

# METALS FOR LONG-TERM VALUE CREATION



# The year in brief

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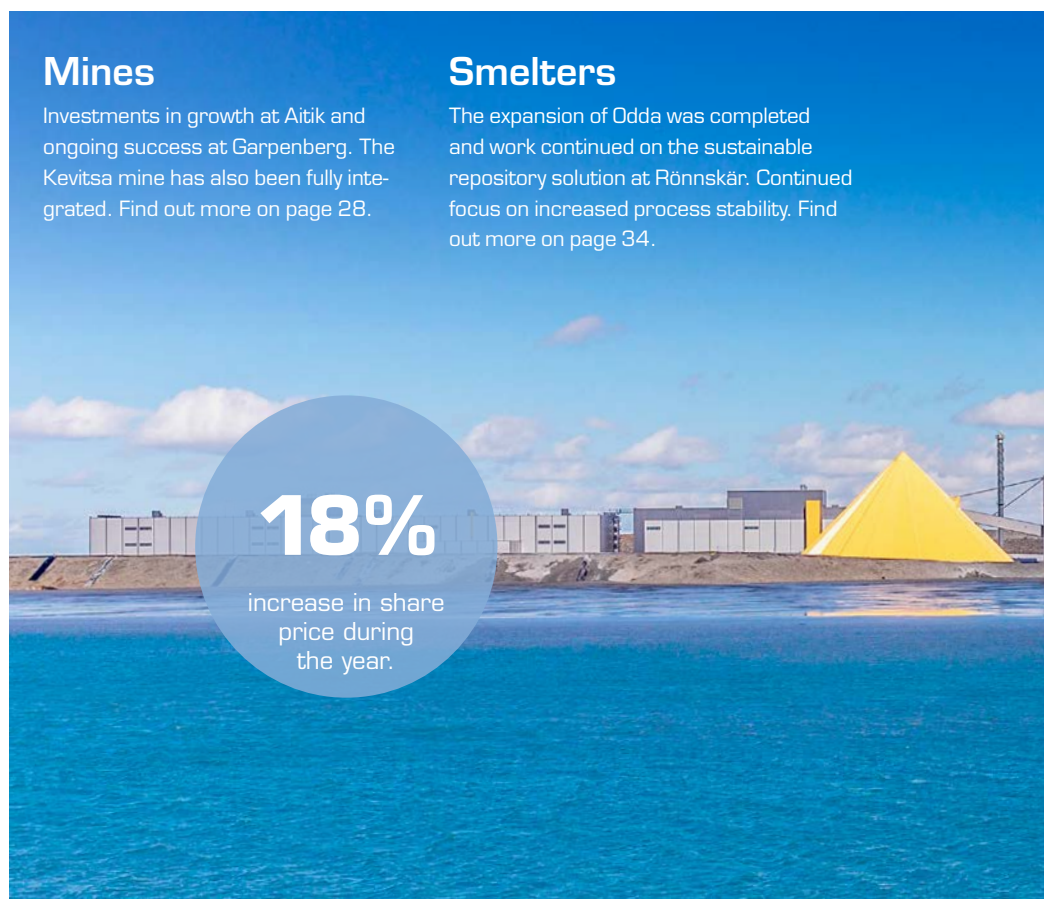
## Highlights

### Mines

Investments in growth at Aitik and ongoing success at Garpenberg. The Kevitsa mine has also been fully integrated. Find out more on page 28.

### Smelters

The expansion of Odda was completed and work continued on the sustainable repository solution at Rönnskär. Continued focus on increased process stability. Find out more on page 34.



## Boliden – long-term value creation

Boliden produces metals that make modern society work. Operations are characterised by concern for people, the environment and society, and Boliden is one of the best companies in the world when it comes to sustainable mining and metal production. Boliden also enjoys a leading position in metal recycling. The combination of in-depth experience and development of best available technology means that its mines and smelters are well-positioned to handle global competition.

### About Boliden's Annual Report

The Annual Report describes Boliden's financial performance and sustainability work. The Directors' Report comprises pages 10–13, 24–53, and 56–69. Boliden's Sustainability Report, which is required under the provisions of chapt. 6, section 11 of the Swedish Annual Accounts Act, is presented on pages 10–13 and 40–53.

The provided sustainability information applies to issues of importance to Boliden.

## Responsible business

Boliden's raw material chain for gold complies with a number of ethical criteria and with stringent transparency requirements and Boliden is, consequently, an LBMA recommended gold producer. Find out more on page 42.

## Employees

A comprehensive technology shift is currently taking place within Boliden, generating the potential to work with innovation and technological development. Find out more on page 46.

## Environmental responsibility

Sweden's most comprehensive ecological compensation project ensures biological diversity as Aitik expands. Find out more on page 52.

**5,684**  
employees in  
Sweden, Finland,  
Norway and  
Ireland.

## The year in brief

| Key data  | 2017   | 2016               |
|---|--------|--------------------|
| Revenues, SEK m   | 49,531 | 40,316             |
| Operating profit, excl. revaluation of process inventory, SEK m | 8,913  | 5,094              |
| Operating profit, SEK m   | 9,015  | 5,682              |
| Earnings per share, SEK   | 25.06  | 15.49              |
| Free cash flow, SEK m   | 7,309  | -2,801             |
| Investments, SEK m  | 5,588  | 4,127              |
| Return on capital employed, %                                   | 21     | 15                 |
| Return on equity, %   | 22     | 16                 |
| Net debt/equity ratio, %  | 11     | 32                 |
| Dividend per share, SEK   | 8.25   | 5.25               |
| Redemption per share, SEK                                       | 5.75   | –                  |
| Accidents (LTI frequency)                                       | 6.3    | 7.9                |
| Sick leave, %   | 4.5    | 4.4                |
| Metals to water, tonnes (Me-eq)                                 | 9      | 13                 |
| Metals to air, tonnes (Me-eq)                                   | 109    | 100                |
| Carbon dioxide intensity, tonnes/tonne                          | 0.69   | 0.73 <sup>1)</sup> |
| Sulphur dioxide emissions, ktonnes                              | 7.4    | 7.1                |
| Number of serious environmental incidents                       | 1      | 2                  |

- Operating profit, excluding revaluation of process inventory, increased to SEK 8,913 m due to increases in production and improvements in market terms, primarily in the form of higher metal prices.
- Free cash flow totalled SEK 7,309 m (-2,801). The year on year increase was due to the improvement in profits.
- Boliden's share price rose by 18% during the year and consequently outperformed the Stockholm Stock Exchange.

<sup>1)</sup> Last year's intensity has been corrected from 0.69 to 0.73 due to incorrect source data.

# Societal development creates new needs

The most important component of Boliden's strategy is ensuring that all units maximise the value of existing operations in a highly responsible manner. When added together, multiple small improvements generate real value. The need for the metals Boliden produces is also increasing.

Societal development has always gone hand in hand with the extraction and use of metals. Industrialisation promoted some metals, urbanisation boosted others, and the information society is demanding yet others, and more of them. Scandinavia enjoys good geological preconditions for metal production, and our renewable energy production is also valuable in the context of our energy-intensive operations.

New energy systems in which a growing share of electricity production is only possible when the wind blows or the sun is up mean that large amounts of copper are required as a result of the need to build in substantial amounts of over-capacity. Electricity requirements are also becoming more varied: rapid recharging of electric cars, for example, requires high power for short periods of time. Battery operation development is also proceeding apace in a number of areas as part of this changeover in usage and the need for batteries and battery metals – metals that Boliden extracts – is increasing.

## What does sustainable mean?

Sweden's ambition is to be climate neutral, and Boliden sees three areas in which our industry-leading technology and small amounts of carbon dioxide per kilo of metal produced in comparison with the competition, can play a significant role in meeting global challenges in this respect.

Paradoxically enough, the biggest contribution Boliden can make to reducing global carbon dioxide emissions is to expand production! The majority of the world's metals come from mines and smelters that are more energy-intensive than ours and which are run using electricity generated from coal. Boliden uses fossil-free electricity in its energy-saving processes and has efficient logistics systems



and short transport routes. Expansions in Boliden's production mean reductions in the production of other mines and smelters with higher carbon dioxide emissions. Which means the best way Boliden can help reduce global emissions is by expanding.

Boliden has adopted a policy of sharing its own environmental technology with its competitors to enable them to introduce the environmentally beneficial measures that we have developed in partnership with our suppliers. In this way, Boliden can help bring about environmental improvements in other mines and smelters, too.

Continuous development of the environmental performance of our own facilities is, of course, the basis of our environmental work. We work with new models

to prioritise environmental investments that will improve the direction of resources to the areas that will yield the optimum environmental benefit per krona invested.

Boliden contributes substantially to the establishment of a sustainable society, over and above its activities in the environmental and climate control sphere. The health and safety work in our workplaces is a top priority for us and our goal is to have accident-free operations. The number of accidents at our installations fell during the year, but the gold standard in our industry is higher, and we are consequently implementing extensive training programmes and investing heavily to progress our work in this area.

Every employee generates, on average, four additional job opportunities and



substantial tax revenues. Our operations are often based in sparsely populated areas where Boliden provides stable employment, infrastructure and societal functions. Perhaps the most important factors for success in terms of our social responsibility are stable operations, safe jobs, a good return for our shareholders, and stability in the communities in which we operate.

### Digitisation, delegation and productivity

Many companies in our capital-intensive industry are run from the top down. Boliden, by contrast, has structures that delegate responsibility all the way down through the organisation. Digitisation is now becoming widespread and I believe that Boliden is well-positioned to exploit its benefits. We have scope for further improvement in the way information is disseminated within the delegated organisation, and this will result in efficient decisions, short lead times, and widespread engagement.

Digitisation and the development of new products is proceeding apace, and we are working with leading suppliers on projects for the development of self-driving trucks, mobile information systems, positioning systems for underground mines, and the electrification of mine vehicles, and are well-positioned to take advantage of the potential offered.

### Strategy

The most important component of Boliden's strategy is ensuring that all units maximise the value of existing operations – new builds are expensive in a capital-intensive industry such as ours – which is why we focus on increasing productivity without making major investments. We also train the organisation on new investments to ensure that they, too, are handled in an optimum way. If we are good at running old equipment, we will be good on any new equipment we acquire, too.

Making optimum use of our combined resources also enables us to achieve substantial economies of scope. The link between mines and smelters offers obvious benefits, but benefits also exist between similar kinds of units. Optimising our processes enables us both to extract more

metals from the raw materials and to concentrate waste into small volumes that can be deposited in advanced storages.

Planning and expansion projects are based on the latest technology and are carried out by experienced project teams. Our reliance on internal resources for both technology development and project management have proven to be an important factor for success. The acquisition of new operations is very expensive and the associated risks are relatively high, and Boliden has consequently built a detailed model for evaluating acquisition possibilities: buying is easy but creating value is hard. Our most recent acquisition was the Kevitsa nickel mine in Finland, which was acquired for SEK 6 billion in June 2016. The integration and improvement work went according to plan and we are happy with the acquisition. At the time of the acquisition, the mine was running at a loss but increased production and improvements in metal prices meant that Kevitsa

This has been a prosperous period for Boliden, where a combination of productivity improvements and profitable investments have contributed to strong growth.

”

was able to post an operating profit for 2017 of ca SEK 900 million.

### Retrospect

I will be leaving Boliden this summer after just over 10 years as CEO. These have been very turbulent years for the metals industry and the period as a whole has been historically weak, which is easy to forget in the current healthy climate.

This has been a prosperous period for Boliden, where a combination of productivity improvements and profitable investments have contributed to strong growth. Many other companies have pursued bold projects and investments, many of which have led to high degree of capital destruction. All of our mines and smelters have played their part in our healthy

development, with the most important improvement involving the personnel and organisational work carried out under the banner of the “New Boliden Way”. Through training and everyday rationalisations, and in the firm belief that numerous small improvements often create more value than a few large ones, we have made improvements across the board.

The competitiveness of most of our units is now good, the lifespans of Boliden's mines have been extended, and production has increased. Our smelters' margins have been strengthened through a focus on material mix and process improvements, and our shareholders have also seen a favourable trend, with a total return of 17% per year over the past ten years.

What could we have done better? Well, we had maximum focus on the really big projects, but we could have had better quality in several of the smaller ones. It's also proven difficult to implement more than one project at a time within the same unit. And when it comes to the New Boliden Way and safety, we could have implemented changes more quickly.

### Thank you all

This will be my last set of closing accounts for Boliden. 2017 was a strong year, with an operating profit of SEK 8.9 billion and a free cash flow of SEK 7.3 billion. Our net/debt ratio was down to 11% and the Board has proposed that the AGM approves an extra payment, over and above the ordinary one.

I have had ten fantastic years with Boliden, and I would like to thank all of you colleagues and business partners for our time together. I welcome Mikael Staffas to take over the leadership of Boliden.

I will miss you all.



Lennart Evrell  
President & CEO

# Boliden's metals for modern, sustainable societies

Demand for metals is associated with improved standards of living and economic growth. Infrastructure, buildings, energy systems, and vehicles – they all contain metals. Metal recycling is becoming increasingly important, but in a world in which poorer countries are developing rapidly, there is also a real need for primary production. Achieving international climate goals and a sustainable future will require larger amounts of metals. Our industry is vital in meeting major global challenges.

## Maintaining value

Surface treatments with zinc and alloys containing nickel, etc. extend the lifespan of steel constructions.



Bhumibol Bridge in Bangkok. Every building contains vast numbers of electrical installations that make use of the superior properties of copper. Which means this base metal is an important prerequisite of electrification and energy efficiency in society.

## A long-term approach

Metals are endlessly recyclable. Societal development is seeing more metals used in a wide variety of different applications.

## Future

Copper, tellurium, nickel and cobalt are vital to modern energy systems with renewable production and energy storage.



# Mines and smelters with synergies

Boliden is a high-tech metals company that takes a long-term approach to meeting society's demand for base and precious metals – from exploration to production and the delivery of high quality metals to industrial customers. The operations are based on experience, innovation and advanced technology, developed in partnership with Nordic technology and engineering companies.

## **Metal mix**

The combination of base and precious metals provides better stability over pricing cycles.

## **Geography**

Geologically attractive area with good access to renewable energy.

## **Earnings**

Mines and smelters have different business cycles and balance out earnings over time.





Boliden is one of the world's leading zinc producers and one of the leading copper and nickel producers in Europe. Boliden also produces precious metals, sulphuric acid, and by-products. Globally, Boliden is one of the leading operators in the area of electronic scrap recycling.

### **New Boliden Way**

Strong corporate culture based on personal responsibility and continuous improvements to bring about high productivity and low costs.

### **Technology**

High level of innovation and strong productivity.

### **Integrated value chain**

Partial in-house concentrate supplies ensure flexibility in the concentrate market.

The Odda zinc smelter in western Norway has a production capacity of 200,000 tonnes per year. With stable access to Norwegian hydroelectricity and good processes, Odda is one of the most climate-efficient zinc smelters in the world.



# Boliden creates value

Boliden is a metals company that focuses on sustainable development. Our roots are Nordic but our market is global. Our core competencies lie in exploration, mining, smelting, and metal recycling.



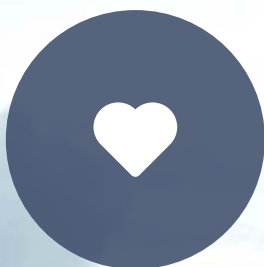
## Vision

Metals are vital to the development of modern society. Boliden's vision is to be one of the leading companies in the industry in terms of development, productivity, responsibility, and value creation. Boliden has a zero vision for accidents affecting people and environment.



## Business concept


By providing, refining, and recycling the base and precious metals that society needs, Boliden acts as an important component of the circular economy. We work to ensure optimum resource and materials processing at every stage of the value chain and strive to ensure sustainable development in the fields of safety, environmental performance and business ethics.



## Values

Boliden's values involve passion for improvements, taking responsibility for the entire value chain, and demonstrating personal commitment to our work and the company. We strive to be a company governed by its values in that they form the basis for how we develop our business.





## Strategy

Existing operations are maximised in full before new investments are initiated. Boliden's strategy, which incorporates sustainability issues, results in high level value creation for every unit and builds a corporate culture characterised by widespread acceptance of responsibility.

### Operational excellence

Increased stability and productivity in existing units mean lower costs, increased production, and a reduced risk of accidents, and all without the need for major investments. Elimination of bottlenecks can improve the utilisation of spare capacity throughout the value chain, and normally results in substantial value creation.

### Organic growth

Boliden has, in addition to its efforts to enhance operational efficiency, invested substantial resources over the years in a range of growth projects. These have been in the form of both several expansion-related investments in existing mines and facilities, and increased focus on exploration.

### Selected acquisitions

Boliden is constantly evaluating potential acquisition opportunities. This involves both operational mines and new mine projects. Any potential acquisition must enable Boliden to generate additional value through its knowledge and expertise in exploration, mining operations, concentration technology, and metallurgy.

Hong Kong is based on international trade. Zinc extends the lifespan of vehicles, ships, bridges, buildings, and wind power plants. 30% of the world's zinc production nowadays comes from recycling and secondary materials.



# Financial and non-financial targets

Strong profitability, safe workplaces, and a good environmental performance are all key components of Boliden's long-term value creation. Together, they lay the foundations for competitive operations.

## Financial targets

### Return on investments

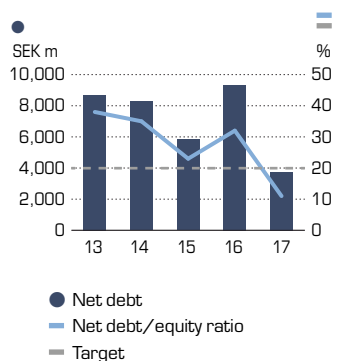
The return on investments shall be a minimum of 10% (NPV)



The return on capital employed totalled 21% (15). The average per annum during the period from 2013 to 2017 has been 12%. Any investments made shall demonstrate a high return and shall be made in line with both Boliden's strategy and available resources. The projects' internal interest rates shall be higher than Boliden's weighted capital cost (WACC), adjusted for a risk premium.<sup>1)</sup>

### Net debt/equity ratio

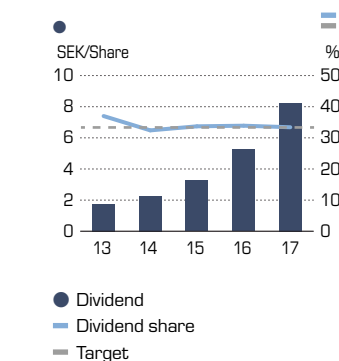
The net debt/equity ratio in an economic upturn shall be approximately 20%



The net debt/equity ratio at the end of 2017 was 11% (32). The decrease since 2016 was due to loan amortisation during the period that was enabled by the profit and cash flow for the year.

### Dividend

The dividend shall correspond to one third of the net profit

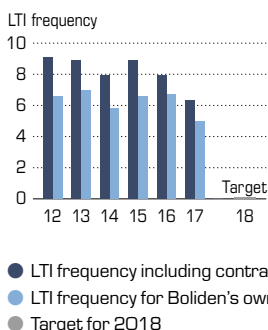


The proposed ordinary dividend is SEK 8.25 (5.25) per share, corresponding to 32.9% (33.9) of the net profit for the year. In addition, an extra payment of SEK 5.75 per share, in the form of an automatic share redemption procedure, has been proposed. The ordinary dividend share during the period from 2013 to 2017 was 33.4% of the aggregate net profit for the period.

## Social targets

### Accidents

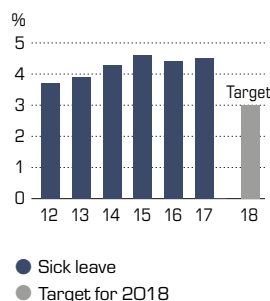
Boliden shall have zero accidents resulting in absence from work (LTI) per month by 2018



The number of accidents leading to absence from work (LTI) decreased by 20% in 2017 from 7.9 to 6.3 per one million hours worked. Efforts to strengthen the safety culture continue unabated and a number of standards were introduced in late 2017 with the aim of both creating safer work environments and boosting risk awareness.

### Sick leave

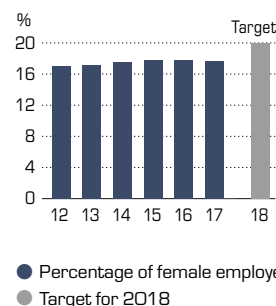
The sick leave rate shall not exceed 3.0% by 2018



The sick leave rate increased in 2017 from 4.4% to 4.5%. Boliden is continuing its efforts to prevent and rehabilitate in conjunction with both physical and mental ill health and training managers in the latter area formed an important component of this work in 2017.

### Gender equality

Women shall comprise at least 20% of the workforce by 2018



The number of women working at Boliden, calculated as FTE, was 1,001 (976), resulting in a virtually unchanged share of 17.6% (17.8) of the workforce. 116 of the total of 449 new recruits to the company in 2017 were women, or 26% (17) of the total.

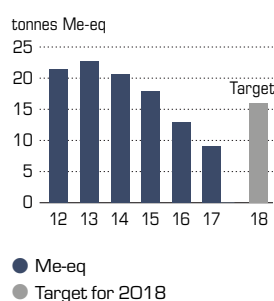
<sup>1)</sup> The WACC before tax is nominally set at 12%, which corresponds to 10% in real terms. Calculations for major and long-term projects are normally conducted in real terms. They are based on forecast interest rates, metal prices, exchange rates, inflation and other relevant assumptions drawn from internal analyses and external assessments.



## Environmental targets

### Metal discharges to water

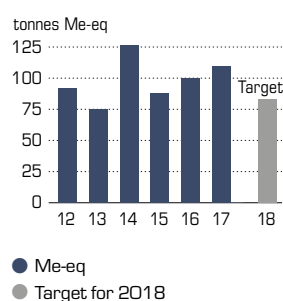
Discharges of metals to water shall decrease by 25% between 2012 and 2018



The environmental impact from discharges of metals to water has declined by 57% since the base year of 2012. Discharges have fallen at the majority of Boliden's units during 2017, with a new water treatment plant at one of the units accounting for a large share of the reduction.

### Metal emissions to air

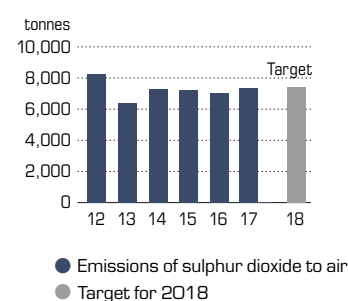
Emissions of metals to air shall decrease by 10% between 2012 and 2018



The environmental impact from emissions of metals to air has increased by 19% since the base year of 2012. The copper smelters have, as a result of the recycling of more complex materials, accounted for the majority of this trend. Boliden is currently carrying out investigations in order to improve treatment techniques, amongst others, with a view to turning this trend around. The emissions are within existing environmental permit limits.

### Sulphur dioxide emissions

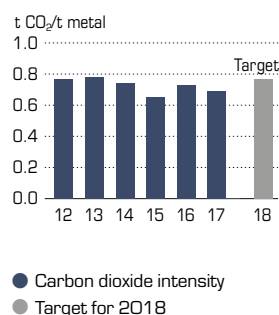
Sulphur dioxide emissions to air shall decrease by 10% between 2012 and 2018



Emissions of sulphur dioxide to air have declined by 11% in comparison with the base year of 2012. A number of investments are being made in order to further reduce these emissions.

### Carbon dioxide emissions<sup>1)</sup>

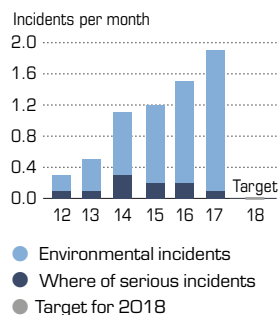
The carbon dioxide intensity shall not exceed 0.77 tonnes of CO<sub>2</sub> per tonne of metal produced by 2018



The carbon dioxide intensity has decreased from 0.73 to 0.69. Boliden is working on increasing the electrification of transports in order to reduce the use of fossil fuels. Projects aiming at reducing the carbon dioxide emissions from processes and systematic work to improve energy efficiency are being pursued.

### Environmental incidents

Boliden's target for 2018 is zero serious environmental incidents per month



The number of serious environmental incidents has fallen to 0.1 (0.2) per month. 1 (2) serious incident occurred during the year, involving a contravention of the Swedish Cultural Environment Act.

Boliden has a vision of zero environmental incidents. 22 (17) environmental incidents occurred during the year, one of which was deemed to be serious. The other 21 comprised 14 discharges to water; 6 instances of prohibited air pollution, and 1 in relation to waste management. None of these incidents are deemed to have caused lasting damage or had a significant environmental impact. Serious environmental incidents are a new key ratio introduced to differentiate environmental incidents deemed to have a more serious impact on the environment from an environmental and/or legislative compliance perspective.

Reducing the number of environmental incidents demands stable processes at every stage in the value chain and focused work on routines, risk assessment, action plans and improved technology.

<sup>1)</sup> The 2016 intensity has been corrected from 0.69 to 0.73 due to incorrect source data for the calculations.



# Boliden's business model

By efficiently extracting and refining the base and precious metals that society needs, and which are recycled after use, Boliden is an important part of the circular economy. Cooperation with suppliers helps ensure technological development, improved environmental performance and sales in a global market.

## Input

### Capital

|                                   | 2017   | 2016   |
|-----------------------------------|--------|--------|
| Investments <sup>1)</sup> , SEK m | 5,588  | 4,127  |
| Capital employed, SEK m           | 42,931 | 42,457 |
| Net debt/equity ratio, %          | 11     | 32     |

### Know-how

- Patents, e.g. for electronic recycling, exploration techniques, water treatment
- Rights and permits
- Reclamation expertise
- R&D partnerships with universities, colleges, and suppliers

### People

- Number of employees [FTE]: 5,684 (5,477)
- Contractors and partners

### Relationships

- Cooperation and dialogues with prioritised stakeholder groups
- Long-term development partnerships
- Involvement in industry organisations

### Natural resources

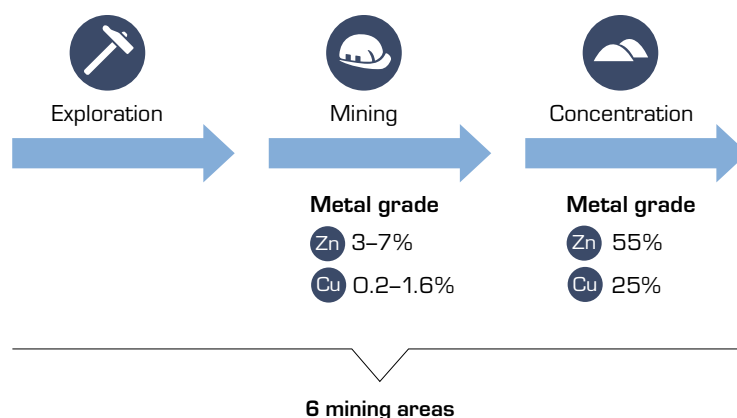
| Natural resources                         | 2017   | 2016   |
|---|--------|--------|
| Mineral resources <sup>2)</sup> , Mtonnes | 2,065  | 2,260  |
| Mineral reserves <sup>2)</sup> , Mtonnes  | 1,405  | 1,450  |
| Forests and land, ha                      | 23,000 | 22,600 |

### Raw materials

|   | 2017  | 2016  |
|---|-------|-------|
| Energy, TWh   | 6.4   | 6.2   |
| – of which, electricity, TWh                                      | 4.6   | 4.5   |
| Water, Mm <sup>3</sup>  | 145   | 140   |
| Mined concentrate feed (primary material) <sup>3)</sup> , ktonnes | 2,375 | 2,408 |
| Recycled materials (secondary materials) <sup>3)</sup> , ktonnes  | 316   | 304   |

## Value creation

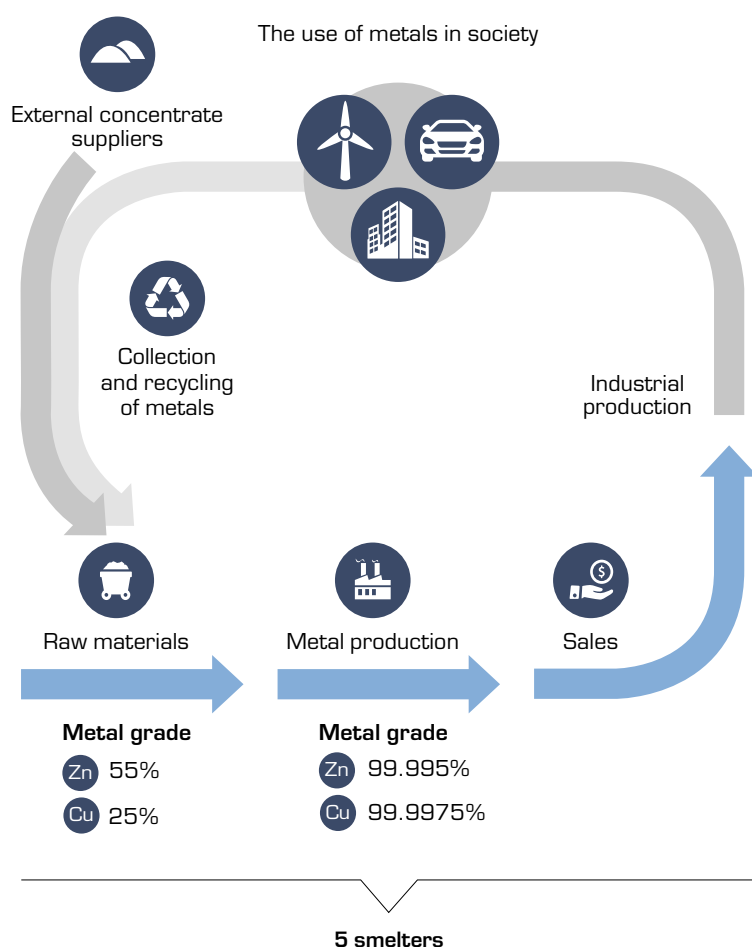
From exploration to the recycling of metals, value is created for shareholders and society. Cutting-edge competence ensures competitiveness and the minimum possible environmental impact.



