and at year-end the credit risk in external derivative instruments had a market value of SEK 415 m (194).

The Group has a well functioning internal control structure. There are control functions at the local unit level, as well as at the business area and head office levels, and all of these work within a common financial reporting framework. We carry out annual controls of the framework.



NON-COMPLIANCE RISKS

Description of risk

Legal risks

Boliden's operations are to a great extent subject to licensing and comprehensive regulation. Permits are reviewed regularly. There is also a risk that we will be involved in commercial and other legal proceedings.

Non-compliance risks

The Group may be exposed to legal or regulatory sanctions, material financial losses or damaged reputation as a result of any failure to follow applicable regulations.

Risks harmful to confidence

Confidence in Boliden can be harmed by events such as serious incidents, or if employees or business partners fail to live up to business ethics and sustainability requirements.

Political risks

Political decisions may have effects in the countries where Boliden and its business partners do business. Examples of such decisions may include changes to different types of taxes and new requirements in permit application processes for the mining industry.

Management and comments for the year

Usually, our permits are renewed on multiple occasions during the lifespan of a mine, and also in the event of changes or an expansion of operations. We monitor legal developments in relevant fields, and we implement, follow up and ensure compliance with applicable laws and regulations on an ongoing basis. Boliden is an active member of domestic and foreign trade organizations and works through these channels to spread knowledge about our industry and to ensure conditions appropriate for it. The Group is also a referral body for new rules, regulations and initiatives relating to the industry. Information on legal proceedings and disputes is provided in note 31.

The Group's Ethics & Compliance function supports operations to ensure their compliance with internal policies and relevant external laws and regulations. Specific focus areas include Boliden's Codes of Conduct for employees and business partners, as well as handling cases reported through Boliden's whistleblower system. Anti-corruption, trade sanctions, human rights, and combating money laundering and terrorist financing, the protection of personal data and compliance with competition law and regulations are other priority areas.

The focus on international sanctions has increased during the year due to Russia's invasion of Ukraine. One identified risk is the sharing of common utilities with Norilsk Nickel, a Russian company, in the Harjavalta industrial area. The degree to which macroeconomic and political factors may affect Boliden is uncertain and presents a significant risk to its operations.

Because we seek to be associated with ethical, sustainable business partners, we conduct systematic evaluations of customers and suppliers on the basis of criteria linked to business ethics and sustainability. Before concluding agreements, we review new business partners on a number of parameters. They are expected to adopt Boliden's Code of Conduct for Business Partners or undertake to comply with other relevant and generally accepted business standards before agreements are concluded, and where necessary audits are carried out on suppliers' premises to ensure compliance.

Boliden and the trade associations in which we participate often act as referral bodies for upcoming political decisions that affect our operations, and this allows us to spread knowledge and information so that any decisions affecting us or our industry are appropriate and reasonable.