<sup>1)</sup> Excluding acquisitions: Kevitsa 2016 (SEK 5,961 m).

<sup>2)</sup> Mineral Resources include measured and indicated resources, while Mineral Reserves include proven and probable reserves. For full details of Boliden's Mineral Reserves and Resources, see pages 106–110.

<sup>3)</sup> Adjusted calculation for 2016.



## Result

### Metal production

|                               | 2017    | 2016    |
|-------------------------------|---------|---------|
| Zinc, ktonnes                 | 457     | 461     |
| Copper, ktonnes               | 353     | 336     |
| Lead and lead alloys, ktonnes | 78      | 74      |
| Nickel in matte, ktonnes      | 25      | 31      |
| Gold, kg                      | 17,776  | 17,638  |
| Silver, kg                    | 551,286 | 609,151 |

### Economic impact

- Purchases: SEK 36,664 m (30,340)
- Salaries paid to employees: SEK 4,532 m (3,925)
- Dividend paid to shareholders<sup>1)</sup>: SEK 3,829 m (1,436)
- Interest paid to lenders: SEK 282 m (311)
- Taxes and charges: SEK 1,881 m (1,135)
- Retained within Boliden: SEK 3,480 m (1,688)

### Social impact

- Direct and indirect job opportunities in Sweden, Finland, Norway and Ireland: 30,000
- Frequency of occupational accidents leading to absence from work (LTI): 6.3 (7.9)
- Sick leave: 4.5% (4.4)
- Involvement and value creation in local communities
- Utilisation of land and water

### Environmental impact

|  | 2017  | 2016  |
|--|-------|-------|
| Discharges of metals to water, tonnes, Me-eq | 9.1   | 13.1  |
| Emissions of metals to air, tonnes, Me-eq    | 109   | 100   |
| Sulphur dioxide emissions, ktonnes           | 7.4   | 7.1   |
| Carbon dioxide emissions, ktonnes            | 1,024 | 1,052 |
| Energy, TWh                                  | 6.4   | 6.2   |
| Waste:                                       |       |       |
| i. Non-hazardous, ktonnes                    | 355   | 252   |
| ii. Hazardous, ktonnes                       | 873   | 826   |

<sup>1)</sup> The 2017 amount includes proposed ordinary dividend of SEK 8.25 as well as the extra payment of SEK 5.75 per share in the form of an automatic share redemption procedure.

The model is based on the framework issued by the International Integrated Reporting Council (IIRC). The primary purpose of the model is to explain how the Group creates long-term value.



# Metal market trends

Base metal prices rose. Copper and zinc prices at the end of the year were high, relative to the mining industry's cost position. The price of nickel also rose, but continued low overall, as stock levels were high. There was periodic high levels of interest in precious metals, which is not normally the case in a strong economic climate, and precious metal prices came close to reaching 2016 levels.

## Market trends, 2017

Global demand for zinc, copper and nickel increased, but growth rates were on a par with those in 2016, in spite of the stronger industrial climate, due to lower growth in the construction and automotive sectors. Demand grew more strongly in mature economies, but slightly less strongly in China.

Copper mines continued to experience disruptions to production and there was a balance between supply and demand in the concentrate and metals markets.

The zinc market continued to experience a shortage of mined concentrate and

metal due, in part, to the temporary closure of substantial mining capacity since 2015. Copper and zinc prices continued to rise.

Nickel metal was also in short supply, due to a temporary closure of production capacity, but there continued to be substantial stocks of the metal. The price of nickel was volatile throughout the year but, on average, higher than in 2016. Precious metal prices remained high due to the global geopolitical situation and to other risks which continued to affect market sentiments from time to time.

## Global economic growth

The demand for metals grows most rapidly in countries where the GDP per capita lies in the interval from USD 5,000 to USD 15,000 as societies develop from agricultural to industrial economies. A large proportion of the world's population still have per capita GDPs of less than USD 5,000 and high levels of metal demand growth are therefore expected long into the future. Mature economies still account for a significant percentage of global metal demand, but growth in these economies is weak. Mature economies' investments in new energy systems will have a positive impact

## Driving forces

Factors that drive demand for metals and which consequently impact pricing.



New technology



Population growth



Urbanisation



Economic growth in developing countries



Increased prosperity in emerging economies



Industrial activity levels

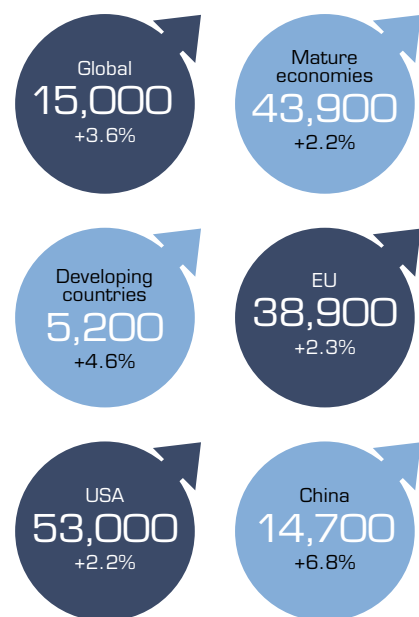


Investments in infrastructure



Automotive market trends

## GDP/capita 2017



All values have been rounded off in USD (PPP) constant prices. Changes show GDP growth year on year.  
Source: Oxford Economics, IMF October 2017

Find out more about price trends in 2017 on pages 20-23

on demand. This demand will, however, be increasingly met using recycled metals.

### Economic trends

All mines have a limited lifespan and supply declines if new mines are not brought into production. Justifying investments in new mines requires assumptions that future prices will be sufficiently high to ensure project profitability. When metal prices are low, high-cost mines are moth-balled or closed permanently, ensuring a balance in the market.

Several copper smelters have been built in the past ten years, particularly in China, and as a result, a global overca-

capacity has arisen. Treatment charges were consequently low for an extended period of time, but turned around some years ago when numerous copper mines were opened and others expanded. The launch of new mining capacity has, however, been on a limited scale in recent years.




The build of zinc smelters in China has been rapid while new mine projects few. The market has fluctuated between a surplus and a shortage of metal and concentrate in recent years, and treatment charges have varied. Large zinc mines were permanently closed down in 2015, and a number have also made temporary cuts in production, resulting in falling treatment

charges and rising metal prices. A few new zinc mines will come be brought into production in 2018, but the net addition to mine capacity over the next five years is limited.

There has been substantial investment in nickel mines and smelters over the past 10 years, and there was a surplus of metal for many years now, healthy demand trends notwithstanding. A number of mines have been temporarily closed since 2014 while metal demand has continued to increase, and there has been a shortage of metal since 2016. Stocks have, however, remained high and the metal price has consequently remained low.

## Development in subsidiary markets, 2017

Demand for Boliden's main metals is primarily driven by global industrial activity levels, and by trends in infrastructure, the construction market (the construction sector's investments), and the automotive market.

| Subsidiary market  | Global                | China                          | USA                   | Europe                |
|--|-----------------------|--------------------------------|-----------------------|-----------------------|
| Industrial activity levels<br>            | Growth rate increased | High growth rate               | Growth rate increased | Growth rate increased |
| The construction sector's investments<br> | Growth rate decreased | High but declining growth rate | Growth rate decreased | Rising from low level |
| Automotive production<br>                 | Growth rate decreased | Low growth rate                | Reduced production    | Growth rate increased |

### ABOUT PRICING

#### Metals

Copper, zinc and lead prices are set daily on the London Metal Exchange (LME). Premiums, which comprise surcharges whose levels are determined by the local balance between metal demand and smelter capacity, are normally added to the price, along with shipping costs and payment terms. Gold and silver prices are similarly set by the London Bullion Market Association (LBMA). Palladium, platinum, cobalt and tellurium prices are published in the Metal Bulletin.

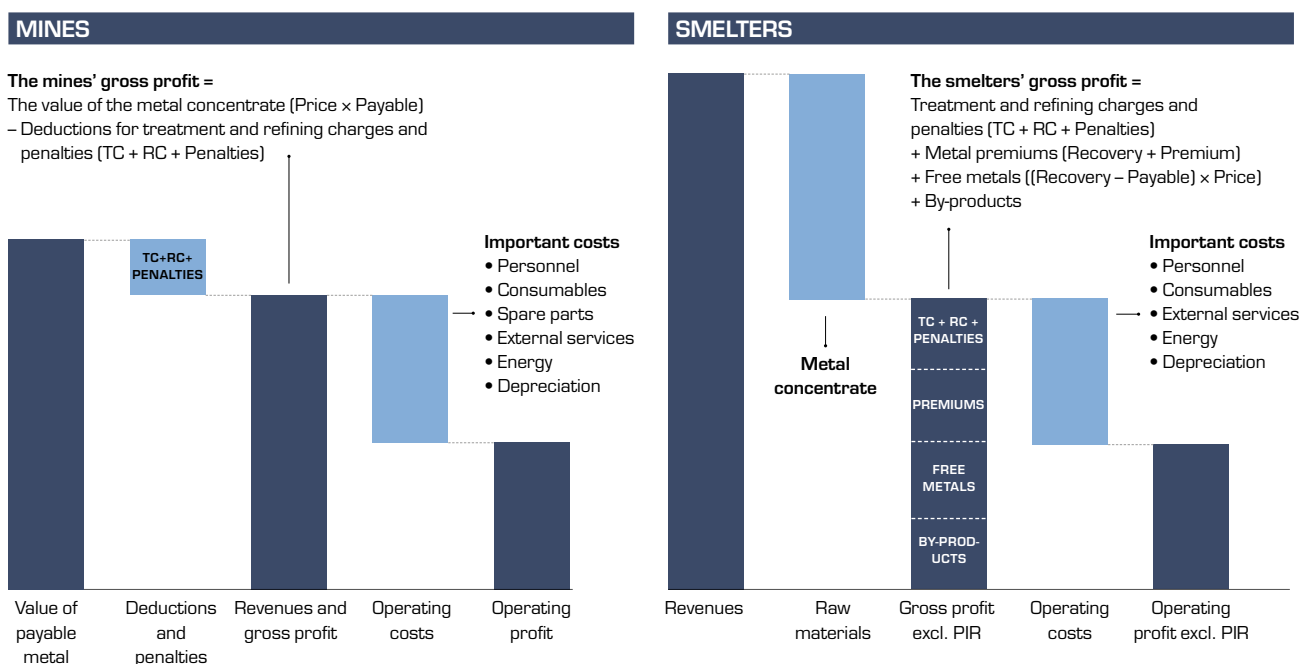
#### Concentrates

The price of concentrate is the LME price minus the treatment charge (TC), and is calculated on that part of the concentrate's metal content that is payable as per agreed terms between the mines and the smelters. The balance between the supply of concentrates from the world's mines and the smelters' demand determines the prices and terms between mines and smelters. Find out more about Boliden's income model on pages 16–17



# Boliden's income model

Boliden operates in both of the metal market's subsidiary markets, selling raw materials from mines to smelters and selling metals, primarily to industrial customers. Boliden's integrated business model generates a range of synergies and ensures more stable revenues for the Group as the income cycles of mines and smelters often differ.



Boliden's smelters have the capacity to process considerably larger volumes than those produced by Boliden's mines and substantial volumes of concentrate are consequently purchased from external mines. All sales of metal concentrates between Boliden's mines and smelters are made on market terms. Bars in the illustrations are not to scale.

## INCOME COMPONENTS

|                    |  |
|--------------------|--|
| <b>Price</b>       | Global market price in USD set on the LME and LBMA   |
| <b>Premiums</b>    | Metal premiums, which comprise a local adjustment of the LME price   |
| <b>Payable</b>     | The payable metal content of the concentrates  |
| <b>TC</b>          | Treatment charges  |
| <b>RC</b>          | Refining charges   |
| <b>Penalties</b>   | Discounts for impurities in the metals   |
| <b>Recovery</b>    | Extracted metal as a percentage of the metal content, which depends on the quality of the process and the material |
| <b>By-products</b> | Income from by-products  |

## Mines

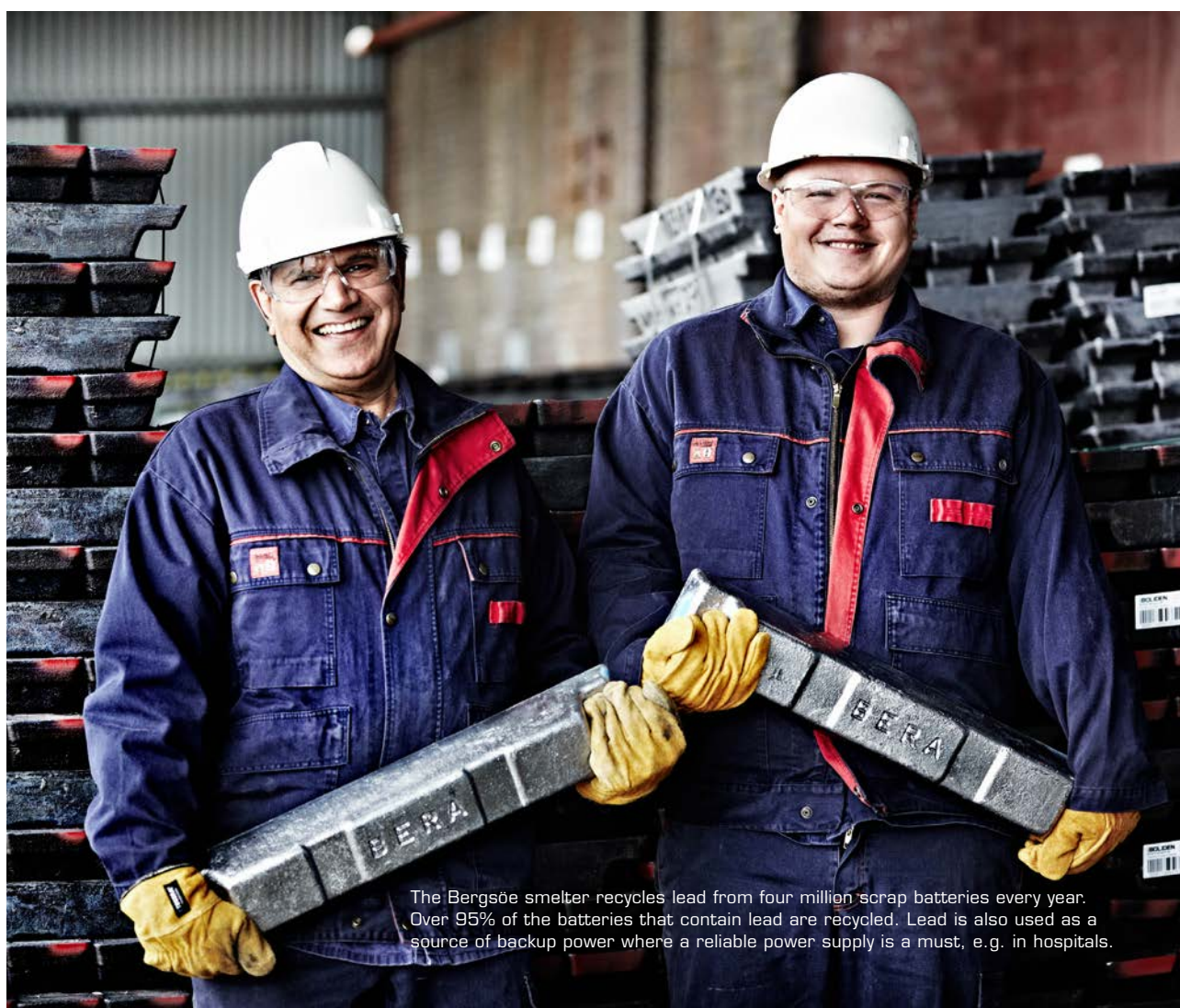
Boliden's Business Area Mines produces metal concentrates. Revenues are affected by ore tonnage, metal grades, recovery during the concentration process, the price of concentrates in USD, and exchange rate fluctuations.

The gross profit and revenues are normally the same, as Mines has no input raw materials. Concentrate prices are an effect of the global market price of the pure metal and the payable metal content (the quantity of metal in concentrates for which the mines can get paid), less treatment and refining charges (TC and RC) and deductions for impurities in the concentrate

(penalties). The levels of TC/RC and penalty charges are determined in negotiations between mines and smelters.

The operating profit is the gross profit less operating costs, the most important of which are personnel, consumables, spare parts, external services, energy and depreciation.

An individual mine has natural variations in grades, waste rock dilution, energy requirements at different depths, equipment maintenance and other factors that result in the profit varying over time. These variations are often known well in advance and are clearly defined in so-called life of mine plans. Boliden provides



The Bergsöe smelter recycles lead from four million scrap batteries every year. Over 95% of the batteries that contain lead are recycled. Lead is also used as a source of backup power where a reliable power supply is a must, e.g. in hospitals.

guidance on major changes in grades in the larger mines when grades are expected to significantly deviate from the reserves' average grades.

### Smelters

Boliden's Business Area Smelters produces pure metals. Revenues comprise the LME price plus metal premiums. The metal premium is determined by regional supply and demand and constitutes a local adjustment of the LME price, including such factors as transportation and customised alloys, and is affected by payment terms.

The gross profit is the difference between revenues and the price of the raw

materials, and comprises treatment and refining charges (from concentrates and secondary raw materials), penalties (remuneration for impurities), metal premiums, income from so-called free metals, and income from by-products. Free metals arise when the amount of metal recovered during concentration is so high that the smelters produce quantities of metal that exceed the payable metal content of the concentrates purchased by the smelter. By-products extracted during the processing, such as sulphuric acid, also generate important revenues.

The operating profit comprises the gross profit less operating costs for personnel,

consumables, external services, energy, and depreciation. Boliden reports operating profit excluding revaluation of the smelters' process inventory (PIR), in order to provide a better picture of the underlying trend.

Unlike mines, smelters have a similar production situation over time with the exception of maintenance shutdowns, which are more comprehensive and which are grouped together - typically every third year and usually during the warmer part of the year. Boliden provides guidance on maintenance shutdowns for the year ahead.



# Boliden's market position

Boliden is one of the world's biggest zinc mining and smelting companies and a smaller player in copper, and has successfully built up a position in nickel in a short space of time. Boliden also enjoys a market-leading position in the field of electronic scrap recycling and is a prominent player in the European lead recycling sector.

## Mining companies - zinc

Boliden is the fourth largest zinc mining company in the world. Tara and Garpenberg are both large zinc mines by international standards. The Garpenberg and Boliden Area mines in Sweden receive revenues from a number of other metals, such as silver, gold, lead, and copper, while Tara in Ireland receives limited revenues from by-product metals.

## Mining companies - copper

Boliden is a minor operator in the global copper mining industry, but a significant one in Europe. The Aitik mine is a large mine with low grades, world-leading productivity and additional revenues from gold and silver. The Kylylahti mine is a small mine with high grades. Kevitsa is a mine with good productivity and where the primary metals are nickel and copper.

## Smelting companies - zinc

Boliden is the sixth largest zinc smelting company in the world. The Kokkola smelter is a major zinc producer, while the Odda smelter is, following the expansion completed in 2017, a medium-sized producer.

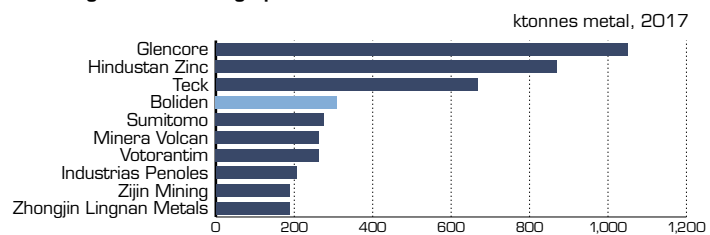
## Smelting companies - copper

Boliden is the sixteenth largest copper smelting company in the world. The Rönnskär smelter is a major copper producer and a world leader in electronic scrap recycling. The Harjavalta smelter is a minor copper smelter, but is the biggest nickel smelter in western Europe. Measured as a producer of refined copper cathodes, Boliden is the twentieth biggest company in the world.

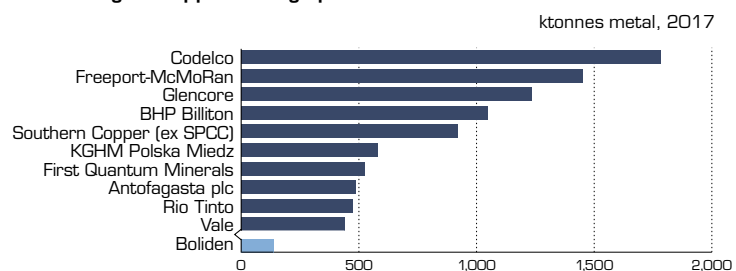
## Mining and smelting companies - nickel

Boliden has been producing nickel for many years in partnership with one of the world's biggest nickel companies. This partnership was wound up in 2015 and Boliden has built up its own network of concentrate suppliers and customers for Boliden's nickel product, which is known as nickel matte. The purchase of the Kevitsa mine in Finland means that Boliden now has the same structure for nickel as for copper and zinc – an integrated business model including both mines and smelters and where our own mines account for a substantial share of the concentrate requirement.

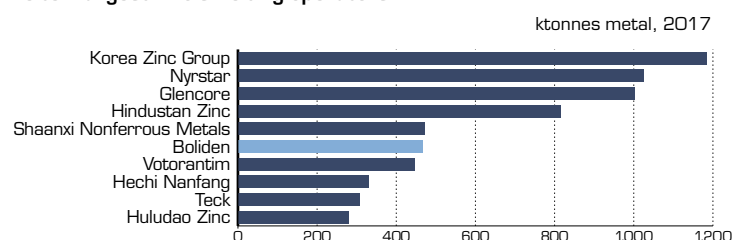
## The ten largest zinc mining operators



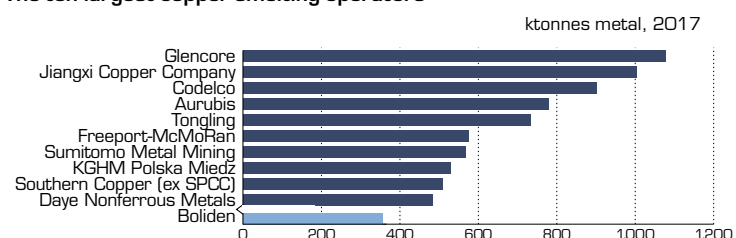
## The ten largest copper mining operators



## The ten largest zinc smelting operators



## The ten largest copper smelting operators



## Mining and smelting companies - lead

Boliden is a significant global mining company when it comes to lead and a medium-sized smelting company for primary lead. The Bergsöe smelter also gives Boliden a significant position in the European lead recycling sector.

SOURCE: WOOD MACKENZIE DEC 2017

# Boliden's competitiveness

Metals are traded and priced on global exchanges. Competitive costs and sustainable processes are critical to long-term success in that the metals are largely produced and traded in their pure forms without distinguishing properties.

Unlike pure metals, mined concentrates are not traded on exchanges, but are priced by leading operators who announce their terms in the form of annual contracts known as benchmark contracts. The competitiveness of mines – the cost per tonne of metal – is well-known to the market's

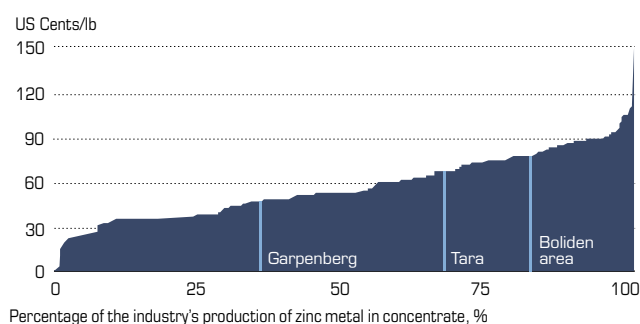
operators due to the information on cost levels, known as cash cost, regularly compiled by independent analysis companies. Strongly competitive mines often have high grades, substantial revenues from by-product metals, advantageous infrastructure, and low costs. Smelters'

competitiveness is usually compared using the cash margin metric, which is a more comparable metric, in that smelters extract multiple metals and by-products. Smelters' competitiveness depends on cost levels, stable processes, and the extraction of metals and by-products in addition to their primary metals.

## Cash cost in the mining industry

### Zinc – cash cost C1 composite costing

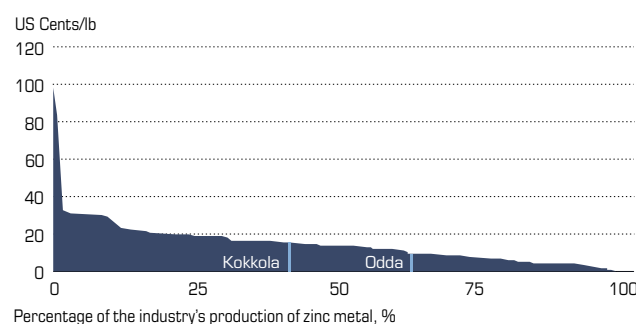
SOURCE: WOOD MACKENZIE JAN 2018



Garpenberg and the Boliden Area have substantial revenues from several metals and cash costs are calculated using pro rata costing. Tara is described using normal costing. According to Wood Mackenzie, Garpenberg's productivity is amongst the best in the world and Tara's productivity is high.

## Cash margin for smelters

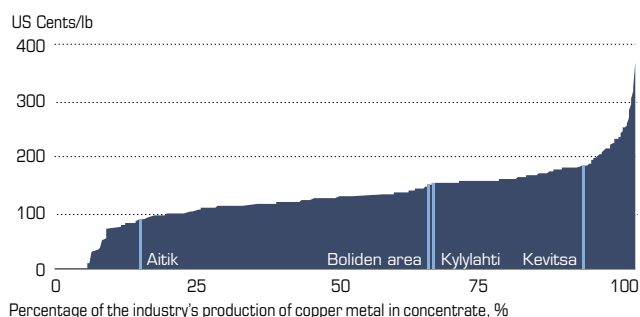
### Zinc – cash margin for smelters



Kokkola and Odda are at the centre of the cash margin curve for the world's zinc smelters.

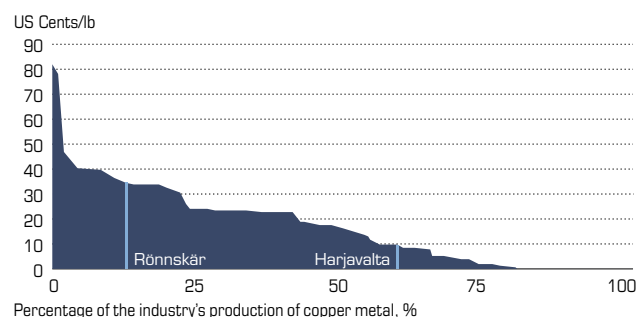
### Copper – cash cost C1 composite costing

SOURCE: WOOD MACKENZIE JAN 2018



Aitik has a low cash cost as a result of having the world's highest productivity. Kylylahti's cash cost, as shown in the graph, is based on Boliden's own calculations. Kevitsa is a nickel and copper mine with by-products. Kevitsa is located in the better quartile of the industry's cost curve for nickel.

### Copper – cash margin for smelters



Rönnskär has a substantial supply of recycling materials. Harjavalta has substantial revenues from nickel, but it is unclear whether Wood Mackenzie's calculations take full account of the nickel business.

For concept definitions, see page 119

The graphs are based on estimates and assumptions by the analysis company, Wood Mackenzie, and may differ from Boliden's own cash cost per mine data due to differences in the underlying data. There are a number of different definitions of cash cost: composite costing is used in Mine's graph, whereby mines are reported using either pro rata or normal costing. Pro rata costing divides the costs between the different metals, while normal costing reduces the costs by the net revenues from by-products.

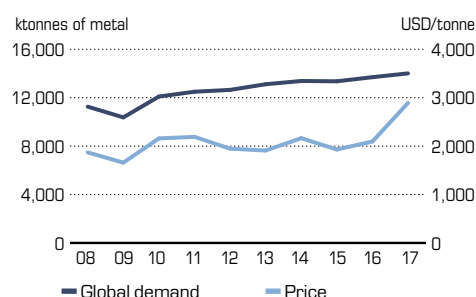


# Price trends, 2017

## The zinc market

### Price and global demand

SOURCE: CRU JAN 2018



### Global demand

**14.0**

MTONNES (+2.5%)

Demand increased in China by just over 3% and accounted for approximately 48% (47) of global demand. Demand increased in the rest of the world by approximately 1.5%. Demand exceeded metal production.

### Average price

**2,896**

USD/TONNE (+38%)

The price at the beginning of the year was well in excess of the cash cost for high-cost mines and continued to rise during the first quarter, only to fall in the second. The price rose substantially in the latter half of the year, and by the end of the year, it had reached USD 3,338 (2,558) per tonne, corresponding to an increase of approximately 30% since the beginning of the year.

### Spot metal premiums in Europe

SOURCE: CRU JAN 2018



### Global mined production

**11.9**

MTONNES (+3.5%)

Mined production of zinc in concentrate rose in both China and elsewhere in the world, but production still fell short of demand for mined concentrate. Significant amounts of mine capacity that has been closed temporarily since 2015 remained closed in 2017. China increased production by 1% and production in the rest of the world increased by just under 5%.

### Spot metal premiums in Europe

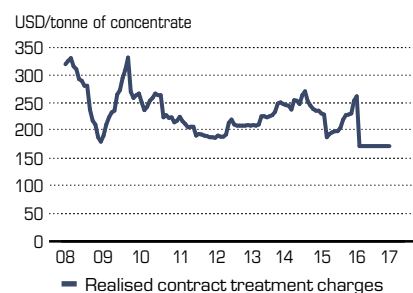
**140**

USD/TONNE (3%)

European metal premiums rose slightly. According to the analysis company, CRU, European zinc premiums rose by an average of 3%, year on year. Metal availability in Europe was good during the year, in spite of the global metal shortage.

### Treatment charges (TC)

SOURCE: CRU JAN 2018



### Global smelter production

**13.5**

MTONNES (-1.0%)

Global production fell by 1%. Production in China fell by 2% due to the limited availability of concentrate. China's share of global production fell to 44% (45). Production remained unchanged in the rest of the world. Smelter production continued to fall short of metal demand.

### Realised contract treatment charges (TC)

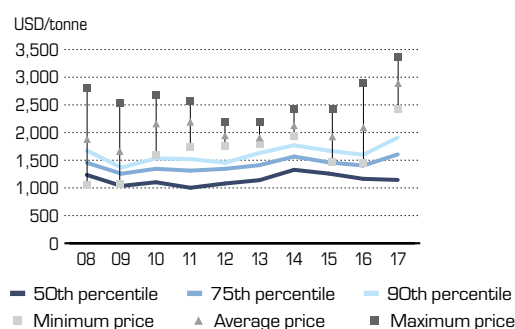
**172**

USD/TONNE OF CONCENTRATE (-21%)

Contract treatment charges fell, year on year, and treatment charges including price sharing of metal price changes were, on average, around 21% lower. Spot treatment charges for concentrate imported to China started the year at a low level and fell further.

### Cash cost and price

SOURCE: WOOD MACKENZIE REUTERS JAN 2018



### Cash cost, zinc

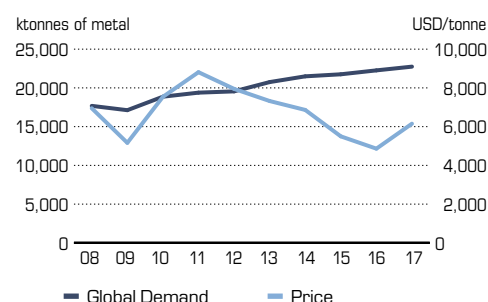
In weaker economic markets, metal prices have often reached a low point when they equate to the cash cost level for high-cost mines. The price of zinc has, on occasional trading days under challenging economic conditions, fallen towards the 60th percentile, where 40% of production has a negative cash flow. As a yearly average,

zinc prices in a weak economic climate have been close to the 90th percentile. The USD weakened successively against many currencies in 2017 and local costs measured in USD consequently rose. Cash cost in the 90th percentile is estimated to have risen to around USD 1,900 (1,600) per tonne.

## Copper market

SOURCE: CRU JAN 2018

### Price and global demand



### Global demand

# 22.7

MTONNES (+2.2%)

Demand in China increased by approximately 4% and accounted for 48% (48) of global demand. Demand elsewhere in the world increased by around 1%. Demand was on a par with metal production.

### Average price

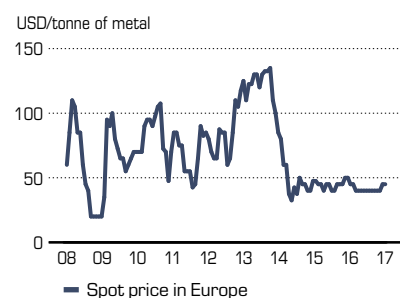
# 6,166

USD/TONNE (+27%)

The price at the beginning of the year was well above the cost level for high-cost mines and continued to rise during the first quarter, only to fall in the second. The price rose substantially in the latter half of the year and ended the year at USD 7,207 (5,523) per tonne, corresponding to a 30% rise from the end of 2016.

SOURCE: CRU JAN 2018

### Spot metal premiums in Europe



### Global mined production (concentrate)

# 16.3

MTONNES (0%)

The mining industry experienced substantial production disruptions during the first half of the year and production of mined concentrate fell in spite of several mines having started increasing production after expansions. The disruptions were, in many cases, caused by industrial disputes. The scale of the disruptions declined in the latter half of the year and full year production levels remained unchanged.

### Spot metal premiums in Europe

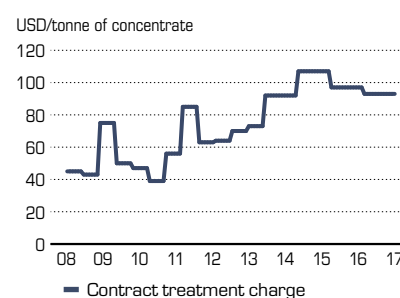
# 40

USD/TONNE (-10%)

Metal availability in Europe continued to be good and spot premiums fell from an already low level.

SOURCE: CRU JAN 2018

### Treatment charges (TC)



### Global smelter production

# 22.9

MTONNES (+1%)

Global production increased year on year by 1%. Production increased in China by approximately 5%, accounting for 37% (36) of global production. Production levels elsewhere in the world remained unchanged. Production slightly exceeded metal demand.

### Contract treatment charges (TC)

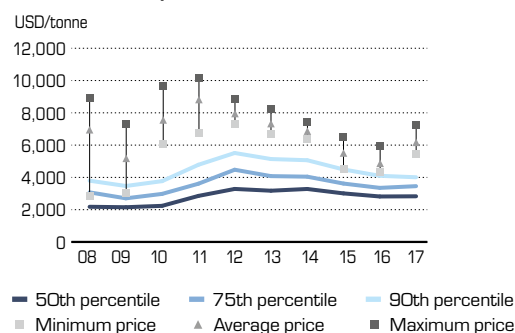
# 92.5

USD/TONNE OF CONCENTRATE (-5%)

Contract treatment charges fell, but the level remained historically high. The mining industry experienced substantial production disruptions during the first half of the year, resulting in a shortage of concentrate and falling treatment charges. The production disruptions declined in the latter half of the year and the concentrate market was balanced, which resulted in rising spot treatment charges.

SOURCE: WOOD MACKENZIE, REUTERS JAN 2018

### Cash cost and price



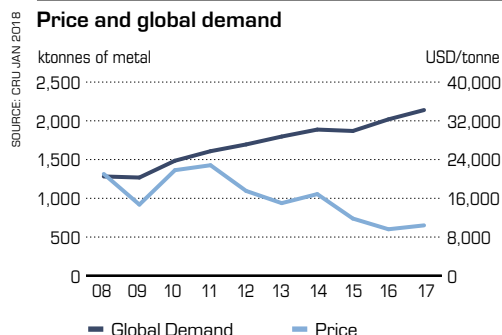
### Cash cost, copper

In weaker economic markets, metal prices have often reached a low point when they equate to the cash cost level for high-cost mines. The price of copper has, in isolated instances, fallen towards the 80th percentile, where 20% of production has a negative cash flow. As a yearly average, copper prices in a weak economic climate

have been above the 90th percentile. The USD successively weakened against several currencies in 2017, resulting in increased costs. This effect was, however, balanced by other factors for the copper mines. The cash cost in the 90th percentile is estimated to have fallen slightly to around USD 4,000 (4,100) per tonne.



## The nickel market



### Global demand

# 2.1

MTONNES (+6%)

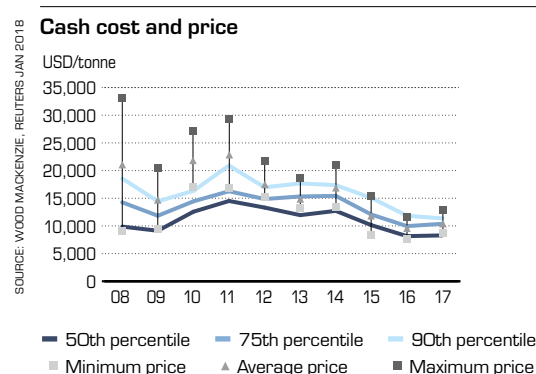
Global demand for nickel rose by approximately 6% when production of stainless steel increased sharply in China and other emerging economies. Demand fell in Europe. Metal production fell short of demand, but market stocks were high.

### Average price

# 10,411

USD/TONNE (+8%)

The price, relative to the industry's cost levels, was low throughout the year, but was, on average, higher than in the previous year. The price trend was volatile and by the end of the year, reached USD 12,706 (9,964) per tonne, corresponding to a rise of 28% since the end of 2016.



### Cash cost nickel

In weaker economic markets, metal prices have often reached a low point when they equate to the cash cost level for high-cost producers. The price of nickel has seldom fallen below the cash cost in the 75th percentile, but high stock levels have pushed the price of nickel even lower

in 2016 and 2017. The cash cost in the 75th percentile is estimated to have been USD 10,380 (10,100) per tonne, while the cash cost in the 90th percentile was USD 11,350 (11,900) per tonne. The successive weakening of the USD during the year resulted in cost increases when costs in local currencies were converted into USD.

### Global mined production

# 2.2

MTONNES (+9%)

Mined production increased from 2016 levels, despite the temporary closure of additional capacity. The ban on ore exports from Indonesia was removed for several producers, and production there increased dramatically. A number of producers were ordered to shut down production in the Philippines for environmental reasons, but the ruling was not enforced and production continued to increase.

### Global smelter production

# 2.0

MTONNES (+3%)

Smelter production remained unchanged, year on year. Production increased in China by around 4% once ore imports from Indonesia increased. Production capacity was expanded in Indonesia and production increased markedly. Falling production in other countries resulted in production falling short of demand for metal.

## The lead market



### Average price

# 2,317

USD/TONNE (+24%)

### Lead

Global demand for lead totalled 11.8 Mtonnes in 2017, corresponding to a year on year increase of around 2%. Demand for batteries for the new vehicle market increased apace with the demand for the replacement market. Demand for lead in China increased by around 2%, year on year, while demand in mature economies increased by approximately 3%. Production fell short of metal demand and the market's metal stocks decreased.

## The markets for precious metals and sulphuric acid

SOURCE: REUTERS JAN 2018

### Gold price

USD/Troy Oz



### Silver price

USD/Troy Oz

### Average price

1,258

GOLD  
USD/TR.OZ. (+1%)

17.0

SILVER  
USD/TR.OZ. (-1%)

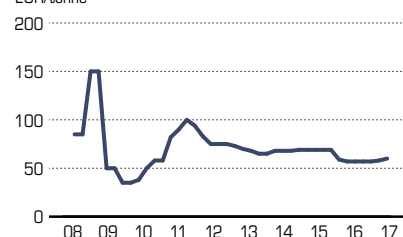
### Gold and silver

Gold and silver prices are controlled by expectations with regard to the global economic climate and they have often been sought-after metals in situations of widespread uncertainty and economic weakness. The last ten years have seen the metals become an increasingly popular component of financial investors' portfolios. Prices were, on average on a par with prices last year. The strong economic climate notwithstanding, levels of interest in precious metals were high from time to time, due to geopolitical conditions and other perceived risks.

SOURCE: CRU JAN 2018

### Sulphuric acid price

EUR/tonne



Sulphuric acid CFR NW Europe, 6-month contracts

### Average price

58

EUR/TONNE (-4%)

### Sulphuric acid

Demand for sulphuric acid was on a par with supply for the majority of the year, but did increase during the latter half of the year. Contract prices for northern Europe were, on average, slightly lower than in 2016.

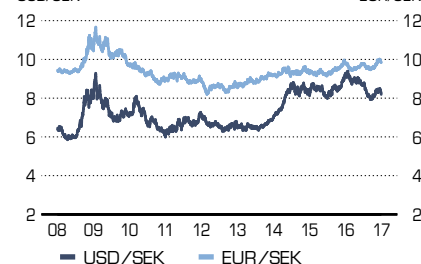
## Exchange rate trends

SOURCE: REUTERS JAN 2018

### Exchange rates

USD/SEK

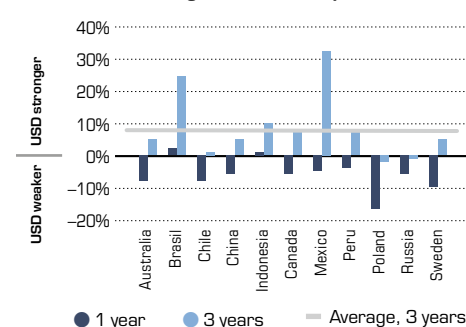
EUR/SEK



The USD was strong against the majority of currencies at the beginning of 2017, but then weakened successively. The US economy is ahead of Europe in terms of the business cycle and interest rate rises, but the European economy has developed surprisingly strongly in 2017 and the EUR has consequently strengthened. The EUR has increasingly becoming a currency that strengthens in times of geopolitical uncertainty and when other market conditions are perceived to have resulted in an increase in risk. The USD/SEK exchange rate remained virtually unchanged at 8.54 (8.56), and by the end of the year, it was 8.23 (9.10). The SEK was slightly weaker against the EUR and the average exchange rate was 9.63 (9.47). At the end of the year, the EUR/SEK exchange rate was 9.85 (9.57).

SOURCE: REUTERS JAN 2018

### Exchange rate trend - USD vs. currencies for major base metal mining countries - up to 31 Dec. 2017



The graph to the left shows the exchange rate trend for currencies against the USD for countries with significant levels of mined production of copper and zinc. The bars illustrate the change over one year and three years. A high percentage of mines' costs are in local currencies, while revenues are in USD.

Exchange rate trends have benefited Boliden, as has been true for many of our competitors, for the past three years. In 2017, the USD weakened against many currencies, but the change varies between different countries and the SEK has strengthened more against the USD than several other important currencies for mining nations. Boliden has not, over one year and three year time scales, benefited from exchange rate trends relative to an average of mining nations.



# Group performance during the year

Metal prices have risen during the year, resulting in higher profits and a stronger Balance Sheet. The Group has focused on making further improvements to production stability and the safety culture. Mines' production volume increased, and Smelters implemented large-scale planned maintenance shutdowns.

## Revenues and operating profits

Boliden's revenues totalled SEK 49,531 m (40,316).

The operating profit totalled SEK 9,015 m (5,682), and the operating profit excluding revaluation of process inventory was SEK 8,913 m (5,094).

The operating profit for Mines totalled SEK 6,681 m (2,804), while for Smelters, the operating profit excluding revaluation of process inventory was SEK 2,732 m (2,759).

Adjusted for the acquisition of Kevitsa, the operating profit excluding the revaluation of process inventory increased by SEK 3,969 m as a result of higher production levels, primarily within Mines, and improved market terms. Planned maintenance shutdowns for Smelters were charged to the profit in the sum of approximately SEK 415 m (260) in the form of lower production and higher costs.

The Group's operating costs before depreciation totalled SEK 14,107 m (12,757).

Adjusted for the acquisition of Kevitsa and exchange rate fluctuations, costs increased by 4%, primarily due to higher levels of mined production, increased maintenance-related and personnel costs. Purchasing prices increased slightly from the previous year, principally for diesel, coal, chemicals, and certain consumables.

Depreciation increased, mainly due to the acquisition of Kevitsa, higher levels of mined production, and the fact that production at Aitik took place in capital-intensive areas.

Items affecting comparability totalled SEK 0 m (256). The corresponding item for last year mainly comprises revenues from the conversion of Tara's defined benefit pension plan to a defined contribution one.

Net financial items for the year totalled SEK -278 m (-308), and the profit after financial items was SEK 8,737 m (5,375).

Reported tax for the year was SEK -1,881 m (-1,135), corresponding to an

average tax rate of 22% (21).

Net profit for the year was SEK 6,856 m (4,239), corresponding to earnings per share of SEK 25.06 (15.49).

## Investments

Investments for the year totalled SEK 5,588 m (4,127). A significant part was maintenance-related investments, which includes development work and waste rock excavation and constitutes preparatory work needed to access the ore in the mines. Important projects during the year included the investment in a deep storage facility at Rönnskär, a new sulphuric acid plant at Harjavalta, and a new crusher station at Aitik.

## Acquisition of the Kevitsa mine

On 1 June 2016, Boliden acquired the Kevitsa copper and nickel mine in northern Finland. The operations acquired have been integrated into Business Area Mines as a sixth mining area. The consideration paid totalled SEK 5,961 m on a debt-free basis. For further information, see Note 11.

## Future reclamation costs

The reclamation provision and non-current assets have increased by SEK 250 m and SEK 163 m, respectively, due to the customary review of reclamation requirements and new mining plans drawn up in response to increased ore reserves, primarily at Garpenberg. For further information, see Note 24.

## Cash flow

The cash flow from operating activities before changes in working capital totalled SEK 11,837 m (7,918), with the improvement due to improved prices and higher production. Tax paid for the year totalled SEK 1,457 m (709). The reduction in working capital made a positive contribution of SEK 900 m (-923) to the cash flow.

The free cash flow totalled SEK 7,309 m

## Operating profit

| SEK m  | 2017   | 2016   |
|--|--------|--------|
| Revenues   | 49,531 | 40,316 |
| Operating costs before depreciation                      | 14,107 | 12,757 |
| Depreciation   | 4,601  | 4,199  |
| Operating profit, excl. revaluation of process inventory | 8,913  | 5,094  |
| Operating profit   | 9,015  | 5,682  |

## Pro forma profit analysis<sup>1)</sup>

| SEK m  | 2017  | 2016  |
|--|-------|-------|
| Operating profit   | 9,015 | 5,682 |
| Revaluation of process inventory   | 102   | 588   |
| Operating profit, excl. revaluation of process inventory                           | 8,913 | 5,094 |
| Operating profit, excl. revaluation of process inventory – pro forma <sup>1)</sup> | 8,913 | 4,946 |
| Change   |       | 3,969 |

## Analysis of change

|  |       |
|--|-------|
| Volumes                                    | 1,515 |
| Prices and terms                           | 3,547 |
| <i>Metal prices</i>                        | 3,935 |
| <i>By-product prices</i>                   | 53    |
| <i>Realised metal and currency hedging</i> | 12    |
| <i>TC/RC</i>                               | -107  |
| <i>Metal premiums</i>                      | -6    |
| <i>Exchange rate effects</i>               | -340  |
| Costs (local currencies)                   | -481  |
| Depreciation (local currencies)            | -316  |
| Items affecting comparability              | -256  |
| Other                                      | -41   |
| Change                                     | 3,969 |

<sup>1)</sup> Pro forma includes Kevitsa for the full year of 2016.

## Investments

| SEK m                           | 2017  | 2016  |
|---------------------------------|-------|-------|
| Mines <sup>1)</sup>             | 3,722 | 2,755 |
| Smelters                        | 1,862 | 1,372 |
| Other                           | 4     | -     |
| Total investments <sup>1)</sup> | 5,588 | 4,127 |

<sup>1)</sup> Excluding acquisitions: Kevitsa 2016 (SEK 5,961 m).

(–2,801). The free cash flow for 2016 includes the consideration for Kevitsa of SEK –5,925 m.

### Financial position

On 31 December 2017, Boliden's net debt totalled SEK 3,752 m (9,339). Equity totalled SEK 35,053 m (29,394), including net market valuation of currency, interest, and raw material derivatives totalling SEK 1 m (–2) and after fiscal effects. The net

debt/equity ratio fell to 11% (32) at the end of 2017 due to the high free cash flow.

The average term of Boliden's total granted loan facilities was 2.4 years (3.3) at the end of the year. The average interest level in the debt portfolio on 31 December 2017 was 1.3% (1.3) and the fixed interest term was 0.5 years (0.2). At the end of the year, Boliden's current liquidity totalled SEK 8,768 m (6,968), in the form of cash and cash equivalents and unutilised

binding credit facilities, with a terms of over one year. For further information on Boliden's debt portfolio, see Note 26.

### The Parent Company

The Parent Company conducts limited operations and operates, fiscally, on commission with Boliden Mineral AB. The Income Statements, Balance Sheets and Statements of Cash Flow for the Parent Company are shown on page 75.

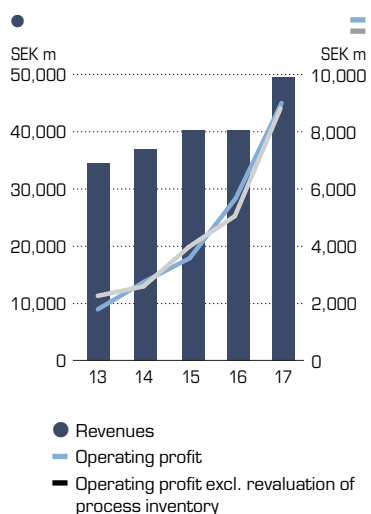
#### Cash flow

| SEK m   | 2017         | 2016          |
|---|--------------|---------------|
| Cash flow from operating activities before changes in working capital | 11,837       | 7,918         |
| Changes in working capital  | 900          | –923          |
| Cash flow from operating activities                                   | 12,737       | 6,995         |
| Cash flow from investment activities                                  | –5,428       | –9,795        |
| <b>Free cash flow (before financing)</b>                              | <b>7,309</b> | <b>–2,801</b> |

#### Capital structure and return

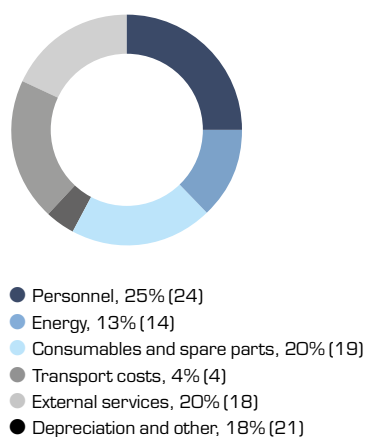
|                               | 2017   | 2016   |
|-------------------------------|--------|--------|
| Balance Sheet total, SEK m    | 55,882 | 53,877 |
| Capital employed, SEK m       | 42,931 | 42,457 |
| Equity, SEK m                 | 35,053 | 29,394 |
| Net debt, SEK m               | 3,752  | 9,339  |
| Return on capital employed, % | 21     | 15     |
| Return on equity, %           | 22     | 16     |
| Equity/assets ratio, %        | 63     | 55     |
| Net debt/equity ratio, %      | 11     | 32     |

#### Revenues and operating profit



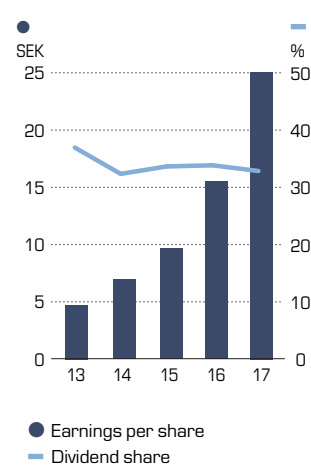
The operating profit excluding revaluation of process inventory increased due to higher production, primarily within Mines, and to improvements in market terms.

#### Breakdown of operating costs



Operating costs, including depreciation, increased by 8% in local currencies. Adjusted for Kevitsa, the increase was 5%.

#### Earnings per share and dividend share



Earnings per share totalled SEK 25.06 (15.49) and an ordinary dividend of SEK 8.25 (5.25) is proposed, corresponding to a dividend share of 32.9% (33.9). An extra payment of SEK 5.75 per share, in the form of an automatic share redemption procedure, has been proposed.

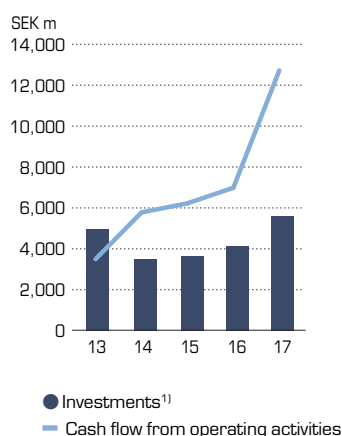


### Principles for remuneration to the President and other senior executives

Remuneration paid by Boliden to senior executives shall comprise a fixed salary, variable remuneration, pension benefits and other benefits. Remuneration to senior executives is described in Note 3.

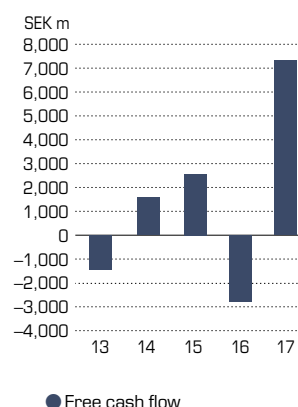
The variable remuneration component shall be linked to the Group's profitability and to the individual in question's sphere of responsibility, and shall primarily comprise one or more financial parameters. The maximum variable remuneration shall be 60% of the fixed annual salary for the President and 40–50% of the same for other senior executives. A certain percentage of this shall be conditional upon Boliden shares being purchased for the gross sum before tax. Senior executives are, in common with all Boliden Group employees, also part of the profit-sharing system. Senior executives have a defined contribution pension solution and a retirement age of 65. The Board does not intend to propose any changes to these guidelines to the Annual General Meeting to be held in April 2018.

Investments and cash flow from operating activities



The cash flow from operating activities before investments increased due to higher profits.

Free cash flow



The free cash flow totalled SEK 7,309 m (-2,801). Excluding the consideration for Kevitsa, the free cash flow was SEK 3,124 m in 2016.

<sup>1)</sup> Excluding acquisitions: Kytlyhti 2014 (SEK 718 m), Kevitsa 2016 (SEK 5,961 m)

# Competitive operations

The competitiveness of the individual units relies on high productivity and stable processes. The combination of mines and smelters also generates flexibility with regard to external supplies of raw materials.



## BOLIDEN'S MINES

### Aitik

Aitik is Sweden's largest open pit copper mine with ore that contains copper, gold and silver. Large-scale production, rational methods, and a high degree of automation make Aitik - which also has a long lifespan - the most productive open pit copper mine in the world.

### The Boliden Area

The Boliden Area comprises the Renström, Kristineberg and Kankberg underground mines and the Mauriliden open-pit mine, which is approaching the end of its useful life. Kankberg produces gold ore, with tellurium as a by-product. All of the other mines produce ores containing zinc, copper, lead, gold and silver.

### Garpenberg

Garpenberg's productivity is amongst the highest for underground zinc mines in the world and the mine is one of the world's most modern. Garpenberg produces complex sulphide ores that contain zinc and

silver, along with lead, copper and gold as by-products. Garpenberg has a long lifespan.

### Kevitsa

In 2016, Boliden acquired the Kevitsa open-pit mine in northern Finland. The mine opened in 2012 and is still in a ramping up phase. Kevitsa produces concentrate containing nickel, copper, gold, platinum, palladium, and cobalt. The mine has a long lifespan.

### Kylylahti

The Kylylahti underground mine, which was acquired in 2014, produces copper, gold, zinc, nickel and cobalt. Kylylahti has a short lifespan.

### Tara

Tara is Europe's largest zinc mine and accounts for half of Boliden's zinc concentrate production. Lead is also extracted as a by-product. The tailings pond is currently being expanded in order to extend the mine's lifespan.

## BOLIDEN'S SMELTERS

### Bergsöe

Bergsöe is one of Europe's biggest recycling facilities for lead batteries and the only secondary lead smelter in the Nordic region. The main products are lead and lead alloys. Bergsöe works closely with Rönnskär and Odda to handle certain materials.

### Harjavalta

Harjavalta is one of the world's most efficient copper and nickel smelters and also produces gold, silver, and sulphuric acid. Harjavalta has some of the lowest sulphur dioxide emissions of competitor nickel smelters. Harjavalta is investing heavily in enhancing its nickel processes and modernising its copper production.

### Kokkola

Kokkola is the second largest zinc smelter in Europe and produces approx. 40 different zinc products, including both pure zinc and products customised for a range of customer segments.

### Odda

Odda produces pure zinc and zinc alloys. The plant's production capacity was increased to 200 ktonnes of zinc per year in 2017, strengthening Odda's competitiveness.

### Rönnskär

Rönnskär produces copper, gold, silver and lead, along with sulphuric acid, zinc clinker, and several other metals as by-products. The smelter is also one of the world's leaders in the field of electronic scrap recycling. Rönnskär is currently investing heavily in building the world's best final storage facility for hazardous substances, which will improve the smelter's environmental performance and generate new business opportunities.

# High productivity mines

High productivity ensures that all six of Boliden's mining areas are highly competitive, and a number of significant measures were implemented in 2017 to further enhance this competitiveness.

Successful exploration is the key to all mining operations. Boliden prioritises exploration in the vicinity of existing mining areas in order to generate the potential for increased production and extended lifespans. Additional long-term value creation is achieved through increased efficiency resulting from continuous improvement work, technological development, and investments. Boliden also invests in organic growth and in selected acquisitions of mines and mining projects. Boliden's mines are also distinguished by their high standard of environmental

performance. Discharges to water have been halved since 2012, and discharge to water levels in 2017 were the lowest ever. Boliden also takes extensive responsibility for the reclamation of decommissioned mining areas. In today's mines, reclamation planning begins before a new mining area has even been established, and our ambition at all times is to use the best available technology in this sphere.

## Important events in 2017

Preparations began in 2017 for increasing production at Aitik from 36 Mtonnes to 45

Mtonnes per year. Work on the expansion of the tailings pond has begun at Tara, enabling the extension of the mine's lifespan to 2026. Garpenberg has been characterised by stable processes, and the increased mineral reserves presented in early 2017 have been evaluated. Work on expanding the Hötjärn tailings pond has begun in the Boliden Area, enabling production to continue until 2028. The integration of Kevitsa has been completed, and Kylylahti has evaluated the potential for increasing the mine's cobalt production.

## Long lifespan at Garpenberg

Successful exploration and low operating costs enabled an increase of 36 Mtonnes in Garpenberg's mineral reserve in early 2017. Garpenberg is consequently now one of the biggest zinc deposits in Europe, and the increase enabled an extension of the mine's lifespan. Additional mineral reserves have been identified during the year, and a strategic decision was taken to increase production to 3 Mtonnes per year. Garpenberg's lifespan at full production is now estimated at 25 years.

# 78 Mtonnes

mineral reserve



Boliden's exploration staff use in-house developed technology with the minimum possible environmental impact.



”

## Investments for growth at Aitik

The enormous crusher facility represents a further step towards increasing ore production and establishing a more stable production apparatus.

The Aitik mine's new crusher facility is part of a long-term value creating expansion plan that will see production increase from 36 Mtonnes to 45 Mtonnes per year, starting in 2020.

The new facility will enable more consistent and more stable production. The improved stability will help ensure more reliable production planning, lower maintenance

costs, better predictability, and improved profits.

Boliden is building a facility with two spindle crushers, which are a common type of crusher used to meet Aitik's capacity and fragmentation requirements. Having two crushers also means that when one of them is being maintained, the other can produce, thereby increasing availability.

# 45 Mtonnes

ore/year will be produced, starting in 2020 – a 25% increase

# 74 metres

10 m taller than the Sydney Opera House



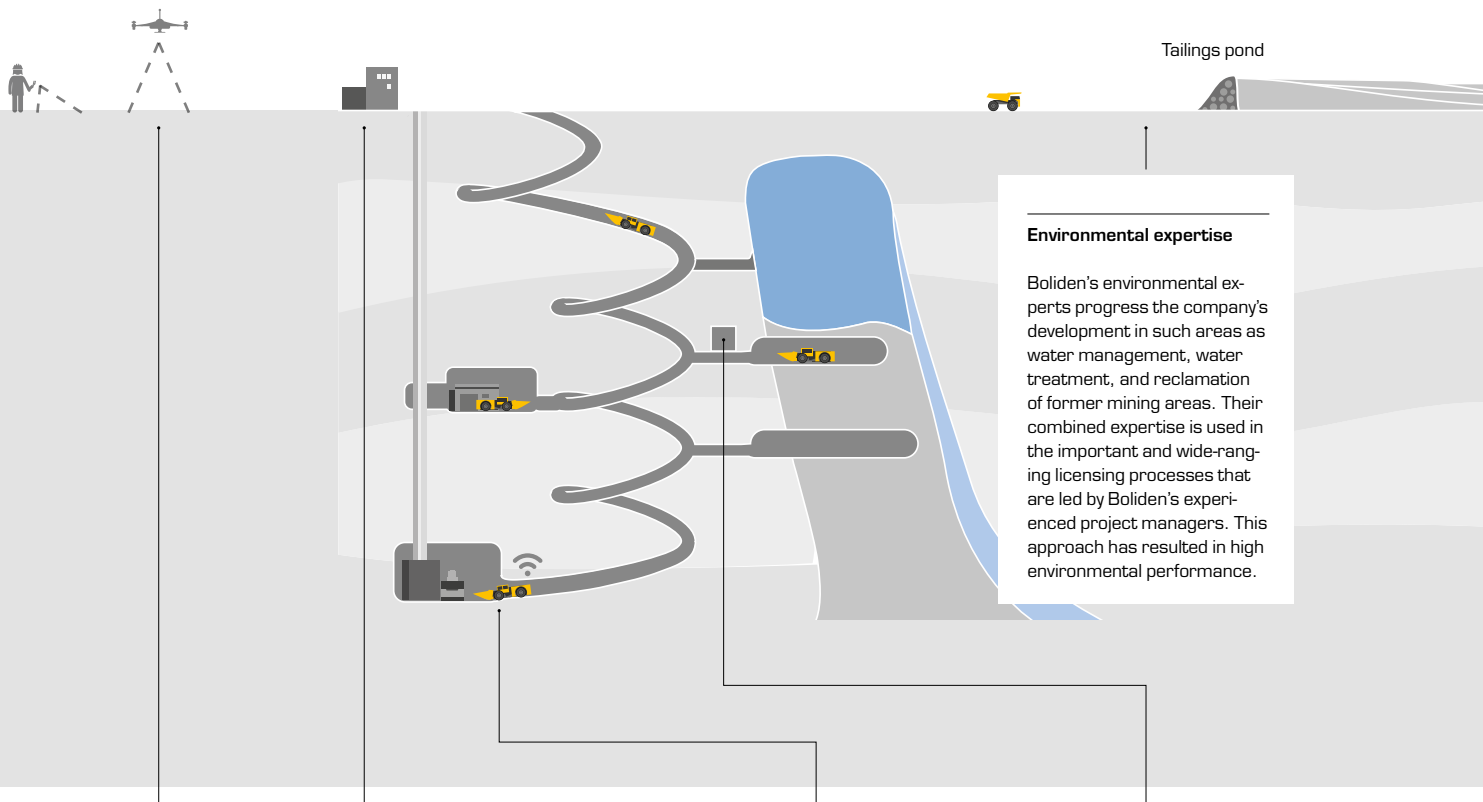
The total amount being invested in the new crusher facility, water treatment facilities and an electrical substation at Aitik is SEK 1 billion. The new facilities are scheduled to come on line in the first half of 2018.

# How Boliden's mines work

Thanks to advanced technology and highly developed processes, several of Boliden's mines are the most productive in the world. Boliden has both open-pit and underground mines. Mine production comprises the following processes: drilling, blasting, crushing, concentration, and transportation to smelters.

## EXPLORATION

## UNDERGROUND



### Environmental expertise

Boliden's environmental experts progress the company's development in such areas as water management, water treatment, and reclamation of former mining areas. Their combined expertise is used in the important and wide-ranging licensing processes that are led by Boliden's experienced project managers. This approach has resulted in high environmental performance.

### Exploration

Long-term and systematic exploration work is carried out with the aim of identifying new minable deposits. Flight measurements, rock surface finds, geophysical and seismic methods make up the initial phases, while core drilling is the final stage in confirming a mineralisation. Boliden uses a range of different techniques and equipment. Some of the instruments used were developed in-house by Boliden's technology departments.

### Remote control

The journey down to workplaces in the mines, which may lie several hundred metres underground, can take up to an hour. Operators can now increasingly control loading and drilling machines from control rooms. Some of the loading machines drive themselves (autonomously) to the shaft where the ore is tipped for transportation on to the concentrator on the surface.

### Positioning

Boliden has equipped all of its mines with positioning systems that enable the exact position of individuals and vehicles to be located in real time. The technology offers similar functionality to GPS underground in order to provide visual flows in production. The technology improves the safety of the working environment and increases productivity by allowing the operations centre to plan different transportation routes and control production.

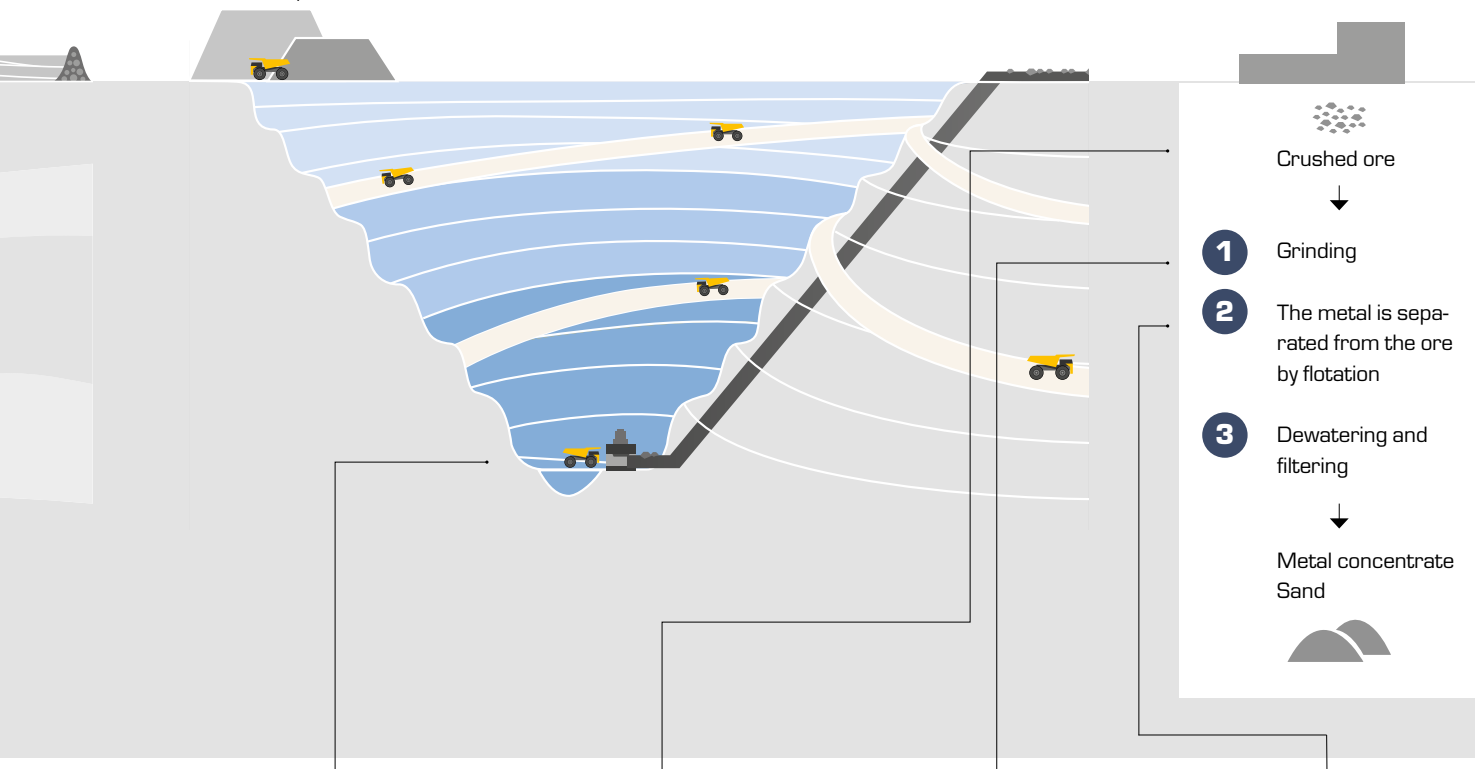
### Rescue chambers

All of Boliden's mines are equipped with rescue chambers where people can seek safety for up to six hours. Each chamber contains supplies of air, water and communication equipment.

## OPEN-PIT

## CONCENTRATOR

Waste rock tip



## Optimal mine design

The Aitik open-pit mine's productivity is amongst the highest in the world when it comes to copper mines, due to its cutting-edge technology and logistics and to the way in which the mine is designed. Crusher stations down in the mine mean short routes, leading to fewer trucks. After crushing, the ore is transported to the concentrator on conveyor belts. Highly developed processes and the presence of gold result in high profitability, low costs, and high productivity. Productivity is also high at the recently acquired Kevitsa open-pit mine, and here, the grades are also high.

## Mobile control rooms

The concentrators' control rooms are in several cases connected to mobile units, giving the operators access to processing data in real time. The operators steer and control the processes via mobile phones or tablets, increasing understanding and communication between individuals, departments and suppliers. This, in turn, enables faster intervention, for example, when adjustments to processes are required and increases the potential for delegation.

## Autogenous grinding

Boliden's concentrators mainly use a technology known as autogenous grinding, whereby the ore is ground without the addition of grinding agents. The technique cuts costs but requires more advanced control than conventional technologies. Autogenous grinding also results in less wear and reduced maintenance costs.

## Concentration of complex ores

Boliden has developed concentrating techniques for complex ores. Mineralogical studies are used systematically to optimise the concentration process. Boliden has a pilot concentrator that is used to evaluate processes with new minerals or to enhance performance in the concentrators.



## Financial information

The majority of Mines' sales are made to Boliden's smelters and on market terms. Revenues increased to SEK 18,195 m (12,659), with external sales accounting for SEK 1,825 m (1,776) of this total.

Mines' operating profit increased to SEK 6,681 m (2,804). Adjusted for the acquisition of Kevitsa, the operating profit improved by SEK 4,027 m due to higher volumes, primarily at Aitik and Kevitsa, and to improved metal prices. The increase in mined production also resulted in an increase in both costs and depreciation.

Aitik's operating profit increased during

the year due to higher milled volumes, higher grades, and improved copper prices.

The improvement in the profits of the Boliden Area, Garpenberg, and Tara resulted from improved zinc prices. Tara's 2016 operating profit was positively affected by items affecting comparability comprising adjustments to pension schemes and totalling SEK 248 m.

Kevitsa, which was acquired in June 2016, reported improved profits due to higher milled volumes. Kylylahti's profit increased due to higher copper prices.

Mines' operating costs before depreciation totalled SEK 7,947 m (6,833),

corresponding to an increase in local currencies of 13% and primarily due to the acquisition of Kevitsa. Adjusted for Kevitsa, costs increased by 4% in local currencies, mainly due to higher levels of mined production, increased maintenance activities, and higher staff overheads.

Depreciation increased to SEK 3,487 m (3,172) due to the Kevitsa acquisition, increased production, and the fact that production at Aitik took place in capital-intensive areas.

Investments, excluding acquisitions, increased to SEK 3,722 m (2,755).

### Key data

|   | 2017   | 2016   |
|---|--------|--------|
| Revenues, SEK m                           | 18,195 | 12,659 |
| Operating costs excl. depreciation, SEK m | 7,947  | 6,833  |
| Depreciation, SEK m                       | 3,487  | 3,172  |
| Operating profit, SEK m                   | 6,681  | 2,804  |
| Investments, SEK m                        | 3,722  | 2,755  |
| Acquisitions, SEK m                       | –      | 5,961  |
| Capital employed, SEK m                   | 25,502 | 24,972 |
| Return on capital employed, %             | 27     | 13     |
| Number of employees, FTE                  | 3,164  | 3,106  |

### Pro forma profit analysis<sup>1)</sup>

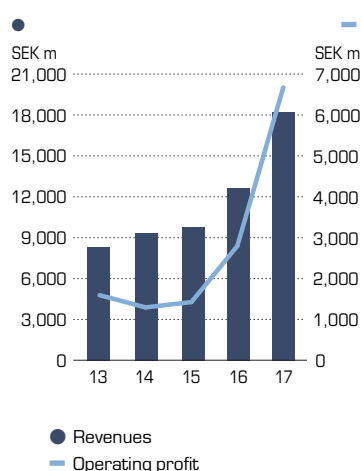
| SEK m                                       | 2017  | 2016  |
|---|-------|-------|
| Operating profit                            | 6,681 | 2,804 |
| Operating profit – pro forma <sup>1)</sup>  | 6,681 | 2,656 |
| Change                                      |       | 4,027 |
| Analysis of change                          |       |       |
| Volumes                                     |       | 1,400 |
| Prices and terms                            |       | 3,425 |
| Exchange rate effects                       |       | –365  |
| Costs (local currencies)                    |       | –301  |
| Depreciation (local currencies)             |       | –238  |
| Items affecting comparability <sup>2)</sup> |       | –209  |
| Other                                       |       | –50   |
| Change                                      |       | 4,027 |

### Operating profit

| SEK m                 | 2017  | 2016  |
|-----------------------|-------|-------|
| Aitik                 | 2,073 | 222   |
| The Boliden Area      | 868   | 548   |
| Garpenberg            | 2,606 | 2,063 |
| Kevitsa <sup>3)</sup> | 893   | 166   |
| Kylylahti             | 34    | –28   |
| Tara                  | 942   | 476   |

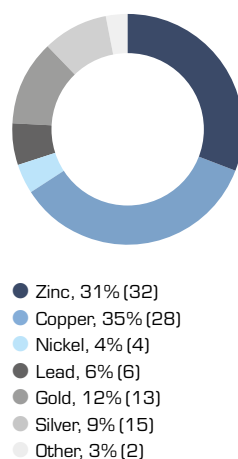
1) Pro forma includes Kevitsa for the full year of 2016.  
 2) 2016: SEK 209 m comprising changes to pension terms for Tara (SEK 248 m) and acquisition costs in connection with Kevitsa (SEK –39 m).  
 3) Kevitsa was acquired on 1 June 2016 and the operating profit for 2016 consequently refers solely to the period from June to December 2016.

### Revenues and operating profit



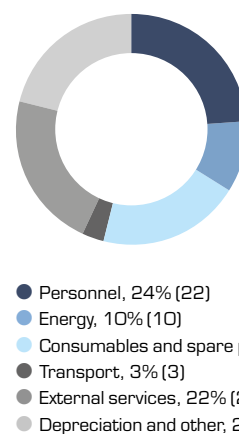
The year on year increase in the operating profit was due to higher volumes and improved metal prices.

### Breakdown of revenues by metal



Copper's share of revenues increased during the year due to improved metal prices and increased production.

### Breakdown of operating costs



Operating costs excluding depreciation increased in local currencies by 13%. Adjusted for Kevitsa, costs increased by 4%.

## Production

Production of copper, nickel and gold in concentrate increased, due to higher production at Aitik and Kevitsa. Production of zinc in concentrate decreased due to lower milled volumes at Tara, while production of silver in concentrate fell due to lower grades at Garpenberg.

Aitik's production of copper in concentrate increased to 97,573 tonnes (70,682), which is the highest annual production figure ever. Milled volumes increased to 39 Mtonnes (36) due to improved crusher availability. Copper grades improved to

0.28% (0.22) and recovery also improved, year on year. The construction of the new crusher station, which will come on line in 2018, is continuing.

Milled volumes decreased in the Boliden Area to 2,065 ktonnes (2,138), primarily due to lower ore production by the Kristineberg mine.

Garpenberg posted milled volumes of 2,634 ktonnes (2,622) and zinc grades that were slightly lower than last year.

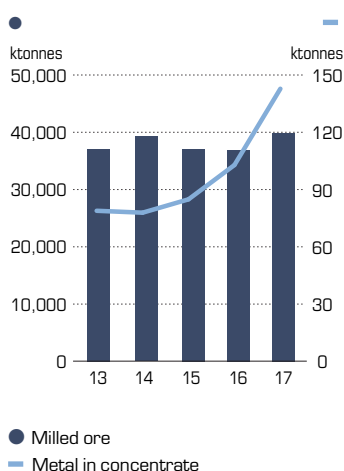
Kevitsa was acquired on 1 June 2016, since when production has developed well. Milled volumes increased during the

year to 7,911 ktonnes (7,392), pro forma. Copper production increased to 29,957 tonnes (20,569), while nickel production increased to 13,777 tonnes (11,100).

Kylylahti's milled volumes achieved record high levels due to systematic improvement work, and totalled 809 ktonnes (797). Lower grades did, however, mean that production of copper in concentrate fell.

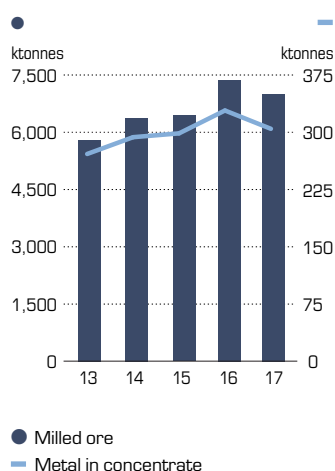
Milled volumes fell at Tara to 2,311 ktonnes (2,603), resulting in reduced production of zinc and lead in concentrate.

### Copper production



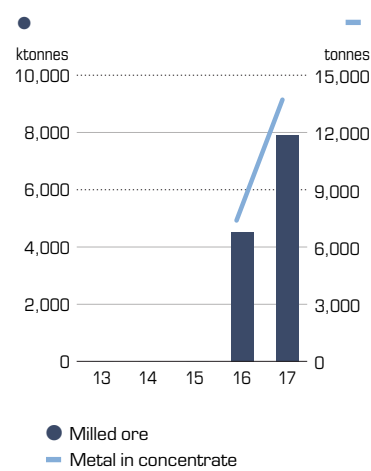
Production of copper in concentrate increased due to higher production at Aitik and Kevitsa.

### Zinc production



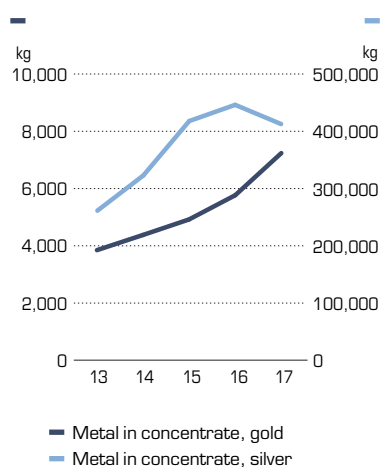
Production of zinc in concentrate declined due to lower milled volumes at Tara.

### Nickel production<sup>1)</sup>



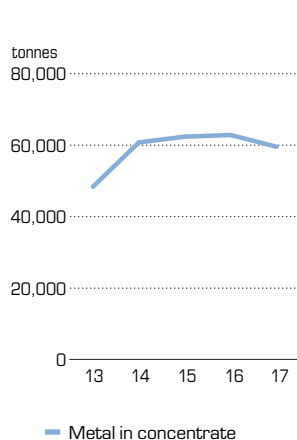
Production of nickel has developed well since the acquisition of Kevitsa in 2016.

### Gold and silver production



The increase in the production of gold in concentrate was primarily due to higher production at Aitik and Kevitsa. Production of silver in concentrate decreased due to lower grades at Garpenberg.

### Lead production



Production of lead in concentrate fell due to lower milled volumes at Tara.

<sup>1)</sup> 2016: refers to June-December

# Smelters with increased stability and technical expertise

Boliden's smelters extract metals and by-products from both concentrates and secondary raw materials. Our vision is to be the most sustainable metal producer, financially, environmentally and socially. The Business Area's focus areas in 2017 were on continuing to increase process stability, implementing important investment projects, and increasing production, and thereby creating additional saleable products.

Approximately half of the raw materials for Boliden's five smelters comes from the Group's own mines, with the other half coming from external suppliers in the form of concentrates or secondary materials. The Business Area's strategy entails maximising the value of raw materials, production and sales, with the emphasis on sustainable repository solutions, while simultaneously maintaining good process stability and product quality. Long-term value creation is achieved through a focus on technology, operational efficiency, skill development, and productification, thereby strengthen-

ing the product portfolio and, at the same time, reducing underground storage costs.

Boliden's smelters are characterised by a high level of both flexibility and expertise, and the smelters are key players in metals recycling. The processes at Boliden's smelters can handle numerous different raw materials, thereby increasing marginal income and acting as a competitive advantage when there is a shortage of raw materials.

## Important events in 2017

Work on the construction of an underground waste storage facility has contin-

ued at Rönnskär in 2017. The expansion project to increase zinc production to 200 ktonnes was completed at Odda, making the smelter more competitive. The nickel smelting furnace at Harjavalta was also modernised in 2017, enabling the maintenance interval to be expanded to every 4 years from the previous every other year schedule. Harjavalta is also completing a major sulphuric acid plant investment project. Extensive maintenance work was carried out in the electrolytic refinery at Kokkola.

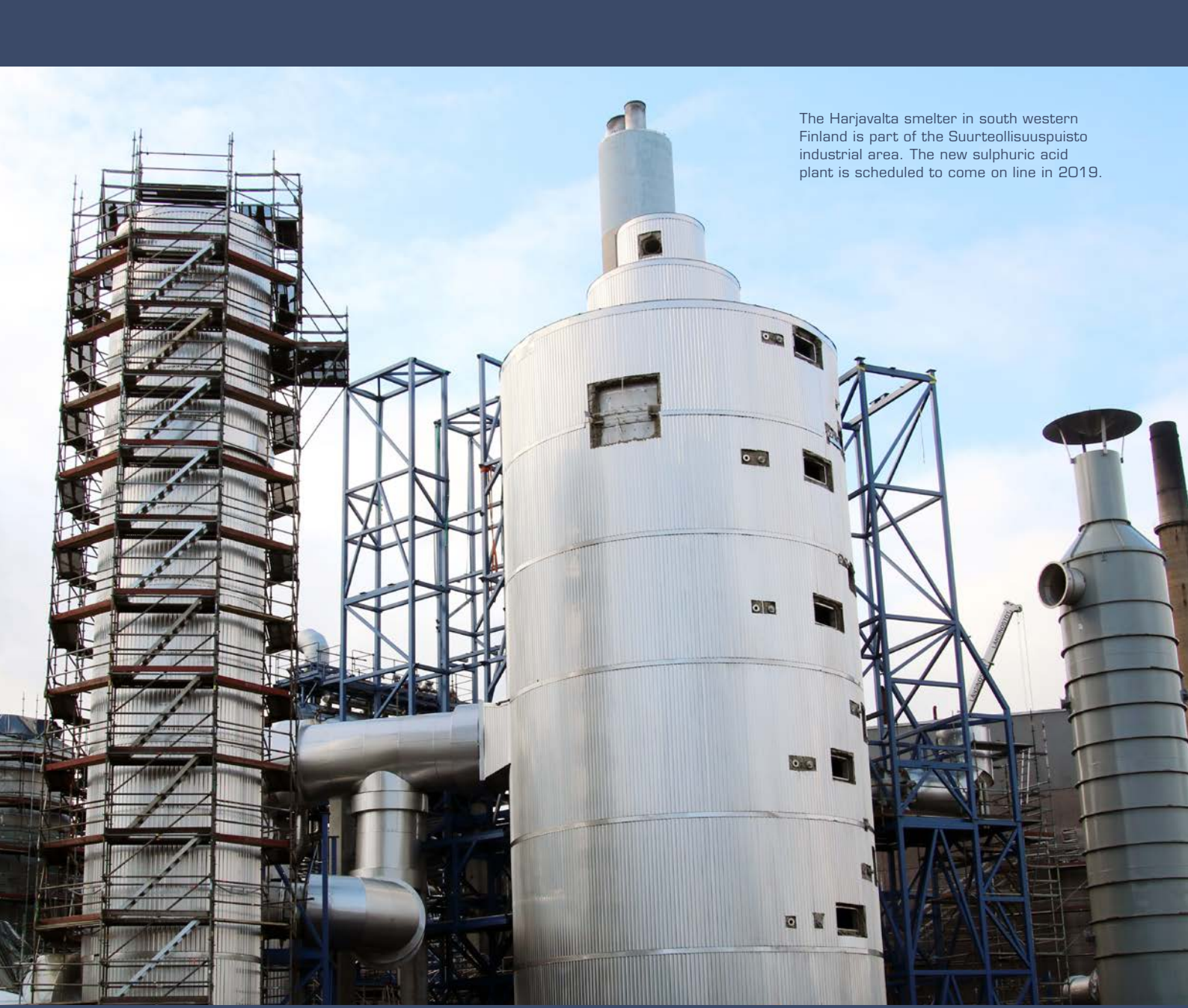
## Improved resource efficiency and new saleable products

The extraction of more metals from existing raw materials and the commercialisation of more products not only boost revenues, they also reduce the amount of material requiring storage. The use of iron sand as ballast material, thereby contributing to increased resource efficiency by reducing the amount of quarrying needed in society, is one example of this approach. Optimisation of the raw materials flows in line with the unique qualities of the respective units is an important factor for success. Sales of tin and copper ashes at Bergsöe, and the impending processing of Kokkola's silver concentrate at Rönnskär are both examples of how Boliden extracts greater value. Odda's and Rönnskär's underground repositories also offer the potential for highly qualified storage of hazardous substances.



Iron sand from Rönnskär is used as construction material in and around Skellefteå.





The Harjavalta smelter in south western Finland is part of the Suurteollisuuspuisto industrial area. The new sulphuric acid plant is scheduled to come on line in 2019.

## Operational efficiency and increased capacity

Selective bottleneck investments and expansions enable the smelters to enhance their competitiveness and improve their environmental performance.

Harjavalta, for example, is currently building a new sulphuric acid plant, opening the door to future expansions. The flash furnace in the nickel smelter was also upgraded in 2017, resulting in increased productivity due to, amongst other things,

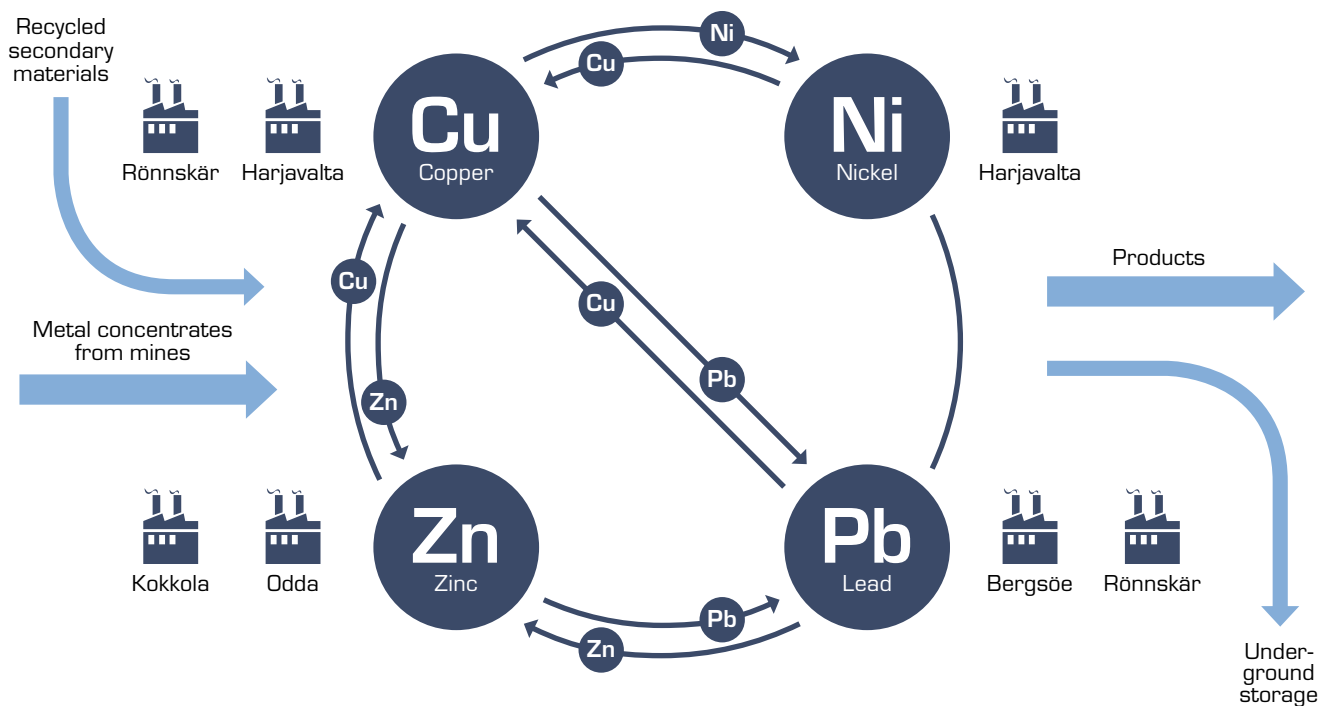
extended intervals between maintenance activities.

Capacity at Odda has been increased by almost 20% through investments, primarily in existing processes and equipment, and the new production capacity of 200 ktonnes per year was achieved in Q2 2017. This not only reduced Odda's costs, but boosted the unit's competitiveness.

# How Boliden's smelters work

Boliden's smelters handle complex raw materials and refine them to produce pure metals. The breadth of the smelters' processes creates the flexibility to handle different raw materials and to reduce waste.

## SMELTERS



Boliden's smelters produce different metals, which means different types of technical expertise are required to extract the value from the raw materials. By optimising the raw materials flow, Boliden maximises value creation. 10% of Boliden's zinc production at Odda and Kokkola, for example, comes from secondary materials that have previously been processed at Rönnskär. The exchange between the smelters also enables more copper,

lead, nickel, gold, silver and platinum group metals (PGM) to be extracted than would otherwise have been possible. In some cases, materials are transported from the smelters to Boliden's mines for additional metal extraction, or use as backfill material. Combined, these measures also reduce the amount of waste that must be permanently stored, and minimise the cost in doing this.

### Recycling

Unique, energy-efficient technology has made the Rönnskär smelter one of the world's leading operators in the field of recycling copper and precious metals from electronic scrap. The Bergsöe lead smelter is one of Europe's biggest recyclers of lead from scrap vehicle batteries. Synergies between Boliden's smelters and mines also enable metals to be recycled from waste products from in-house processes, enabling Boliden to maximise the value of incoming raw materials.

### Efficiency

The prices of Boliden's metal products are set on global metal exchanges, and Boliden's competitiveness consequently depends on having stable and efficient processes, high recovery levels and low costs. Boliden is working to enhance the efficiency of its maintenance work with the aid of Boliden's lean-based improvement programme, the New Boliden Way.

### Flexibility

Boliden's smelters are able to use complex raw materials to produce metals, which increases access to materials and, normally speaking, generates additional income. The smelters are working to develop processes and the technical expertise required to enable capacity increases and offer additional flexibility. Boliden invests in waste management and increased capacity to handle difficult materials in order to enable its smelters to handle increasingly complex raw materials containing impurities.

### Metals and by-products

The variety of processes carried out at Boliden's smelters enables a broad raw materials portfolio that can be refined to produce different metals and by-products. This diversification reduces the smelters sensitivity to cyclic fluctuations with regard to materials supply and profits. High levels of resource utilisation also ensure that the amount of material that must be sent to landfills is minimised.

### Customised products

Boliden's product portfolio comprises copper, nickel, gold, and silver metal, together with a number of by-products. Boliden also offers a variety of different lead and zinc alloys that are customised in line with different customers' requirements. The alloys enable the customers to create specific end product properties, cut costs, and increase productivity.

### Treatment

The smelter's treatment processes are continuously being developed to reduce their environmental impact. Stable processes with few stoppages are, furthermore, important in minimising emissions. A new gas treatment system with dioxin filters has been brought online at Rönnskär during the year, and Kokkola is investing in an expansion of its water treatment capacity and replacing its sulphur dioxide treatment filters. The biggest ongoing environmental investment is a new sulphuric acid plant at Harjavalta.

### Underground storage

Underground storage enables sustainable, permanent storage of certain types of waste. These sustainable storage solutions enhance the smelters' ability to handle complex raw materials. At Odda, waste is deposited in rock caverns, while at Rönnskär, construction work is in progress on a storage facility 350m underground which will become operational in 2020.



## Financial information

Revenues totalled SEK 47,691 m (38,516) and the gross profit, excluding revaluation of process inventory, was SEK 9,776 m (9,376).

Operating profit, excluding revaluation of process inventory, was SEK 2,732 m (2,759). Including the inventory revaluation effect of SEK 102 m (588), the operating profit was SEK 2,834 m (3,347). Higher metal prices were offset by lower treatment charges and increased maintenance activities. Operating profit was impacted by maintenance shutdowns

to the tune of approximately SEK -415 m (-260), due to lower production and higher costs.

The increase in Rönnskär's profit was due to improved market terms and a slight year on year increase in production. Harjavalta's profit was on a par with the previous year, with improved market terms compensating for extensive maintenance shutdowns.

Kokkola's profit increased due to improved market terms and higher zinc prices compensated for lower treatment charges. Odda, too, enjoyed better

market terms than last year, but lower volumes and higher maintenance costs resulting from production disruptions in a roasting furnace had a negative impact on the profit. Bergsöe's profit was stable, but higher production was offset by higher costs.

The smelters' operating costs excluding depreciation totalled SEK 6,004 m (5,696). Costs increased in local currencies by 4% due to both higher personnel costs and costs arising from production disruptions and maintenance activities.

### Key data

|   | 2017   | 2016   |
|---|--------|--------|
| Revenues, SEK m   | 47,691 | 38,516 |
| Gross profit, excl. revaluation of process inventory, SEK m     | 9,776  | 9,376  |
| Operating costs, excl. depreciation, SEK m                      | 6,004  | 5,696  |
| Depreciation, SEK m   | 1,114  | 1,026  |
| Operating profit, excl. revaluation of process inventory, SEK m | 2,732  | 2,759  |
| Operating profit, SEK m   | 2,834  | 3,347  |
| Investments, SEK m  | 1,862  | 1,372  |
| Capital employed, SEK m   | 18,018 | 17,838 |
| Return on capital employed, %                                   | 15     | 20     |
| Number of employees, FTE  | 2,335  | 2,208  |

### Profit analysis

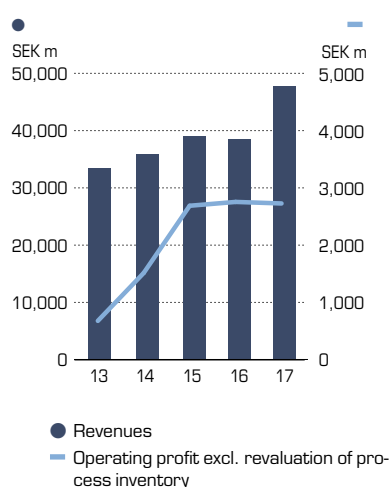
| SEK m  | 2017         | 2016         |
|--|--------------|--------------|
| <b>Operating profit</b>  | <b>2,834</b> | <b>3,347</b> |
| Revaluation of process inventory                               | 102          | 588          |
| <b>Operating profit excl. revaluation of process inventory</b> | <b>2,732</b> | <b>2,759</b> |
| <b>Change</b>  |              | <b>-27</b>   |
| <b>Analysis of change</b>                                      |              |              |
| Volumes  |              | 52           |
| Prices and terms   |              | 286          |
| Exchange rate effects  |              | -185         |
| Costs (local currencies)                                       |              | -252         |
| Depreciation (local currencies)                                |              | -78          |
| Items affecting comparability <sup>1)</sup>                    |              | -47          |
| Other  |              | 12           |
| <b>Change</b>  |              | <b>-27</b>   |

### Operating profit

| SEK m      | 2017 | 2016 |
|------------|------|------|
| Rönnskär   | 900  | 852  |
| Harjavalta | 707  | 704  |
| Kokkola    | 688  | 572  |
| Odda       | 225  | 314  |
| Bergsöe    | 110  | 109  |

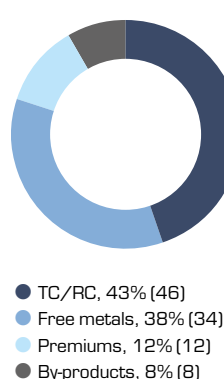
1) 2016: Capital gain on the divestment of the aluminium fluoride operations at Odda (SEK 47 m)

### Revenues and operating profit excl. revaluation of process inventory



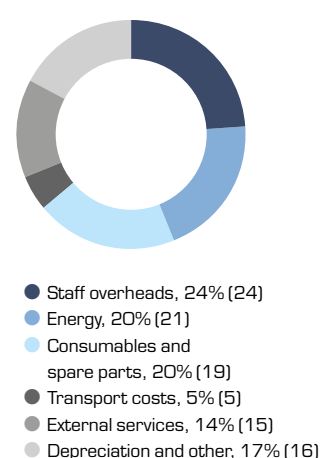
The operating profit, excluding revaluation of process inventory, was on a par with last year.

### Breakdown of gross profit excl. revaluation of process inventory



Treatment charges and free metals accounted for 80% of the gross profit, excluding revaluation of process inventory.

### Breakdown of operating costs



Operating costs, excluding depreciation, increased by 4% in local currencies.

The Business Area's investments during the year totalled SEK 1,862 m (1,372).

### Production

The smelters' production of copper increased, while production of zinc, gold and lead remained on a par with the previous year. Production of nickel and silver decreased.

Rönnskär's process stability improved and copper production increased slightly. Lower precious metal content in the raw materials resulted in reduced production of gold and silver.

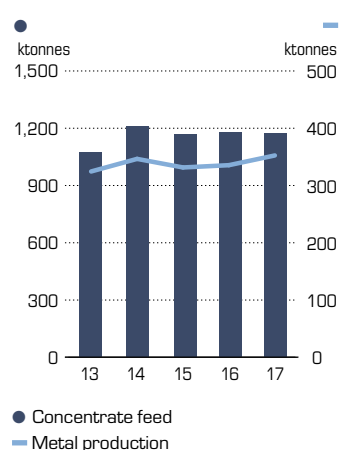
Harjavalta's copper process was stable, resulting in a slight increase in copper production. A comprehensive maintenance shutdown in the nickel process was implemented during the year, and production of nickel matte consequently decreased, year on year. Silver production fell due to lower grades in the raw materials.

Kokkola's feed increased but zinc production fell. 2016 and 2017 have both been impacted by production disruptions, although availability did improve during the latter half of the year. Silver extraction increased, year on year.

Production at Odda was on par with the previous year. Production disruptions and maintenance work on a roasting furnace offset the effect of the completed expansion investment that will increase production to 200 ktonnes/year. An augmented maintenance shutdown was carried out in the fourth quarter of the year in order to improve availability.

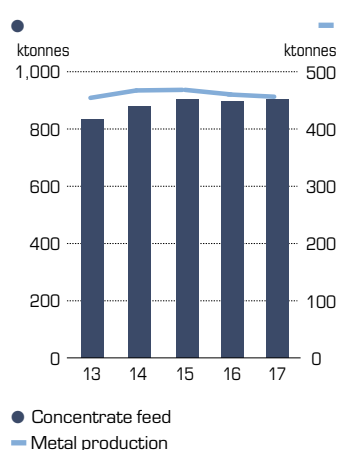
Bergsöe's production of lead alloys achieved record high levels due to good process stability.

### Copper production



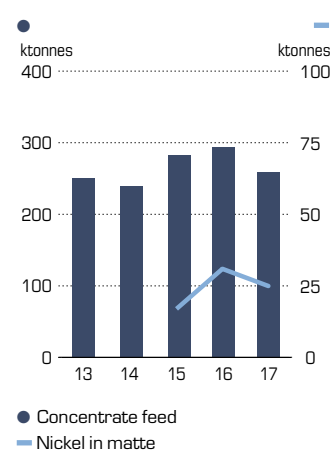
Concentrate feed and copper production increased at Rönnskär. Concentrate feed decreased at Harjavalta, but copper production increased slightly.

### Zinc production



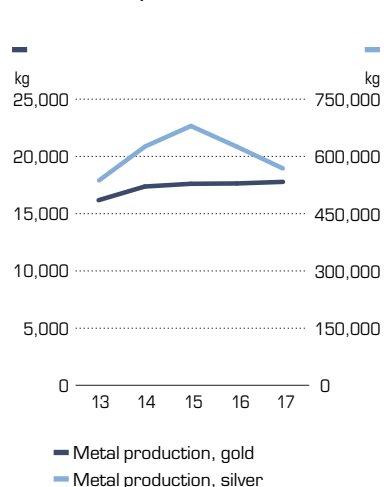
At Kokkola, the concentrate feed increased but zinc production fell. At Odda they were on a par with the previous year.

### Nickel production



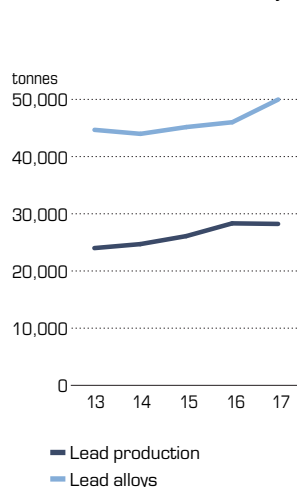
Harjavalta's nickel concentrate feed and nickel in matte production both decreased, year on year.

### Gold and silver production<sup>1)</sup>



Gold production increased at Harjavalta and fell at Rönnskär. Silver production decreased at both Rönnskär and Harjavalta. The production of silver in concentrate at Kokkola did, however, increase slightly.

### Production of lead and lead alloys



Bergsöe's production of lead alloys increased, while lead production at Rönnskär remained unchanged.

<sup>1)</sup> Silver in concentrate at Kokkola is included in the production figures shown as of 2014.

# Long-term sustainable operations

Sustainability is an integral part of Boliden's strategy, enhancing Boliden's competitiveness and ability to live up to the outside world's expectations.

## Boliden's Sustainability Report

Boliden has been publishing sustainability information since 2005. A new requirement has been incorporated into the Swedish Annual Accounts Act this year, requiring larger companies to present sustainability information addressing the following issues: the environment, social conditions, personnel, respect for human rights, and anti-corruption. Boliden's Annual Report has been complemented in order to comply with these requirements, and Boliden also presents complementary information on the website at [www.boliden.com](http://www.boliden.com). The complementary information has been prepared in accordance with the most recent Global Reporting Initiatives guidelines for GRI standards. Boliden's GRI report, and its associated index, have been reviewed by an external party.

## Material issues based on risks and opportunities

Boliden's sustainability work is based on our norms and values and on the UN's Global Compact and Agenda 2030. Boliden has employed dialogues with

internal and external stakeholders for a number of years now to ensure that different perspectives are taken into account. Within Boliden, a "material sustainability issue" is defined as an issue that reflects the company's significant financial, environmental and social impact, and an issue that can materially impact the assessments and decisions made by stakeholders.

## 2017 materiality analysis

Global macrotrends, from fighting poverty and promoting higher standards of living, to resource shortages and climate change, bring about rapid changes in the preconditions for Boliden's commercial operations. Boliden makes full use of the driving forces that enable long-term sustainable development by analysing technical and consumption trends and engaging in close dialogues with customers and suppliers. The aim of the materiality analysis is to provide an insight into the issues that are significant to Boliden's stakeholders, and the analysis forms the basis for the company's strategy and business planning. A renewed reconciliation of Boliden's

material sustainability issues was carried out in 2017 and an updated list of 24 material sustainability issues produced and verified by the company management. Boliden's operations affect a many people and have environmental impacts, and stakeholders consequently have different views and expectations of Boliden. The way in which Boliden's operations relate to the global sustainability objectives, to other societal trends and expectations, and the views that have emerged from recent years' dialogues, both internally and in contacts with representatives of other stakeholders, all constituted important input data in the process. Boliden's internal process for identifying and prioritising the sustainability issues of greatest relevance in the light of the operations conducted includes questions such as:

- At what point in the value chain does the impact occur?
- Which stakeholders are affected?
- Does Boliden impact the surroundings and what can be done about it?





Boliden has been guided by GRI standards in its categorisation and naming of sustainability issues. The most important input values in the process are shown in the left-hand column in the graphic, and the result is the material sustainability issues shown in the right-hand column. Boliden does not rank any of the sustainability issues in its reporting, but the company's complementary GRI reporting provides more detailed explanation of why these issues are material and how Boliden addresses them.

## PRECONDITIONS AND THE OUTSIDE WORLD

### Boliden's values

- Passion for improvements
- Value chain responsibility
- Personal commitment

### Internal stakeholders' views

- Employees
- Management
- Group-wide networks

### External trends

- Automation
- Eco-efficiency
- Recycling

### External stakeholders' views

- Business partners
- Investors/owners
- Authorities
- Neighbours/locals
- Landowners and Sami
- Universities/research
- Opinions formers
- Consumers
- The UN's Global Compact

### Risks and opportunities

- Operating risks
- Market and commercial risks
- Financial risks
- Other risks

### The UN's Agenda 2030 and global goals



## MATERIALITY ANALYSIS



### Financial impact

- Economic results
- Market presence
- Indirect economic effect
- Anti-corruption
- Activities inhibiting competition



### Environmental impact

- Materials
- Sustainable resource usage
- Energy
- Water
- Biological diversity
- Air pollution emissions
- Discharges to water and waste
- Environmental legislation compliance
- Environmental evaluation of suppliers



### Social impact

- Employment
- Occupational health & safety
- Training and skills
- Diversity and equality
- Non-discrimination
- Indigenous peoples rights
- Local communities
- Relocation and decommissioning planning
- Monitoring and following up on suppliers
- Legislative compliance, social issues

# Responsible business

Boliden's ambition is to be a responsible and credible business partner. Stakeholders have high expectations of Boliden's management of sustainability risks throughout the value chain. Boliden has been developing its work with the value chain for a number of years now to ensure that its business partners also work efficiently with sustainability issues.

Boliden buys raw materials, energy, services and equipment from external suppliers worldwide. Operating in a global market in which legislation, ethics, working conditions, and environment vary demands a systematic methodology. Boliden shall ensure that it acts responsibly in all commercial relationships, and it works with its business partners to minimise the risks to people and the environment and to exploit to the full opportunities for growth.

## Based on international guidelines

Boliden's business partners are evaluated with regard to commercial and sustainability aspects based on the 10 principles of the UN's Global Compact and on ILO conventions and ISO standards. Its Code of Conduct lays down principles and norms for responsible business and constitutes a minimum level of conduct required by the company. The same principles apply to all commercial relationships, whether Boliden is the buyer or the seller of raw materials, products and services.

Boliden demands the same standards within its own organisation as it demands of its suppliers, and more besides. Boliden's operations are reviewed in comparison with relevant quality, environmental, work environment, and energy management

standards in order to ensure that we are maintaining a high standard in all of these areas.

Boliden's smelters are listed on "the Good Delivery List". Boliden ensures, in order to maintain its inclusion in the London Bullion Market Association's (LBMA) list of recommended gold producers, that the raw material chain complies with a number of ethical criteria and that it meets stringent transparency requirements. Boliden's reports to the LBMA are verified by the accounting firm, KPMG, and can be viewed at [www.boliden.com/sustainability](http://www.boliden.com/sustainability). All of the relevant information can also be found at [www.lbma.org.uk](http://www.lbma.org.uk).

Boliden has updated and concretised its Code of Conduct for business partners in 2017. The Boliden employees affected have also been trained in the Code of Conduct for business partners and in the process for evaluating and developing suppliers.

## Risk-based methodology

Boliden has a systematic and risk-based process for managing its supply chain and for increasing transparency. The process differs, depending on the business partner's estimated risk level and the strategic importance of the business partner.

Boliden makes its requirements and

expectations clear at the beginning of every potential business relationship. Sustainability risks, such as human rights, working conditions, and corruption, are then evaluated. The findings, together with the business partner's self-assessment, form the basis for an overall assessment that is reconciled with Boliden's ethical guidelines.

Boliden will, when the risk level motivates it, conduct an audit. The level is determined in line with Boliden's code of conduct for business partners, and their potential risk of coming into conflict with any aspects of the code. These include human rights, employee rights, the environment, conflict minerals, anti-corruption, and the partner's compliance with international and national legislation, directives and conventions.

## Development of strategic business partners

Boliden may, under certain circumstances and identified deficiencies notwithstanding, elect to continue with a business partner, in which case, Boliden will work with the business partner to draw up a development plan designed to rectify the deficiencies. The business partners with whom Boliden elects to collaborate are deemed to be long-term and strategic, such as a supplier of an important concentrate that suits Boliden's production. If the risk is deemed to be overly high, or if the business partner is unwilling to make the necessary improvements, Boliden will discontinue the partnership.

The advantages of Boliden's methodology is that it both secures important supply chains and affords Boliden the opportunity to develop partners and to contribute to the creation of a more sustainable society.

## Trading in materials and waste

Boliden complies with national legislation and international guidelines such as the OECD guidelines for trade in materials, waste and hazardous waste. For some years now, Boliden has, in order to avoid

## Dispute arising from the export of waste products

In 1984 and 1985 Boliden exported a waste product from Boliden Rönnskär to Chile. The aim of the export was that the material would be processed, thereby reducing the amount of material held in storage. The exports were preceded by consultations with the relevant authorities in Sweden and Chile, and Boliden made several visits to the facility. Promel, which had bought the material, ceased operations several years later and abandoned the facility,

where housing had been built in the vicinity of the industrial area, which had not previously been decontaminated. In 2013, a suit for damages was brought against Boliden by a Swedish limited partnership representing a number of private persons from the area. Boliden is of the opinion that the exports were carried out responsibly and that there is no proof of any link with any effects on people's health. The main hearing in the case was completed in December 2017 and a ruling will be issued on 8 March 2018.



Transports to and from business partners world-wide go through the port at Kokkola.

the risk of dumping hazardous waste, been implementing a strict internal policy regarding such transactions whereby payment is not made until the material has been processed. Boliden also conducts risk assessments that include site visits and audits. The results of the assessments must be approved by the Business Area Director before any agreement is reached.

#### Stricter rules governing conflict minerals

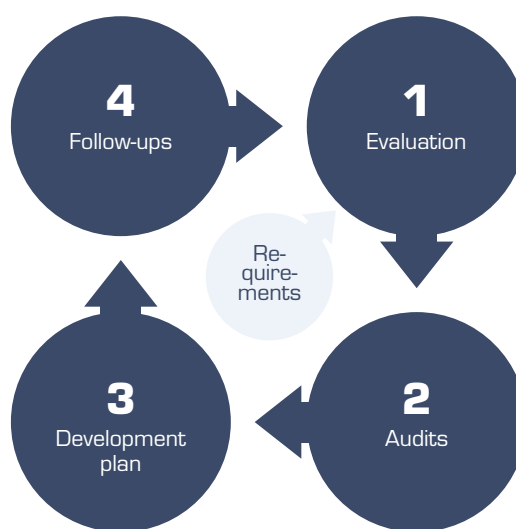
Boliden's policy is that no concentrates or secondary raw materials shall be acquired from areas of armed conflict. The secondary raw materials are, however, more difficult to control, as metals may have been recycled multiple times and may have been passed through several links in the supply chain before reaching Boliden's smelters.

A new EU regulation tightening up the regulations governing imports of conflict minerals is expected to come into force in 2021. The new rules will oblige importers of tin, wolfram, tantalum, and gold to check their suppliers carefully and to report their purchasing methods.

#### Members of a human rights network

Boliden joined "The Swedish Network for Business & Human Rights" – a forum for companies to meet and share their experiences of business and human rights – in 2017. The membership will strengthen Boliden's work with human rights and act as a platform for comparing guidelines and methodologies with other companies and sectors.

#### BOLIDEN'S PROCESSES FOR DEVELOPING BUSINESS PARTNERS



Boliden's work with business partners is subject to continuous development and improvement, based on new know-how and new conditions. The process for existing business partners is repeated at 3-5 year intervals, depending on the business partner's estimated sustainability risk and the strategic importance of the business partner.

#### Business partner evaluations, 2017

Self-assessments are a tool used to evaluate business partners' work in areas identified by Boliden as of particular importance. 170 responses to self-assessment forms have been evaluated in 2017, and 5 (5) audits conducted.

**REQUIREMENTS** – Business partners are selected and provided with Boliden's mandatory Business Partner Code of Conduct.

**1 EVALUATION** – Information gathering and the business partner's self-assessment form the basis for identifying and evaluating significant sustainability risks. If necessary, Boliden will carry out an on-site visit with a team of experts on environmental, safety, and health issues.

**2 AUDITS** – Audits taking the Code of Conduct as their starting point are carried out for a selection of business partners, based on a risk assessment and the strategic importance of the business. The audits are primarily conducted by third parties.

**3 DEVELOPMENT PLAN** – A plan for remedial action in development areas is drawn up in collaboration with the business partner. Boliden supports the partner through the implementation process. The plan is binding and concrete, and has clear deadlines.

**4 FOLLOW-UP** – Boliden follows up to ensure that the business partner is following the development plan and has implemented the measures as promised. If a business partner is unwilling to follow the plan or fails to keep their promises, the partnership is terminated.



# Boliden's Code of Conduct

Boliden expects all employees to support the company's values by acting responsibly towards their colleagues, business partners, and society at large. Boliden's Code of Conduct constitutes the framework for what Boliden regards as responsible business. Boliden also has a range of policies, including anti-corruption and diversity policies, which complement the Code of Conduct.

## Human rights

Boliden's own operations take place in countries where the risk of infringements of human rights in general is low. Some aspects must, however, be taken into account, such as non-discrimination, the rights of indigenous peoples, and risks in the supply chain.

Boliden's Code of Conduct is formulated on the basis of the UN Declaration of Human Rights and ILO conventions. Fundamental human rights include freedom of speech, integrity, health, freedom, safety, and an adequate standard of living. Boliden's Code of Conduct also obliges the company to ensure that none of the operations controlled by the company result in the exploitation of children.

Boliden rejects all forms of harassment, discrimination or other behaviour that may be regarded by a colleague or close associate as offensive or degrading.

Boliden and its employees shall:

- ensure that Boliden is perceived as an equal opportunity employer and that employees and business partners are treated with respect for their dignity and equality;
- refrain from all forms of discrimination and harassment based on gender,

ethnicity, age, disability, religion, or sexual orientation;

- support employees in their ambition to achieve a healthy work-life balance;
- prevent any incidence of discrimination or harassment.

Boliden respects employees' rights to organise in trade unions and supports all cooperation between employers and employees, and their respective representatives, in all areas of mutual interest.

Boliden's operations in northern Sweden and Finland are located in traditional reindeer husbandry areas. Consultations are held with the Sami villages affected, and cooperation and compensation agreements have been reached between Boliden and the Sami villages in question.

## Anti-corruption

Efforts to combat bribery and corruption are an important part of Boliden's sustainability work. Boliden applies a zero tolerance policy in this respect. No form of bribery or corruption is acceptable, and conflicts of interest must be reported and addressed.

Boliden has an anti-corruption policy adopted as part of Boliden's anti-corruption programme, and which applies to both the Board of Directors and employees

of the Boliden Group. This anti-corruption policy also applies to companies and joint ventures in which Boliden has an interest, and to third parties who act for or on behalf of Boliden. Great emphasis is, in addition to the anti-corruption work, placed on compliance with applicable competition regulation, and Boliden has adopted a policy addressing this issue.

## Reporting abuses and the whistleblower function

Any instances of discrimination, harassment, corruption, regulatory breaches, or other inappropriate conduct shall be reported. The issue shall, initially, be addressed by means of discussion with the individual's immediate superior, and secondarily with the company's HR function or via the whistleblower function. Boliden's whistleblower function offers an anonymous channel for reporting suspicions of certain types of economic crime.

A case submitted via Boliden's whistleblower function was investigated with the help of an external party in 2017. The investigation, which concerned alleged improprieties in respect of procurement at one of the production units, found no case to answer. Existing routines in relation to procurement have since been further tightened.













# Purchasing

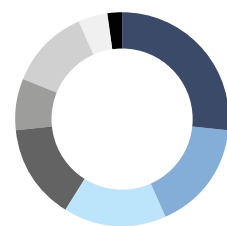
Boliden's purchasing volume, excluding concentrate purchases, totalled SEK 13.2 billion, with Mines and Smelters accounting for 58% and 42%, respectively, of this total. Purchasing prices have only increased marginally in 2017, in spite of a challenging market situation with sharply increasing pricing levels for the majority of raw materials.

## PURCHASING CATEGORIES

The following table presents Boliden's purchasing categories and overall strategy, together with the trends in the supplier market and Boliden's costs.

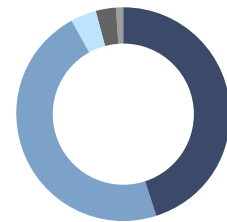
| Category  | Strategy and market trends  | Boliden's price trend, 2017   |
|---|---|---|
| <b>Services</b>                                 | The price trend has tracked inflation. Some capacity shortages in 2017. Health, the environment, and safety are priority areas when choosing suppliers.   | Continued consolidation and increased competition has resulted in an unchanged cost scenario overall. Some subsidiary areas have, however, experienced substantial cost increases.   |
| <b>Bulk goods and chemicals</b>                 | The petrochemical product market has continued to recover. The primary strategy is to secure access to critical products and to consolidate volumes.  | Significant price increases after previous falls, primarily for diesel, coal, and coke.   |
| <b>Electricity</b>                              | Network charges have continued to increase and will likely continue to do so in the years ahead. Coal prices have increased, affecting electricity prices. The hydrological situation has levelled off and stocks are well-filled.                            | Market trends, coupled with Boliden's long-term agreements, have resulted in a slight fall in the price of electricity for Boliden.    |
| <b>Logistics</b>                                | The cost of transport services has increased due to higher fuel prices, taxes, and charges. A shortage of truck drivers in Europe has contributed to the rising prices. Boliden works with fixed price agreements and concentrates on identifying imbalances. | Ongoing cost levels have fallen slightly as a result of large scale rationalisation projects for trucks and trains in Finland, and a successful fixed price strategy for larger scale logistics agreements. The cost of maritime transports has increased slightly.  |
| <b>Indirect materials &amp; services</b>        | Manpower, travel, cleaning, and consultancy services are affected by wage trends in the respective countries. Rising market prices, but healthy competition. The strategy primarily entails coordinating local procurement processes.                         | Inflationary pressure, coupled with a number of Group-wide procurements, have resulted in an unchanged cost position overall.    |
| <b>IT &amp; Telecoms</b>                        | Hardware costs are falling, but the cost of services is increasing slightly. The primary strategy entails a focus on standardisation and competition.   | Prices have continued to fall in 2017, driven by market trends and exposure to competition from larger scale agreements.   |
| <b>Fixed equipment</b>                          | The primary cost drivers are steel, rubber, cast goods, and exchange rates. Boliden endeavours to engage a small number of close suppliers and to focus on improved specifications.   | Some price increases in index-linked agreements, but otherwise unchanged.    |
| <b>Mobile equipment</b>                         | Increases in orders received by suppliers have resulted in longer lead times. Suppliers are pushing to recover margins, and pushing for higher prices.  | Forward planning and healthy competition have enabled an unchanged price level for Boliden.    |
| <b>Tools &amp; consumables</b>                  | Steel prices, wage trends, and exchange rates are the cost drivers. The primary strategy entails consolidating the supplier base, securing contract compliance, and preventing price escalation.  | Supplier consolidation and some harmonisation of the range has balanced out a general inflation in the category.   |
| <b>Electrical installations &amp; equipment</b> | Equipment and services with strong lock-in effects. Market prices track the underlying inflation trend and copper and plastic prices.   | Reduced service availability and increasing raw material prices have resulted in rising prices.    |

## Purchasing volume by category



- Services, 24% (25)
- Bulk goods & chemicals, 15% (15)
- Electricity, 14% (14)
- Logistics, 13% (13)
- IM&S, IT and other, 7% (9)
- Fixed equipment, 11% (9)
- Tools and consumables, 4% (4)
- Electrical installations & equipment, 2% (3)

## Purchasing volume by currency



- SEK, 45% (49)
- EUR, 47% (43)
- USD, 4% (2)
- NOK, 3% (5)
- Other, 1% (1)

Boliden's purchasing volume is divided into strategic categories. Efficient work on contracting as much of the purchases as possible and on securing valid agreements made 2017 a peak year in terms of purchase volume addressed. The Finnish mines' suppliers have been integrated into Boliden's overall supplier base, resulting in significant synergies. Other focus areas included lead times, suppliers' delivery performance, and the development of supply operations.

# Employee development

Boliden endeavours to help people grow and develop. To this end, Boliden offers interesting job opportunities, conditions that promote good health, and career development for every employee.

Boliden's operations are complex and technically advanced. Mines and smelters consequently require committed and creative employees with cutting-edge expertise in a number of areas. A comprehensive technology shift towards automation is currently taking place within Boliden, generating opportunities for employees to work with innovation and technological development in many different areas, and opening the door to employees with new skill sets.

Boliden gives all of its employees the opportunity to combine their private and working lives in a balanced way. The company has modern employment conditions with flexible benefits, and a stimulating and attractive work environment with

technical solutions and aids to support them in their day to day work.

Boliden is a transparent employer that acts responsibly, fairly and honestly in all situations. A values-based leadership ensures that every employee is treated in line with their individual preconditions and needs. Managers help create job satisfaction and functioning teams and groups that take pleasure in each others' successes. Boliden places a value on employees challenging and questioning processes and methodologies, in order to ensure continuous learning within the organisation and continuous improvement. Employees' ability to exert influence exists within the context both of their day to day work and through structured activities such as

pulse meetings, improvement groups, and workplace meetings.

## Employee development

Opportunities for specialisation, in-service training, skill development, and a career path are all a natural part of our operational development. A number of internal training programmes are designed to lay the foundations for career and skill development planning. Annual management meetings, known as Talent Forums, are held in order to identify talent and offer skill development programmes to develop leadership and specialist skills.

Boliden's staff turnover rate during the year was 5.7% (5.9).

## Securing tomorrow's talent pool

An advanced talent pool model gives Boliden a tool that can be used in the context of operational planning in order to meet tomorrow's challenges and meet future manpower requirements.

A structured methodology for recruitment and succession planning provides the structure needed to support talent pool work in both the short and long term. Identification of important future skill challenges gives employees and managers the chance to set individual goals for skill development in line with Boliden's strategic goals.

Boliden's skill development and recruitment work is based on both Boliden's needs and the Group's strategic goals of promoting diversity and equal opportunities. The challenges we face include the fact that this is a male-dominated industry that operates in regions with a limited recruitment base, coupled with the stiff competition for engineers with specialist training. Boliden's operational units consequently all have their own strategic recruitment plans.

Efforts to improve awareness of Boliden among students at secondary schools, universities and colleges of further education continued during the year in order to help grow the recruitment base and numerous

Remote control of underground machinery is becoming increasingly common, improving not only safety, but the work environment and productivity.





activities were carried out at prioritised centres of education in order to explain what Boliden offers as an employer in the focus areas of sustainable development, work-life balance, technical innovation, and personal learning.

### Diversity and equal opportunities

Diversity leads to sustainability, dynamism, creativity and, ultimately, to greater profitability. Boliden endeavours to ensure its workforce is made up of people with different backgrounds, ages, and experiences. Attracting female employees to a traditionally male-dominated industry is a challenge, but our target is for at least 20% of the workforce to be made up of women by the end of 2018. In 2017, the percentage was 17.6% (17.8). It is worth noting that among Boliden's so-called top 100 managers, the percentage of female employees is 23%, which is higher than the average. 3 out of 11 mines and smelters are led by women, and one of the five members of the Group management team is a woman.

### Occupational health and safety

The work environment is a top priority within Boliden and the Group has an explicit zero tolerance for accidents. A strong safety culture, coupled with proactive risk prevention, will help ensure Boliden's success. Group-wide safety guidelines were introduced in 2017. The number of accidents leading to absence from work per one million hours worked was 6.3 (7.9). Boliden's ability to successfully attract and retain skilled employees is also dependent on our ability to offer a work environment that ensures a work-life balance. Boliden also makes life easier for parents with young children by planning parental leave, well in advance, and contributing to their income while they are on leave. Good health is not just positive for the individual in question, it also promotes Boliden's success. The sick leave rate in 2017 was 4.5% (4.4). Boliden's health work programme is based on continuous

improvement and development through systematic health and safety work. Local conditions will determine the nature of the work, but health-promoting activities such as sponsored exercise in employees' free time, ergonomics training, staff canteens that specialise in healthy food, and recurring smoking cessation campaigns are examples on what can be provided. Good health is also about good leadership and effective rehabilitation measures to reduce long-term sick leave.

### My opinion

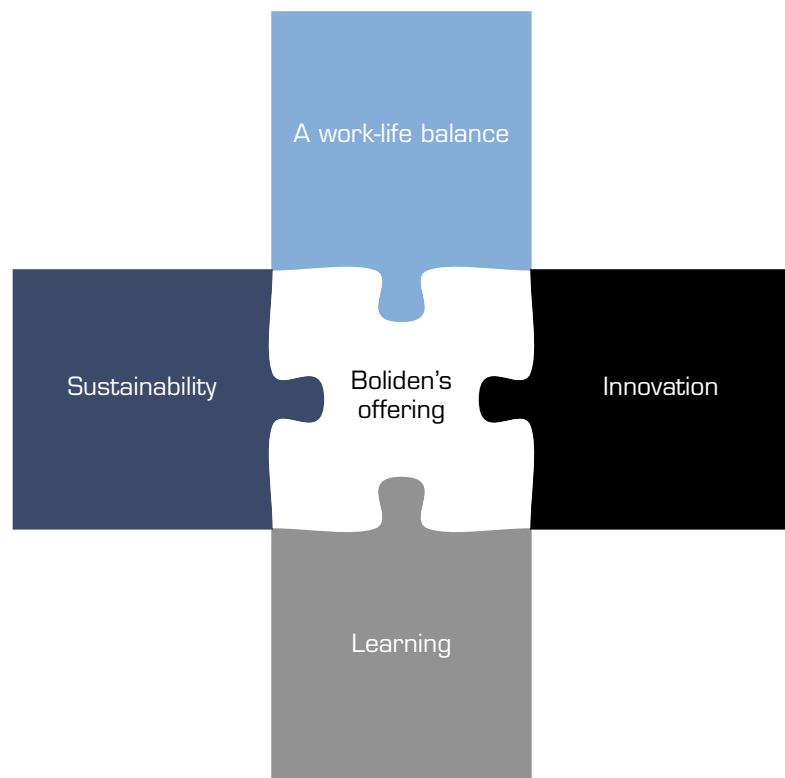
It is important to create an organisation in which employees have the skills, the will, and the ability to develop. The My Opinion employee survey is carried out

every other year and measures Boliden's performance. The results from 2017 showed a positive trend within Boliden in terms of management, health and safety work, and employee motivation in comparison with the most recent survey. The vast majority of employees stated that they would recommend Boliden as an employer to someone they knew.

# 5,684

Number of employees (FTE), 2017  
+4% in comparison with 2016

## EMPLOYEE DEVELOPMENT



# The integration of Kevitsa

With productivity and transparency as the lodestar and a project team made up of people from both Boliden and Kevitsa, the operational integration was a success. The ability to spread the changeover in management from the previous owner in an orderly fashion over the course of a full year, and the huge commitment shown by the Kevitsa employees, were two of the factors for success in the process. Integration was not the sole aim of the project, it also focused directly on operational issues and helped bring about an increase in

the plant's throughput from 6.7 Mtonnes in 2015 to 7.9 Mtonnes in 2017.

The experience Boliden has gained from previous acquisition integration processes was a contributory factor when planning the 9-month long integration project. A structured approach, coupled with detailed planning, clear strategies, correct communication, and the support of several specialists within Boliden, ensured that the project achieved its goals within the time and cost frameworks set.

## 500 m

The depth of the mine when it is mined out

## 428

The number of employees, and approx. 350 permanent contractors



The new sign is lifted in place after the acquisition of Kevitsa in 2016. Kevitsa became operational in 2012 and is still in a development phase.



# Environmental work

Boliden places considerable emphasis on the treatment of discharges, energy saving, waste management and recycling issues. Value generation from its own by-products and waste products, and those of other companies, help create a more circular economy. Waste and spillage are always minimised in order to ensure optimum resource utilisation.

## Boliden's environmental agenda

Environmental sustainability is a prerequisite for successful mines and smelters. Boliden endeavours to use the best available environmental technology developed both in-house and in partnership with leading technology suppliers. It allows equipment suppliers to use Boliden as a reference when rolling out technical solutions to others in the industry. Environmental improvement measures account for a comparatively large share of Boliden's capital investments, and the Group always evaluates the environmental benefit in relation to the economic input in order to prioritise the best projects. Boliden makes investments that yield substantial environmental benefits relative to the input, irrespective of external requirements.

## Boliden's environmental impact

Boliden's metals have a crucial role to play in the global transition to renewable energy. Solar and wind power produce variable amounts of energy and require substantial upgrades in terms of energy transmission and energy storage, and this demands substantial quantities of copper and zinc. Electric vehicles and other forms of transition away from fossil fuels to renewable energy also require large amounts of copper and a number of other substances for battery manufacturing. The manufacture of these metals leads, in many cases, to net savings in greenhouse gas emissions.

Boliden's operations utilise land and large amounts of energy, and can impact the environment, and the Group consequently takes far-reaching responsibility for limiting this environmental impact throughout the value chain, including reclamation work when a mine is decommissioned. The operations have a direct impact on the environment and give rise to carbon dioxide emissions.

Mines can have a negative impact on the surroundings in the form of discharges to water, dust, noise and changes in the landscape. The effects of mines and smelters

are most pronounced in the immediate vicinity of the operations, but some effects are felt across wider regions in the form of, for example, acidification and increased eutrophication.

## Water management and dam safety

Boliden's operations require large amounts of water. The primary environmental impact of discharges to water lies in the risk that the affected bodies of water and their beds are contaminated by foreign substances that may disturb their natural balance. By reusing the water and returning it to the processes, Boliden is able to reduce both its water withdrawal and its discharges.

Boliden is responsible for around 40 dam facilities that were either previously used, or are currently being used, to store tailings sand or other waste and for water processing. Boliden endeavours to minimise the impact it has on the surrounding area, both when developing dams, and during and after the dams' operating lives. Boliden complies with the mining industry's dam safety guidelines (GruvRI-

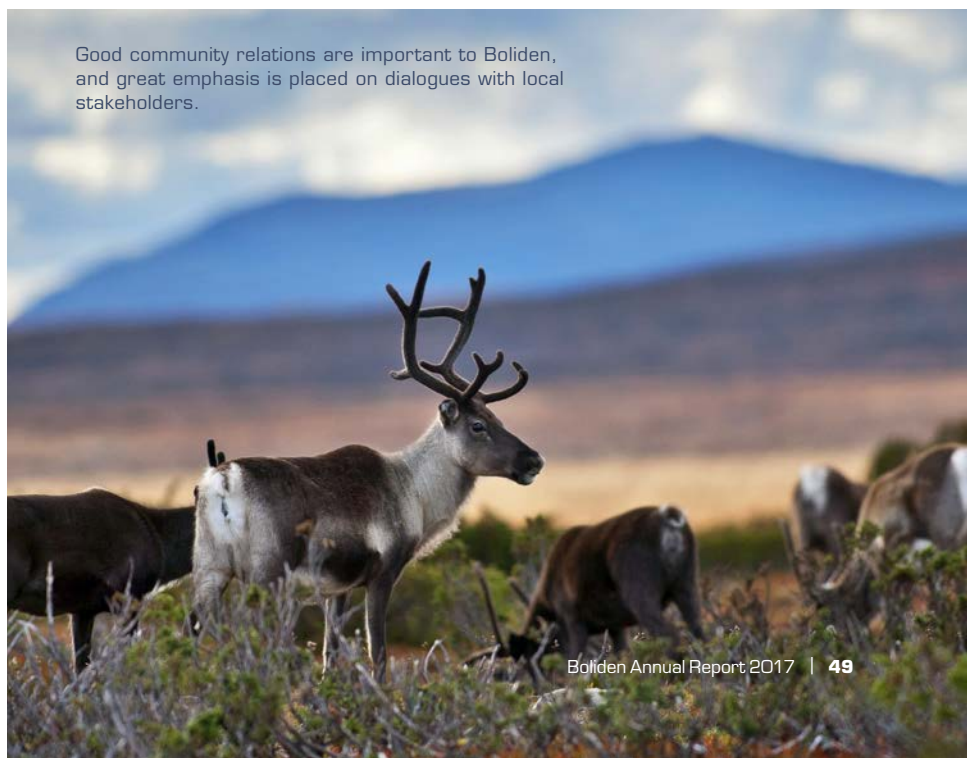
DAS) and supports the dam safety policy of the Swedish mining industry organisation, SveMin.

## Forestry and land management

Access to land is fundamental in terms of Boliden's ability to carry out exploration and conduct mining operations, and Boliden manages ca. 23,000 hectares of forests and land. Boliden aims in conjunction with all forestry-related activities, transportation and other activities in conjunction with it, to use input goods and consumables that are environmentally friendly and recyclable. Boliden has, on its own initiative, designated about 14% of the productive forested land under its management as nature conservation areas and is developing nature conservation compensation methods for use in the event of it providing necessary to utilise forests with a high natural value.

Reclamation of mining areas that have reached the end of their useful lives is a work in constant progress for Boliden. Our goal is to use the best available technology and to document the work carried out.

Good community relations are important to Boliden, and great emphasis is placed on dialogues with local stakeholders.





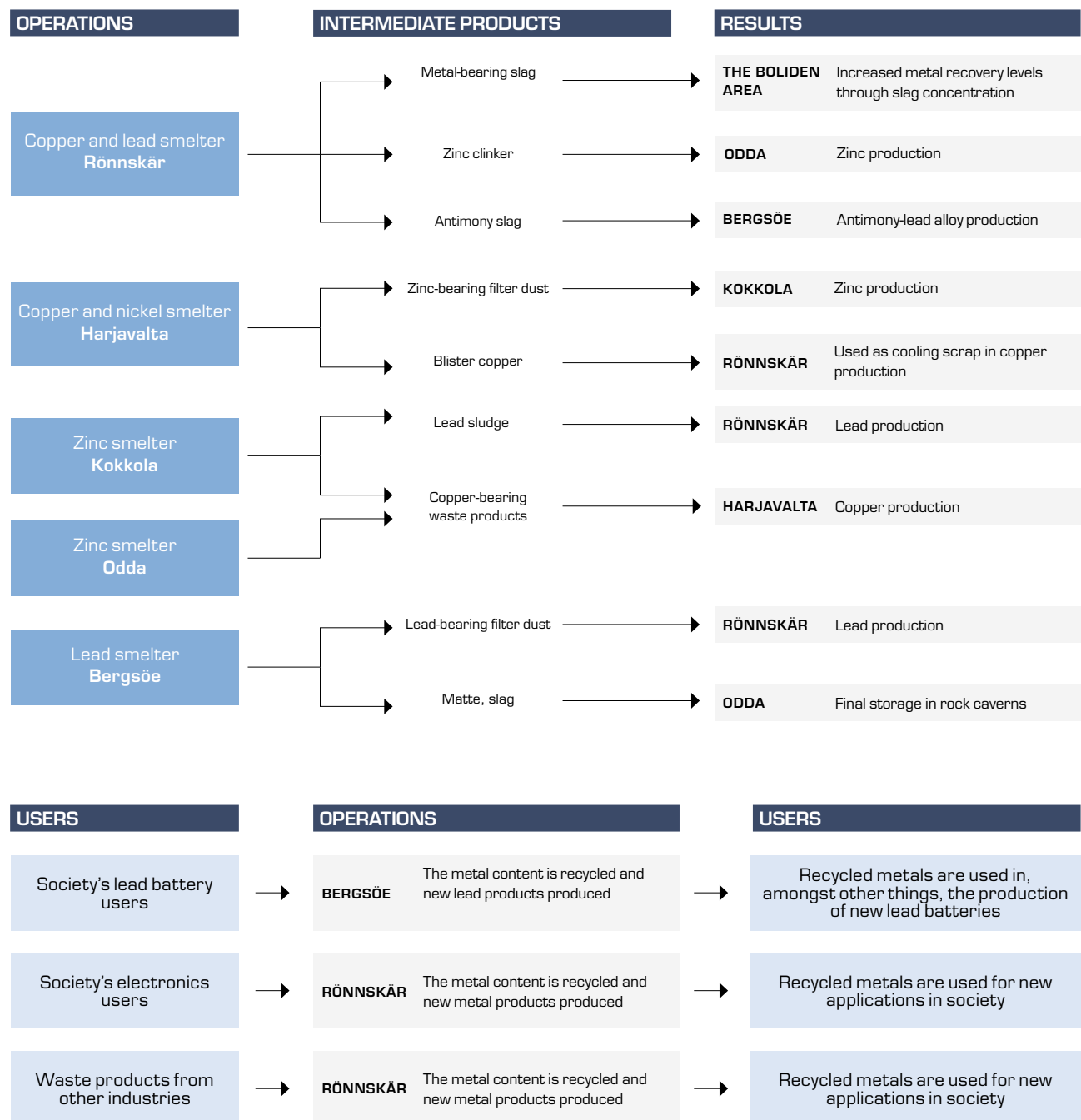
| ENVIRONMENTAL ISSUE  | BOLIDEN'S MINES  | BOLIDEN'S SMELTERS   |
|--|--|--|
|  <p><b>Waste</b><br/>The amount of waste shall be minimised and waste management activities shall have the minimum possible environmental impact.</p>                         | <p>Mines generate waste in the form of waste rock (55 Mtonnes (52)) and tailings sand (53 Mtonnes (47)). These waste products seldom have high toxicity levels, but the volumes can be substantial and the material is handled safely in the vicinity of the mine.</p>   | <p>Smelter waste is classified as hazardous (868 ktonnes (822)) or non-hazardous (215 ktonnes (240)). The hazardous waste is stored internally or sent externally for storage or recycling. The construction of a new deep storage facility for hazardous waste under Rönnskär is proceeding and is scheduled for completion in 2020.</p>                                  |
|  <p><b>Energy and greenhouse gases</b><br/>Boliden endeavours to enhance its energy efficiency and reduce its dependence on fossil fuels, wherever possible.</p>             | <p>Mining is an energy-intensive activity and the types of energy that it normally uses are electricity and diesel. Boliden is carrying out projects designed to reduce our reliance on diesel through electrification. It is calculated that the mines contributed to direct (Scope 1) and indirect (Scope 2) emissions corresponding to 343 ktonnes (313) of carbon dioxide in 2017.</p> | <p>Smelters are calculated to have contributed to direct (Scope 1) and indirect (Scope 2) emissions corresponding to 681 ktonnes (739). The smelters use any surplus heat produced to help reduce carbon dioxide emissions. It is estimated that a total of 636 GWh (612) was used internally in 2017, and a further 874 GWh (877) was supplied to external providers.</p> |
|  <p><b>Other emissions to air</b><br/>Exhaust emissions and diffuse dust emissions which affect people and the environment shall be minimised.</p>                          | <p>The environmental impact is mainly attributable to vehicle exhaust fumes and dust.</p>  | <p>Boliden monitors emissions of metals to air (109 tonnes Me-eq (100)) particularly closely, and our goal is to reduce them over time. Sulphur dioxide contributes to acidification (7.4 ktonnes (7.1)), and reducing these emissions is an important goal for Boliden.</p>   |
|  <p><b>Discharges to water</b><br/>Discharges to water which affect the areas around both active and decommissioned operations shall be minimised.</p>                      | <p>Mines' discharges to water primarily comprise nitrogen (195 tonnes (256)) and metals (1.2 tonnes Me-eq (2.1)). Returning water to the processes reduces both water withdrawal and discharges.</p>   | <p>Smelters' discharges to water primarily comprise metals (8 tonnes Me-eq (11)). Some smelters generate nitrogen discharges (40 tonnes (44)). The smelters also use water in their cooling processes, but the net effect of this on water quality is not particularly significant.</p>  |
|  <p><b>Land use and biological diversity</b><br/>Boliden works actively to maintain and compensate for any loss in biological diversity and to manage land responsibly.</p> | <p>The establishment of new mines and expansion of existing operations requires land utilisation. An ecological compensation area has been developed in Norrbotten in 2017.</p>  | <p>As of 31 December 2017, Boliden owned and/or controlled approx. 23,000 hectares of land in the vicinity of existing or previous operations and in areas of interest for exploration.</p>  |

# Sustainable resource use

Boliden is one of the leading companies in the world when it comes to recycling electronics from scrap telephones and computers and is one of Europe's biggest recyclers of automotive batteries. The

Group also processes a number of intermediate and waste products in the smelters in order to maximise metal recovery levels. Synergies are achieved by directing materials to the facilities with the best

technology for handling them. Any waste products sent to other countries are subject to legislation governing exports for landfill or recycling purposes. See also page 42.



## Promoting biological diversity

170 hectares of forest with a high natural value have been felled in conjunction with the expansion of the Aitik mine's tailings pond. Boliden has consequently initiated one of Sweden's most extensive ecological compensation projects to date in partnership with Sveaskog and the Swedish University of Agricultural Sciences (SLU). The compensation areas are, collectively, around four times as large as the area around Aitik being utilised. The aim of the measures is to ensure biological diversity

and ecosystem services in the area, which would otherwise have been negatively impacted. The measures being implemented include removing dead wood, promoting deciduous tree growth, damaging living trees, instituting controlled burns, release cutting old, coarse trees, and much more besides. Boliden has also set up a parallel research platform and is part-financing four years of research with the aim of establishing the nature conservation benefits of the measures.

# 840<sub>Ha</sub>

The size of the compensation area

# 5

maintenance areas with different specialisations and activities have been created

The compensation areas, which are located immediately to the south of Gällivare, are easily accessible for recreation and outdoor activities. Once they are opened to the public in 2018, visitors will be provided with information on subjects such as nature conservation and forestry conservation activities.



# A significant part in society

Boliden plays an important role in the communities and regions in which the Group's mines and smelters are located. Good relationships and mutual understanding are important components of the ability to conduct and develop its operations.

## Boliden's job creation

Boliden is the biggest employer in many of the communities in which it operates. Boliden has a total of 5,684 employees in eight countries, who are directly employed by the Group. The cyclic sensitivity of the industry notwithstanding, Boliden has enjoyed stable employment rates over several economic cycles and the workforce has increased by 1,160 over the past 10 years.

Many of Boliden's employees live in the vicinity of the workplace and the company consequently has a considerable impact on local employment levels and local trade and industry by generating increased purchasing power and providing a critical base for important social services. Boliden's market presence in Sweden, Finland, Norway and Ireland contributes to the creation of approximately 30,000 job opportunities, either directly or indirectly, through its subcontractors, suppliers, or the effect of its employees' expenditure. This means that for every one Boliden employee, an estimated four other jobs are created as a result of our operations. For additional details of job creation and other indirect economic impact, see Boliden's GRI Report.

Promoting the interests of local communities and maintaining good relationships with employees, neighbours, authorities and business partners is an important part of what it means to be a responsible company and also facilitates efforts to attract a skilled workforce and to develop operations.

## Contributing to tax revenues

Boliden also contributes to tax revenues in the regions in which the Group operates. The paid tax 2017 totalled SEK 1,457 m, but Boliden's direct tax expenditure also includes social security contributions, property tax, fuel tax, and VAT. Boliden's total contribution to public finances through taxes (direct, indirect, and induced) is approximately SEK 14.0 billion.

## Because – Boliden's charitable foundation

Metals contribute to the development and modernisation of societies the world over. Boliden's operations have enabled it to be part of that process for over 90 years now, and for many years, we have been actively involved on a local level through associations and voluntary organisations. In 2014, Boliden launched its charitable

foundation, Bcause, as part of its efforts to make a global contribution. Bcause is based on voluntary monthly contributions by Boliden's employees, and for every krona donated in this way, Boliden donates two, thereby tripling the total amount donated. The money raised is then donated in full, every year, to charitable purposes.

## Consultation processes

Good community relations are important to Boliden, and every year, Boliden carries out a number of consultation processes during which the public is encouraged to raise and discuss specific issues in a more formal context.

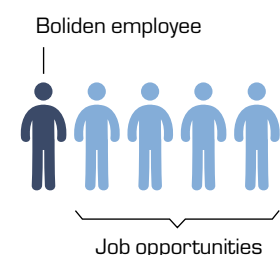
The community dialogue on the subject of Gillervattnet and the Boliden Area's original open-pit mine is one example of the consultations carried out during the year. The area was previously used as an industrial park area and tailings pond for the storage of tailings sand from the Boliden Area's concentrator, and the technical reclamation of the area will be completed in 2018.

A community dialogue has been conducted, involving local people in the process, in order to examine the site's potential, future use, and development.



Two organisations were the beneficiaries of the money raised in 2017 by Boliden's charity foundation, Bcause. The majority went to the Finnish aid organisation, Finn Church Aid, and their school for the deaf in Eritrea, and the remainder went to the voluntary organisation, Ocean Cleanup, which uses new technology to rid the Pacific Ocean of plastic.

## INDIRECT JOB CREATION



Around four indirect job opportunities are created for every one Boliden employee.

# Share trend

The Boliden share is listed on Nasdaq Stockholm in the Large Cap segment. The share price rose by 18% during the year and consequently outperformed the Stockholm Stock Exchange.

## Trading in the Boliden share

A total of 1.1 billion Boliden shares with a total value of SEK 277 b were traded in all marketplaces in 2017.

Nasdaq accounted for 43% of the trading in Boliden shares. A total of 455 m (621) Boliden shares at a value of SEK 120 b (100) were traded on the Nasdaq Stockholm Exchange during the year. An average of 1.8 m (2.5) shares were traded per trading day and the Boliden share accounted for 2.8% (2.6) of the total volume of shares traded on the Nasdaq Stockholm Exchange.

The largest marketplace after Nasdaq was Cboe Global Markets, which accounted for 41% of trading in the share.

## Price trend and dividend

The price of the Boliden share rose by 18%, in contrast to the OMX Stockholm 30 index, which rose by 4%, and the EMIX Global Mining Index in SEK, which rose by 16%. Healthy production, coupled with a favourable metal price and exchange rate trend, contributed to the share's performance in 2017.

At the end of 2017, the Boliden share was quoted at SEK 280.6 (237.90) on the Nasdaq Stockholm Exchange, corresponding to a market capitalisation of SEK 76.7 b (65.1). In common with other raw materials companies, the variation in the value of the Boliden share is, on average, greater than for the broad stock market indices. The beta value of the Boliden share over the last five years against OMXSPI is 1.36.

The Board of Directors proposes to the Annual General Meeting an ordinary dividend of SEK 8.25 (5.25) per share for 2017, which is in line with Boliden's dividend policy. The proposed dividend corresponds to 32.9% (33.9) of the net earnings per share and a dividend yield of 2.9% (2.2), calculated on the basis of the share price at the end of the year.

In addition, an extra payment of SEK 5.75 per share, in the form of an automatic share redemption procedure, has been proposed.

The Boliden share's total return (the sum of the dividend paid and the price trend) over the most recent 10-year period was, on average, 17% per annum.

## Share capital

There are a total of 273,511,169 Boliden shares. Every share has a nominal value of SEK 2.12 and the share capital totals SEK 578,914,338. Boliden's share capital comprises a single class of share in which every share has the same voting power and grants the same entitlement to dividends. The Boliden Articles of Association contain no provisions restricting the right to transfer shares or any limitations with regard to the number of votes that a shareholder can exercise at General Meetings of the company's shareholders. Boliden does not hold any of its own shares, nor has it issued any shares in 2017.

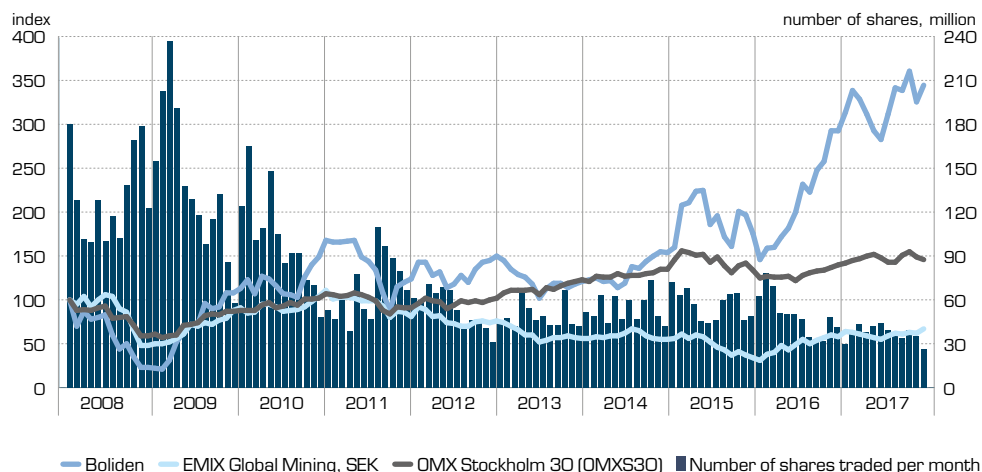
Boliden is unaware of any agreement between shareholders that may entail restrictions on the right to transfer shares in the company. Boliden is not party to any significant agreement affected by any public buyout offer. Boliden has no shareholders who have declared that they, either directly or indirectly, represent at least one tenth of the total number of votes for all shares.

## Share price, sector index, and the Nasdaq Stockholm Exchange

### Share price, sector index and the Nasdaq Stockholm Exchange

The price of the Boliden share rose by 18% during the year, in comparison with the OMX Stockholm 30 index, which rose by 4%, and the EMIX Global Mining sector index in SEK, which rose by 16%.

SOURCE: THOMSON REUTERS DATA-STREAM



## Distribution of Boliden shares on 31 December 2017

| Shareholding        | Number of shareholders | Number of shares   | Holding, %   | Votes, %     |
|---------------------|------------------------|--------------------|--------------|--------------|
| 1–100               | 35,935                 | 1,441,699          | 0.5          | 0.5          |
| 101–500             | 21,869                 | 6,450,317          | 2.4          | 2.4          |
| 501–1,000           | 6,733                  | 5,645,080          | 2.1          | 2.1          |
| 1,001–10,000        | 5,262                  | 14,051,267         | 5.1          | 5.1          |
| 10,001–50,000       | 371                    | 8,192,212          | 3.0          | 3.0          |
| 50,001–             | 246                    | 177,682,511        | 65.0         | 65.0         |
| Anonymous ownership |                        | 60,048,083         | 22.0         | 22.0         |
| <b>Total</b>        | <b>70,416</b>          | <b>273,511,169</b> | <b>100.0</b> | <b>100.0</b> |

SOURCE: MONITOR, MODULAR FINANCE AB HOLDINGS

## Ownership structure

Boliden had 70,416 (69,048) shareholders on 31 December 2017.

Approximately 66% (67) of the shares were owned by foreign shareholders. The ten biggest single shareholders represent 29.8% of the share capital.

Boliden's employees hold shares, via profit sharing foundations, for which voting rights cannot be directly exercised. The foundations held 395,099 (249,792) shares at the end of the year.

## Boliden's biggest owners on 31 December 2017

| Percentage of capital and votes, % |             |
|------------------------------------|-------------|
| Norges Bank                        | 5.9         |
| BlackRock                          | 5.2         |
| Swedbank Robur Fonder              | 4.8         |
| AMF Försäkring & Fonder            | 3.3         |
| Vanguard                           | 2.6         |
| SEB Fonder                         | 1.8         |
| Invesco                            | 1.8         |
| Söderbloms Factoringsjänst AB      | 1.7         |
| J O Hambro Capital Management      | 1.4         |
| Dimensional Fund Advisors          | 1.3         |
| <b>Total</b>                       | <b>29.8</b> |

SOURCE: MONITOR, MODULAR FINANCE AB. VERIFICATION DATE MAY VARY FOR CERTAIN SHAREHOLDERS.

## The share in brief, 2017

|                              |                  |
|------------------------------|------------------|
| Marketplace                  | Nasdaq Stockholm |
| Short name                   | BOL              |
| ISIN code                    | SE 0000869646    |
| ICB code                     | 1700             |
| Highest price paid           | SEK 307.90       |
| Lowest price paid            | SEK 222.70       |
| Closing price                | SEK 280.6        |
| Market capitalisation 31 Dec | SEK 76.7 b       |
| Turnover rate                | 164%             |
| Number of shares             | 273,511,169      |
| Beta value (5 years)         | 1.36             |

SOURCE: NASDAQ, THOMSON REUTERS DATASTREAM

## Shareholder information on the website

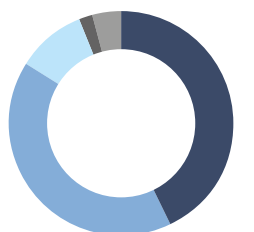
Boliden's website, [www.boliden.com](http://www.boliden.com), provides information on Boliden, the performance of the Boliden share, metal prices and currencies, financial reports, a list of the analysts who cover Boliden, and details of how to contact Boliden. Presentations of Interim Reports and capital market days are also available on the website.

| Annual total shareholder return, 31 December 2017 | 1 year | 3 years | 5 years | 10 years |
|---|--------|---------|---------|----------|
| Boliden   | 20%    | 33%     | 21%     | 17%      |
| OMX Stockholm 30                                  | 8%     | 6%      | 11%     | 8%       |
| EMIX Global Mining, SEK                           | 19%    | 10%     | 0%      | -1%      |

The average total shareholder return on the Boliden share over the past 10 years was 17% per annum and 367% for the period as a whole. Boliden's annual total shareholder return has outperformed both the OMX Stockholm 30 and the international mining index in the one-, three-, five-, and ten-year periods.

SOURCE: THOMSON REUTERS DATASTREAM

## Trading in different marketplaces

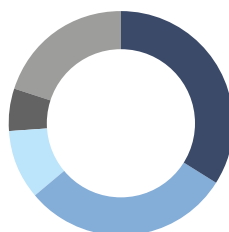


- Nasdaq, 43%
- Cboe Global Markets, 41%
- LSE Group, 10%
- BOAT, 2%
- Other, 4%

The Boliden share is traded in a number of marketplaces. 43% (42) was traded on the Nasdaq Exchange.

SOURCE: MONITOR, MODULAR FINANCE AB

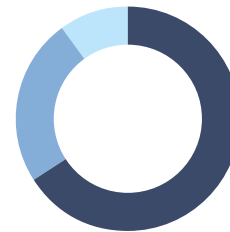
## Ownership by country



- Sweden, 34%
- USA, 30%
- UK, 10%
- Norway, 6%
- Other, 20%

The percentage of foreign-owned shares remained stable, with approximately 66% (67) of the shares registered in foreign ownership.

## Ownership by category



- Foreign accounts, 66%
- Swedish legal entity accounts, 24%
- Swedish natural person accounts, 10%



# Risk management

Boliden's operations are cyclically sensitive and are exposed to fluctuations in metal prices and exchange rates. Sustainability risks are evaluated continuously. The operations have an impact on the surrounding environment, and many processes are associated with work environment and safety risks. Boliden works unceasingly to reduce these risks, e.g. through scenario planning based on a range of different market fluctuations.

## Operational risks

Operational risks are managed by the operating units in accordance with the guidelines and instructions established for each Business Area and unit.

| Risk                        | Description of risk   | Management and comments for the year  |
|-----------------------------|---|---|
| <b>Health and safety</b>    | Boliden handles large material flows, both below and above ground. Employees and contractors are periodically exposed to heavy machinery and lifting, to high temperatures, and to substances that are hazardous to health. Deviations from established routines or inadequate maintenance can create dangerous situations and increase the risk of personal injury.  | <p>Boliden has a zero vision for accidents and established routines for health and safety. The number of accidents resulting in lost time (LTI) per million hours worked, including those suffered by contractors, decreased, year on year; and totalled 6.3 (7.9).</p> <p>Work on developing Boliden's safety culture has been intensified during the year in the form of both concrete, physical measures and initiatives designed to increase employee involvement and increase risk awareness.</p> <p>An organisational psychologist was employed in 2017 and has, working in partnership with HR, drawn up a policy that clarifies definitions, duties, and responsibility for preventing bullying and discrimination.</p>   |
| <b>Environmental impact</b> | <p><b>Environmental impact</b><br/>Boliden's operations affect the air, water, land and biological diversity in the vicinity of those operations. The extraction of metals also creates waste products that must be processed safely. The risk is posed by both the ongoing and decommissioned operations.</p> <p><b>Carbon dioxide emissions</b><br/>Boliden's operations are energy-intensive and result in carbon dioxide emissions that can impact the climate. External environmental risks, such as climate change and changes to regulations and taxes, may affect Boliden, e.g. regulations and requirements relating to carbon dioxide emissions from processes. The EU's ETS emissions trading scheme may result in cost increases that jeopardise Boliden's competitive situation in the international market.</p> <p><b>Water management and dam safety</b><br/>Tailings ponds account for one of the risk scenarios for the mining industry. The risks comprise both the environmental impact of dam construction and the risk of a dam failure. Extreme weather conditions and changes in average rainfall levels affect this risk.</p> | <p>Boliden sets emission goals and monitors them closely. Efforts to manage the risk of emissions and discharges are based on risk analyses, ongoing monitoring and maintenance. Technological development aimed at ensuring optimum resource utilisation and minimizing potential waste volumes is an ongoing process.</p> <p>Boliden is working to reduce its climate footprint through electrification and enhanced energy efficiency. Boliden works, through its industry organisations, to promote transparency in the Emissions Trading Scheme and to ensure that European metal producers are not disadvantaged. Boliden's goal is for its carbon dioxide intensity to be below 0.77 tonnes CO<sub>2</sub>/tonne of metal. In 2017, the carbon dioxide intensity decreased from 0.73 to 0.69.</p> <p>Boliden develops water balance models to ensure better resource utilisation and to create a wider safety margin in relation to emergency water discharges. Every operating unit with its own dam has a Dam Safety Manager and a Dam Operations Manager. The dams in Sweden are operated in accordance with the GruvRIDAS dam safety guidelines.</p> |
| <b>Unplanned stoppages</b>  | Boliden's production essentially comprises continuous processes and unplanned stoppages can affect production, emissions and discharges to air and water, and financial results. The stoppages can be long-term. Unplanned stoppages can, for example, occur due to technical problems, accidents or strikes.   | Boliden carries out preventative maintenance work at all of its production facilities. Major maintenance shutdowns are carried out every year within the smelting operations, while maintenance work, albeit on a generally less comprehensive scale, is an integral part of day-to-day operations for the mines. Boliden has adopted a zero tolerance vision for accidents in order to help prevent unplanned stoppages.   |
| <b>Talent pool</b>          | A large number of Boliden's employees will retire over the next few years. A shortage of people with the right experience increases the difficulty of recruitment.  | Boliden has established methods of evaluating employees and succession planning. Talent Forums are held at all units to ensure that the right expertise is available in the right key positions. Middle management programmes are conducted annually, as are employer branding activities. Boliden has visited several universities and trade fairs during the year. Boliden's equal opportunities work has received praise. One example of this is Women at Work – a network for women who are interested in career development.   |

## Market and commercial risks

Boliden's market and commercial risks are primarily managed within the individual Business Areas and at Group level.

| Risk                                  | Description of risk  | Management and comments for the year   |
|---------------------------------------|--|--|
| <b>Metal prices</b>                   | Changes to metal prices have a significant impact on Boliden's profits and cash flow.  | Boliden's policy is not to hedge metal prices, but rather to allow changes to be reflected in the result. There are some exceptions to this, e.g. when mining ore bodies with short residual lifespans or in conjunction with major investment projects. See also under the "Financial risks" section. Boliden also continuously hedges Smelters' metal price and currency exposure during the period between the purchase of materials and the sale of corresponding metals (with the exception of process inventory) in what is known as transaction exposure. See also under the "Financial risks" section. |
| <b>Treatment and refining charges</b> | Treatment and refining charges make up a large part of the smelters' gross profit and are determined by the supply/demand of metal concentrates.   | The terms are negotiated annually by the major players in the mining and smelting industries. Boliden applies these terms internally and the majority of external contracts are based on these terms.  |
| <b>Customers</b>                      | Boliden has a reliance on a small number of large copper customers. Reduced sales to industrial customers in Europe increase the risk of sales via the London Metal Exchange (LME), with slightly lower margins as a result. | Boliden endeavours to reduce the risks by maintaining a diversified portfolio of customers and long-term relationships, via its own northern European sales organisation. Boliden also has plans in place that would enable the production to be reorganised to produce LME-quality products that can be sold via LME.   |
| <b>Raw materials supply</b>           | A stable and reliable raw materials supply is important in enabling the smelters to produce at high levels of capacity utilisation and consistent quality.   | Boliden endeavours to conclude long-term agreements and partnerships with reliable external metal concentrate and recycling materials suppliers.   |
| <b>Energy prices</b>                  | Energy accounts for approximately 13% of operating costs and changes in energy prices can have a significant effect on profitability.  | Boliden has long-term electricity agreements with slow-moving pricing clauses in Sweden and Norway. The agreement portfolios in Finland and Ireland have shorter terms and Boliden is more exposed to market prices. Changes in energy prices consequently affect the operating profit. Boliden monitors the potential for entering into longer term pricing agreements as and when favourable terms are offered.  |

## Financial risks

Boliden has a centralised treasury function that is responsible for managing financial risks with the exception of credit risks in trade and other receivables. The treasury function provides financial risk management support for the management and operating units. The treasury function is responsible for identifying and limiting the Group's financial risks in line with the financial policy adopted by the Board of Directors.

| Risk                                       | Description of risk   | Management and comments for the year  |
|--|---|---|
| <b>Exchange rate and metal price risks</b> | <p>The pricing terms for Boliden's products are primarily determined on raw materials exchanges such as the London Metal Exchange (LME) for base metals, the London Bullion Market Association (LBMA) for precious metals, and the currency and money market. Boliden's products are largely priced in USD and fluctuations in the USD/SEK/EUR exchange rates hence have a significant impact on Boliden's profits and cash flow. The Group's exchange rate and metal price exposure covers transaction exposure and translation exposure:</p> <p><b>Transaction exposure</b><br/>Boliden's transaction exposure comprises binding undertakings to customers and suppliers.</p> <p><b>Exposure in connection with binding undertakings</b><br/>When Boliden undertakes to participate in a transaction at a fixed value and which is not compensated for by a simultaneous opposite transaction of a corresponding size and nature, a transaction risk arises. The Group buys metals in the form of raw materials which it processes into refined metals, and where the acquisition value of the raw materials as well as the exchange rates may differ from the final sales value. Such differences arise as a result of variations in quantities and processing and selling dates. Some customers are, furthermore, offered fixed prices in different currencies that are sometimes set well in advance of delivery.</p> <p><b>Exposure in connection with forecast cash flows</b><br/>This exposure also arises from future revenues that are affected by fluctuations in metal prices and exchange rates.</p> | <p>The Group's total sensitivity to the factors listed (see sensitivity analysis table below) is calculated on the basis of the quarterly reports detailing the Group companies' planned exposure resulting from metal production, exchange rates and interest. The effects of different market scenarios can be quantified on the basis of the information on sensitivity to market changes, and can then act as source data for the management of financial risks and be reported to the Board of Directors, management, and the market.</p> <p>Transaction exposure in conjunction with binding undertakings is hedged with the exception of the smelters' process inventory. Exposure in conjunction with forecast cash flows is normally not hedged in line with Boliden's policy. See also the "Market and commercial risks" section above.</p> <p>The Group uses futures contracts to ensure that the sale price and exchange rate correspond to those applicable in conjunction with the purchase of the raw material in question or with the signing of a sales agreement at a fixed price. Hedge accounting is applied to the futures contracts, thereby hedging the fair value in the Income Statement.</p> <p>Boliden continuously calculates the way in which changes in metal and exchange rate markets will affect the Group's future financial position. See the sensitivity analysis of the operating profit table below. Boliden's policy is not to hedge metal prices and exchange rates in relation to the Group's future income. Boliden can, however, in order to limit the risk in certain situations, hedge part of the forecast cash flows. There may be special justification in conjunction with, for example, major investments or investments in mines with a short lifespan for limiting the financial risks. The Group can use futures and options contracts to hedge metal prices and/or exchange rates for the cash flows from forecast metal sales. The derivatives are hedge accounted as cash flow hedging under Other comprehensive income. See page 58 for a sensitivity analysis of how the Other comprehensive income result is affected by a change in the value of financial derivatives (cash flow hedging).</p> |

## Financial risks, cont.

| Risk                      | Description of risk   | Management and comments for the year  |
|---------------------------|---|---|
| <b>Exchange rate risk</b> | <b>Translation exposure</b><br>A translation difference arises when converting net investments in overseas operations into Swedish kronor, in conjunction with exchange rate fluctuations, which affects Other comprehensive income within the Group.       | The effect of translation exposure is, in accordance with Boliden's financial policy, not eliminated ("equity hedging"). If external borrowing requirements within the Group exceed internal loans, the excess share of the borrowing currency is steered such that the currencies in the assets match. The main borrowing currencies are EUR, SEK and NOK. |
| <b>Interest rate risk</b> | Changes in market interest rates affect the Group's profits and cash flows. The rapidity with which a change in interest rate levels affects the Group's net financial items depends on the fixed interest term of the loans and the duration of the loans. | Boliden's financial policy provides the scope for an average fixed interest term of up to 3 years. The Group's loan portfolio had, on 31 December 2017, an average fixed interest term of 0.5 years (0.2). Interest swaps are used to extend the fixed interest term.   |

## Sensitivity analysis

**Operating profit, excluding outstanding derivatives:** the table below contains an estimation of the effect on the Group's operating profit of changes in market terms for the following year. The calculation is based on closing day prices on 31 December 2017 and on Boliden's planned production volumes. The sensitivity analysis does not take into account the effects of metal price hedging, exchange rate hedging, contracted treatment and refining charges, or the revaluation of smelters' process inventory.

**Other comprehensive income, taking into account outstanding derivatives:** the table below contains an estimation of the effect on Other comprehensive income (income and cost items including reclassification adjustments not reported under the profit), before tax, of changes in the value of outstanding derivatives based on the closing day prices on 31 December 2017. Changes in the value of financial derivatives in respect of binding undertakings and translation exposure have a very limited or no effect net on the profit or Other comprehensive income. The table below hence contains the effect of changes in the value of derivatives intended to counter the Group's forecast exposure.

| SEK m   | 2017             |                     |      |        | 2016             |                     |      |        |
|---|------------------|---------------------|------|--------|------------------|---------------------|------|--------|
|   | Operating profit | Net financial items | Tax  | Equity | Operating profit | Net financial items | Tax  | Equity |
| <b>Change in metal prices, +10%<sup>1)</sup></b>  |                  |                     |      |        |                  |                     |      |        |
| Copper  | 820              | 11                  | -183 | 648    | 630              | 8                   | -140 | 497    |
| Zinc  | 920              | 12                  | -205 | 727    | 910              | 11                  | -203 | 718    |
| Lead  | 135              | 2                   | -30  | 107    | 115              | 1                   | -26  | 91     |
| Gold  | 285              | 4                   | -64  | 225    | 285              | 4                   | -63  | 225    |
| Silver  | 165              | 2                   | -37  | 130    | 195              | 2                   | -43  | 154    |
| Nickel  | 105              | 1                   | -27  | 83     | 100              | 1                   | -22  | 79     |
| <b>Change in exchange rates, +10%</b>   |                  |                     |      |        |                  |                     |      |        |
| USD/SEK   | 1,600            | 21                  | -357 | 1,264  | 1,465            | 18                  | -326 | 1,156  |
| EUR/USD   | 1,025            | 14                  | -228 | 810    | 870              | 11                  | -194 | 687    |
| USD/NOK   | 145              | 2                   | -32  | 115    | 160              | 2                   | -36  | 126    |
| <b>Change in TC/RC, +10%</b>  |                  |                     |      |        |                  |                     |      |        |
| TC/RC copper  | 90               | 1                   | -20  | 71     | 95               | 1                   | -21  | 75     |
| TC zinc   | 50               | 1                   | -11  | 40     | 55               | 1                   | -12  | 43     |
| TC lead   | -15              | 0                   | 3    | -12    | -10              | 0                   | 2    | -8     |
| <b>Change in market rate, +1%<sup>2)</sup></b>  |                  | 53                  | -12  | 41     |                  | -101                | 22   | -79    |
| <b>Translation exposure, net investments in overseas operations, exchange rate, +10%<sup>3)</sup></b> |                  |                     |      |        |                  |                     |      |        |
| NOK/SEK   |                  |                     |      | 154    |                  |                     |      | 168    |
| EUR/SEK   |                  |                     |      | 1,431  |                  |                     |      | 600    |
| <b>Effect of interest +1%, gold + 10%, USD/SEK +10%<sup>4)</sup></b>                                  |                  |                     |      |        |                  |                     |      |        |
| Interest derivatives, interest swaps  |                  |                     |      | 15     |                  |                     |      | 5      |
| Metal derivatives, gold futures   |                  |                     |      | -      |                  |                     |      | 31     |
| Currency derivatives, USD/SEK   |                  |                     |      | 16     |                  |                     |      | -3     |

1) Based on forecast sales for the coming twelve months.

2) Based on closing day debt portfolio excluding interest swaps (31/12).

3) Based on closing day balances (31/12).

4) Based on outstanding derivatives (31/12).



## Financial risks, cont.

| Risk                                  | Description of risk  | Management and comments for the year   |
|---------------------------------------|--|--|
| <b>Refinancing and liquidity risk</b> | The risk that Boliden will be unable to obtain the requisite financing or to meet its payment undertakings due to insufficient liquidity.  | <p>Boliden limits the refinancing risk by ensuring that its loan liability has a good spread in terms of counterparties, financing sources and durations. Boliden works actively to ensure satisfactory current liquidity by making appropriate use of unutilised credit facilities with market- and operations-adjusted loan durations. The refinancing requirement is reviewed regularly by Boliden's treasury function. The refinancing requirement is dependent, first and foremost, on market trends and investment plans. The loan agreements carry loan covenants which oblige Boliden to comply with certain defined key ratio conditions in order to avoid early repayment. A deterioration in the global economic climate may entail increased risks in respect of profit performance and financial position, and the risk of Boliden coming into conflict with loan terms and conditions. Boliden has complied with all loan covenants in 2017.</p> <p>The average term of total loan facilities was 2.4 years (3.3) at the end of the year, which is in accordance with established Group policy. On 31 December 2017, Boliden's payment capacity totalled SEK 8,768 m (6,968) in cash and cash equivalents and unutilised binding credit facilities with a term in excess of one year. Boliden has a cash pool structure that enables it to maintain a central overview of liquidity flows and ensures efficient management of the Group's liquidity.</p>   |
| <b>Credit and counterparty risk</b>   | <p><b>Credit risks in financial operations</b></p> <p>The term, credit and counterparty risk, refers to the risk that a counterparty in a transaction may fail to fulfil their obligation, thus causing the Group to incur a loss. Boliden's financial exposure to counterparty risk mainly occurs when trading in derivative instruments.</p> <p><b>Credit risks in trade and other receivables</b></p> <p>The risk of the Group's customers failing to fulfil their obligations constitutes a credit risk.</p> | <p>Boliden's financial policy mandates a Standard &amp; Poor's credit rating of A when entering into a transaction, and a maximum investment of cash and cash equivalents per counterparty. The credit quality and counterparty spread for derivatives is adjudged to have been good in 2017. On 31 December 2017 the credit risk in derivative instruments corresponded to a market value of SEK141 m (298), which relates to Boliden's receivables from external counterparties.</p> <p>Offsetting of financial assets and liabilities is regulated under ISDA agreements (International Swaps and Derivatives Association) which handle both offsetting between contracted counterparties during day-to-day operations and in conjunction with special circumstances, such as failure to pay. Boliden, during the course of its day-to-day operations, net reports market values in the same currency with a single counterparty that mature at the same time and the excess sum is paid by the party with the biggest liability. In the event of a breach of contract, all outstanding obligations covered by ISDA agreements are terminated. The outstanding sum in the majority of ISDA agreements is paid by the counterparty with the biggest liability.</p> <p>Credit risks are managed through an established credit rating process, active credit monitoring, short credit periods, and daily routines for monitoring payments. The requisite provisions for bad debts are also monitored continuously. The quality of trade and other receivables is deemed to be good. Write-downs of outstanding trade and other receivables on 31 December 2017 have only been effected in very limited amounts and have also, historically speaking, been insignificant. See also Note 19, Trade and other receivables. Credit insurance is also used from time to time.</p> |
| <b>Risk management and insurance</b>  | The risk of damage that causes financial impact.   | The objective of the Risk Management function at Boliden is to minimise the total cost of the Group's damage risks. This is achieved both by continuously enhancing the damage prevention and control work conducted within the operations, and by introducing and developing Group-wide insurance solutions.  |
| <b>Financial reporting</b>            | The risk of inaccurate financial and operational reporting.  | Boliden has an efficient internal control structure. Control functions exist both locally, in individual units, and within Business Areas and at the Head Office. All of the functions work within a Group-wide internal control framework for financial reporting that is based on COSO. The framework's controls are tested annually, both internally and by external auditors. The operational reporting is followed up and controlled by the Group's Controlling function, which works closely with the local units and Business Areas   |

## Other risks

| Risk                       | Description of risk  | Management and comments for the year  |
|----------------------------|--|---|
| <b>Legal risks</b>         | Boliden's various operations are widely subject to licensing requirements and to wide-ranging environmental and other regulations. Boliden may become involved in disputes and legal proceedings.  | The continuation of Boliden's operations is, to a large degree, dependent on the retention/renewal of existing licences and the acquisition of new ones. Boliden continuously monitors legal developments in relevant spheres and implements, follows up on and ensures compliance with applicable laws and regulations. Boliden is active in the environmental law sphere, amongst others, through its membership of industry and trade associations, in the form of lobbying activities, and by means of presentations and educational measures for decision-makers and other stakeholder groups. Information on legal proceedings and disputes is provided in Note 30.   |
| <b>Political risks</b>     | Political decisions can have an effect in Sweden and the countries in which Boliden and Boliden's commercial partners operate. Examples of such decisions may include changes to different types of tax, reclamation management, and licensing processes.    | Boliden and industry organisations are often an expert body to which reports are referred for comment ahead of impending political decisions that impact Boliden's operations.  |
| <b>Risks to confidence</b> | Boliden may suffer incidents that adversely affect confidence in the company, when, for example, suppliers, customers and/or employees fail to live up to the environmental, quality, ethical etc. requirements adhered to by Boliden. See also pages 42–44. | Evaluations and sanction monitoring of customers and suppliers and Boliden's business partners, is carried out within the framework of Boliden's CR work before any partnership is entered into. This is done using questionnaires that are completed by prospective business partners, and which are evaluated systematically. Customer and supplier audits are also carried out, as necessary, to ensure a level that is within the framework of Boliden's requirement structure. Discrepancies may result in the termination of the partnership. Boliden has a crisis management group with established routines for managing crises and complex events, including internal and external communication and legal assistance. |

# Corporate Governance Report

## Comments from the Chairman of the Board

**Efficient corporate governance is a prerequisite for generating added value for our shareholders and maintaining confidence amongst our stakeholders at large.**

A group, essentially comprising Swedish institutional investors, have held their shareholding and been long-term owners in Boliden since we were relisted in Sweden 15 years ago and the last few years have seen their ranks joined by a number of large, foreign, institutional owners. There is no clear principal owner, however, and this places special demands on the Board as the owners' ambitions must be "interpreted".

We work in an industry that is characterised by high volatility, i.e. rapid and vigorous fluctuations – both up and down – in profits, and this is something that our shareholders must understand. The volatility also makes significant demands on the company's management and Board in terms of their ability to provide high quality, transparent information and to handle these rapid changes without suffering either from hubris when the trend is upwards or dejection when the trend is downwards.

The Board of Directors and the management must, at the same time, successfully handle large and long-term investment projects. This type of project naturally also entails a large number of risks, which are discussed over a relatively long period of time by the Board before any decision is taken, but is nevertheless vital in terms of the company's ability to generate value.

One of the prerequisites for value-generating work by the Board is that the Board has a firm grasp on the operations and on events in the outside world. We achieve this by, amongst other things, monthly reports and a well-structured body of material for the Board. We also usually visit two of Boliden's operating facilities each year in order to learn about those operations in real depth and to meet with the local management and employees.

In addition, in order to ensure that we spend sufficient time on the more long-term and strategic issues, we agree every year on a number of themes that we incorporate into our Board agenda. The Corporate Governance Report details the themes we have addressed during the past year. Some of them are recurring themes, e.g. CSR issues, which we address specifically at our October meeting, and leadership development, which is the focus of our December meeting.

The evaluation of the Board's work that we carried out in 2017 shows that the Board is functioning efficiently. This evaluation forms the basis for the work of the Nomination Committee and it is an important tool for the Board's efforts to ensure continuous improvement in our work.

February 2018

Anders Ullberg  
Chairman of the Board

## Governance of the Boliden Group

Boliden is a Swedish limited company listed on Nasdaq Stockholm. The Boliden Group has approximately 5,700 employees and runs mines and smelters in Sweden, Finland, Norway and Ireland.

Boliden's corporate governance is based on the Swedish Annual Accounts Act, the Swedish Companies Act, Nasdaq Stockholm's regulations for issuers, the Swedish Code of Corporate Governance, and other applicable legislation and regulations.

In addition to compliance with rules and regulations, Boliden applies internal governance instruments, such as the Group's organisational and operational philosophy, the New Boliden Way, and Boliden's internal control tool, the Boliden Internal Control System (BICS), together with policies in a number of areas such as Boliden's Code of Conduct with which all employees must be familiar and in accordance with which they must conduct themselves. The Group's units also work in accordance with health & safety, environmental, energy, and quality management systems.

## Highlights and events during 2017

The year began with exploration successes in Ireland and at Garpenberg. A new mineralisation with an inferred mineral resource of 10 Mtonnes was identified at the Tara zinc mine in Ireland, and will, assuming the expansion of the tailings pond, enable an extension of the mine's lifespan. Large parts of Garpenberg's mineral resources were also upgraded to reserves. The integration of the Kevitsa mine in Finland, which was acquired in 2016, has been successful, and the mine has developed well, contributing to the raw material supply chain for Harjavalta's nickel production. Construction work on Aitik's new crusher continued and the facility is expected to come on line in 2018. A decision was also taken to increase the capacity of Aitik's tailings pond. An investment in the next phase of the expansion of the Hötjärn tailings pond has also been approved in order to enable continued production in the Boliden Area.

Boliden works continuously on improv-

# 27 April

Welcome to the 2018  
Annual General Meeting!

The 2018 Annual General Meeting will be  
held in Garpenberg on 27 April.

ing the environmental performance of its units, and to this end, several investments have been approved, including trials and evaluations of electric trucks at Aitik, the dewatering of Kokkola's tailings pond, and a new sulphuric acid plant at Rönnskär with the capacity needed to handle future expansion. Rönnskär is also continuing to work towards completion of the underground storage facility for certain types of waste, and a new silver-zinc separation project has been launched.

On the financial front, a strong cash flow contributed to good current liquidity and a stable capital structure in line with Boliden's financial goals, and has also enabled the faster amortisation of the loan raised for the acquisition of Kevitsa.

The dispute regarding Boliden's deliveries of smelter sludge to Arica in Chile in the 1980s was heard by Skellefteå District Court in the autumn of 2017 in an eight week long hearing. A ruling will be given in March 2018.

## Shareholders and Annual General Meeting

Boliden's biggest shareholders are Swedish and foreign investment funds and institutions. There were a total of 70,416 (69,048) shareholders at the end of the year and the single largest shareholders were Norges Bank and BlackRock. The percentage of foreign ownership fell during the year and was approximately 66% (67) by the end of the year. See pages 54–55 of the Annual Report and Boliden's website for further information on the shareholder structure within Boliden.

Boliden's shareholders exercise their right of decision by submitting proposals to and participating in and voting on the proposals submitted to the Annual General Meeting and any Extraordinary General Meetings. Shareholders may request that a matter be discussed at the Annual General Meeting by submitting a written request to the Board of Directors at the designated time that is sufficiently in advance of the meeting that the matter can be included in the notice convening the

meeting. Shareholders are also welcome to submit enquiries on company issues to the Board and the President, the Auditor and the Remuneration and Audit Committee Chairmen during the General Meeting.

The Annual General Meeting is the company's supreme decision-making body. The duties of the Annual General Meeting include the election of Members of the Board, the Chairman of the Board, and the Nomination Committee. The Annual General Meeting's duties also include the adoption of the Income Statement and Balance Sheet, resolutions on the appropriation of profits and discharge from liability for the Members of the Board and the President of the company, the determination of fees payable to the Members of the Board and to the auditors and the principles governing conditions of employment and remuneration for the President and senior executives, and, where relevant, the amending of Articles of Association and election of auditors.

The Annual General Meetings are regularly held at one of Boliden's facilities in Sweden in order to give the shareholders an insight into the operations. Shareholders are offered the chance of a guided tour of Boliden's mines, concentrators or smelters in conjunction with these meetings in order to deepen their knowledge of the operations and to give them an opportunity to meet with Boliden's employees.

## The 2017 Annual General Meeting

The 2017 Annual General Meeting was held on 25 April in Aitik's truck workshop. 101,393,489 shares were represented at the Meeting by 1,113 shareholders, either in person or through their proxies. The shares represented comprised just over 37% of the total number of shares. The Meeting was attended by most Members of the Board and members of the Group management, and the auditor.

The Meeting resolved, amongst other things, to re-elect all of the Members of the Board, with the exception of Ulla Litzén, who had declined re-election. Pia Rudengren was elected as a new Member of the

Board. Anders Ullberg was re-elected as the Chairman of the Board. The Meeting further resolved:

- To pay a dividend of SEK 5.25 per share, totalling SEK 1,436 m (899), in accordance with the proposal by the Board of Directors.
- To appoint the following persons as members of the Nomination Committee: Jan Andersson (Swedbank Robur fonder), Lars Erik Forsgårdh, Ola Peter Gjessing (Norges Bank Investment Management), Anders Oscarsson (AMF) and Anders Ullberg (Chairman of the Board).
- To raise the Director's fee to the Chairman of the Board by SEK 175,000 to SEK 1,575,000, to raise the fees to Members who are not Boliden employees by SEK 25,000 to SEK 525,000, and to maintain the fees unchanged to members of the Committees at SEK 190,000 payable to the Chairman of the Audit Committee, SEK 90,000 payable to each of the two other members of the Audit Committee, and SEK 50,000 to each of the two members of the Remuneration Committee, all in accordance with the proposal by the Nomination Committee.
- To elect Deloitte AB as the company's auditors for the period up to and including the next Annual General Meeting, in accordance with the proposal by the Nomination Committee and that auditors' fees shall be payable in accordance with the approved invoices received.

The Annual General Meeting also resolved to approve the proposed principles for remuneration to the Group management whereby the remuneration shall comprise a fixed salary, any variable remuneration, other benefits and pensions. The variable remuneration shall be maximised at 60% of the fixed salary for the President and maximised at 40–50% of the fixed salary for other senior executives and shall be based on results in relation to targets set. The variable remuneration shall not entitle to pensionable income.



## BOLIDEN'S GOVERNANCE STRUCTURE



The resolutions passed by the 2017 Annual General Meeting are included in the Minutes of the Meeting published on Boliden's website, where the minutes of previous Annual General Meetings are also published.

### The Nomination Committee

The Nomination Committee represents Boliden's shareholders and is tasked with preparing and presenting proposals for resolutions that Boliden's shareholders vote on at the Annual General Meeting. The proposals relate to the number and election of Board Members, election of the Chairman of the Board, fees payable to members of the Board and its Committees, election of and fees payable to the company's auditors, and to the process and the criteria that shall govern the appointment of the members of the Nomination Committee ahead of the next Annual General Meeting.

The focus of the Nomination Committee's work is on ensuring that the company's Board of Directors comprises Members who, collectively, possess the knowledge and experience that corresponds to the standards that Boliden's shareholders require of the company's most senior governing body. The Chairman of the Board accordingly presents the Nomination Committee with the evaluation conducted of the work of the Board and the individual Members during the past

year as part of the process of drafting proposals for Board Members. The Company President also presents Boliden's operations and future orientation. The Nomination Committee is also afforded the opportunity to meet Members of the Board. The Nomination Committee, assisted by the Audit Committee, also drafts proposals for the election of auditors. Shareholders can submit proposals to the Nomination Committee in accordance with the instructions presented on Boliden's website.

The Annual General Meeting passes resolutions on the principles governing the appointment and duties of the Nomination Committee. The Nomination Committee shall, in accordance with the Instructions for the Nomination Committee, comprise a minimum of five and a maximum of seven members. Five members shall be elected at the Annual General Meeting, of whom three shall represent the biggest shareholders and one the smaller shareholders, and one of whom shall be the Chairman of the Board. The Nomination Committee may, in order better to reflect the shareholder structure in the event of changes in ownership, offer places on the Committee to other larger shareholders. The Nomination Committee appoints its own Chairman and works in the best interests of all shareholders. The members of the Nomination Committee receive no remuneration for their work.

### The work of the Nomination Committee in 2017

Jan Andersson (Swedbank Robur fonder), Lars Erik Forsgårdh, Ola Peter Gjessing (Norges Bank Investment Management), Anders Oscarsson (AMF) and Anders Ullberg (Chairman of the Board) were elected to the Nomination Committee at the 2017 Annual General Meeting. In November, the Chairman of the Board convened the members of the Committee, at which time the Nomination Committee, in accordance with its mandate and in order to better reflect the shareholder structure, resolved to appoint an additional member, Hans Ek (SEB Investment Management). Jan Andersson was appointed Chairman of the Nomination Committee. The current composition of the Nomination Committee is also shown on Boliden's website. The Nomination Committee has met twice prior to the 2018 Annual General Meeting and has also had telephone contacts with and held meetings with Members of the Board. These contacts afford the Nomination Committee a good opportunity to form an opinion of the way in which the Chairman of the Board and the individual Members of the Board view the work of the Board, of the executive management, and of the way in which they view Boliden's operations and the challenges faced by the company in the next few years.

In accordance with the provisions of the Code, the Nomination Committee endeavours to ensure an even gender distribution and a Board which – taking account of Boliden's operations, developmental phase, future orientation and overall conditions – provides a fit for purpose composition, with members possessing multifaceted and broad competencies, experiences and backgrounds.

The Nomination Committee's proposals for submission to the 2018 Annual General Meeting will be published in the impending notice convening the Annual General Meeting and on Boliden's website.

### The Board of Directors

The Board of Directors is appointed by the owners to bear ultimate responsibility for the company's organisation and the management of the company's affairs in the best interests of both Boliden and the shareholders. This shall be done in a sustainable way that entails carefully balanced risk-taking, in order to ensure that the company's long-term developmental trend is a positive one.

The Board of Directors shall, under the provisions of the Articles of Association, comprise a minimum of three and a maximum of ten Members, without Deputy Members, elected by the Annual General Meeting. The company's employees have a statutory entitlement to appoint three Members and three Deputy Members to the Board. The Board of Directors, which is elected for one year at a time, has comprised eight Members elected by the Annual General Meeting and three Members appointed by the trade union organisations. The Board Meetings are attended both by the ordinary Members and by the unions' three Deputy Members. The General Counsel Group Legal Affairs is the Board's Secretary. Boliden's Chief Financial Officer (CFO) also usually attends the Meetings as part of the Group management. Other members of the Group management and other executives also attend and present reports on individual issues as required.

The Board Members elected by the Annual General Meeting are all to be regarded as independent in relation to major shareholders and all, with the exception of the President, are to be regarded as independent in relation to the company and the Group management. The Board consequently complies with the requirements of the Code with regard to independent Members. The Members of

the Board are presented on pages 66–68 and on Boliden's website.

The Board sets the company's financial goals and strategy, appoints and evaluates the President and CEO, and ensures that efficient systems are put in place for following up on and monitoring operations, that the company complies with statutory and regulatory requirements, and that information is published in a correct and transparent manner. The Board adopts a Formal Work Plan every year at the statutory Board Meeting, held after the Annual General Meeting. The Formal Work Plan regulates the work and responsibilities of the Board in greater detail, together with the special duties with which the Chairman of the Board is tasked.

The Chairman of the Board presides over the Board's work and the Board Meetings and establishes an open and constructive dialogue. The Chairman's duties also include monitoring and evaluating the expertise and work of the Board Members and the contribution they make to the Board as a whole. Another important component of the Chairman's work is monitoring the operations through an ongoing dialogue with the President. The Chairman of the Board acts as a discussion party and source of support for the President and ensures implementation of and compliance with the Board's decisions, instructions and directives. Prior to every Board Meeting, the Chairman and the President review the issues to be discussed at the meeting. The supporting documents for the Board's discussion of the issues are sent to the Members one week before each Board Meeting. The division of labour between the Board of Directors and the President is clarified in the written "Instructions to the President" adopted by the Board at the Statutory Board Meeting.

### The Board of Directors' work in 2017

The Board of Directors held 7 meetings in 2017, including the Statutory Board Meeting. A number of the Board Meetings are regularly held at the company's operating units in order to give the Members an increased insight into the operations. In 2017, the Board therefore visited Aitik and Odda.

The Board receives ongoing information on the commercial and financial performance and updates on the fulfilment of the company's sustainability goals in the form of monthly reports and at Board Meetings. Every Board Meeting begins

with a review of the operations, the current safety status and of sustainability issues.

The Board also, at the beginning of the year and in addition to these and other customary operations-related issues, sets a number of themes that it particularly wishes to address during the year in order to create an increased understanding of Boliden's opportunities and challenges from a broader perspective. The acquisition of the Kevitsa nickel and copper mine has resulted in a continued focus on the nickel market. The Board has also discussed such issues during the year as prioritising exploration activities, battery technology, the energy market and India as a potential growth market. Efforts to improve and coordinate safety issues have been the subject of ongoing monitoring and follow up work by the Board. Efficient and appropriate environmental permit processes and reasonable operating conditions (License to Operate) are, in light of the nature of Boliden's business, important issues for the company and its Board, and are the subject of recurring discussions. A related area, namely CSR and business ethics concerns have also been addressed.

The Chairman ensures that the Board and its work are evaluated annually and that the results of the evaluation are conveyed to the Nomination Committee. The evaluation is carried out by the Board itself under the guidance of the Chairman or with the help of an independent consultant. The 2017 evaluation was a self-assessment during which the Members answered a number of questions in writing on a range of different subjects.

### The Committees

The overall responsibility of the Board of Directors cannot be delegated but the Board may, within itself, set up committees which prepare issues within their respective spheres. The Board has, accordingly and as in previous years, set up an Audit Committee and a Remuneration Committee in 2017. The Committees' members are appointed at the Board Meeting following the election held after the Annual General Meeting and their work is governed by the Committees' formal work plans and instructions.

### The Audit Committee

The Audit Committee prepares a number of issues for consideration by the Board and thereby supports the Board in its endeavours to fulfil its responsibilities

## THE BOARD OF DIRECTORS' WORK IN 2017

**Recurring business:** Sustainability and health & safety issues, operational review, investments, cost accounting, and theme items. The main matters on the agenda at Board Meetings in 2017 are shown below:

**January:** Extraordinary Board Meeting by reason of a decision to make an investment at Tara.

**February:** Review of the Year-End Report, the Annual Report, the Audit Report, mineral reserves and mineral resources and matters for submission to the Annual

General Meeting. In-depth examinations of the exploration strategy and battery technology.

**April (AGM and Statutory Meeting):**

Q1 Interim Report, License to operate and public affairs, structural transactions, review of purchasing issues and cost trends, investment in IT system, and a meeting between the Board of Directors and auditors in the absence of the management. Annual General Meeting and the Statutory Board Meeting.

**July:** Q2 Interim Report and review of the Audit Report, energy issues, strategic orientation for Business Area Mines.

**October:** Q3 Interim Report, strategic orientation for Business Area Smelters, the nickel market, India, risks relating to permit hearings and metal substitution, disputes status, follow-up on the New Boliden Way and Corporate Responsibility (CR).

**December:** Review of strategy, budget and business plan, managerial and Board Member evaluation and refinancing issues.

within the areas of auditing and internal control and with assuring the quality of Boliden's financial reporting. Boliden has an internal control function whose work involves mapping risk areas and following up on work in identified areas, amongst other things. The Committee also oversees the procurement of services from the company's auditors in addition to the actual auditing services and procures auditing services jointly with the Nomination Committee, as necessary. The Audit Committee meets before the publication of every financial report, and as necessary.

As of the 2017 AGM, the Audit Committee comprises Pia Rudengren, (Chairwoman), Tom Erixon and Anders Ullberg. The Committee members have specialist competence, experience of and interest in financial and accounting issues – see Directorships and previous positions, pages 66–67. The Committee's meetings are also attended by Boliden's CFO and the Director of Internal Control. The Committee met five times in 2017. Special attention was paid during the year to internal controls, IT security, and accounting principles. The Committee works on the basis of a set of "Instructions for the Audit Committee" adopted every year by the Board of Directors and reports back to the Board on the results of its work.

### The Remuneration Committee

The Remuneration Committee submits proposals for resolution by the Board regarding salary and other terms of employment for the President, and follows up on and evaluates programmes for variable remuneration for the management.

The Committee also approves proposals regarding salaries and other terms of employment for the Group management, as proposed by the President. The Remuneration Committee is, furthermore, tasked with submitting proposals regarding remuneration principles for the President and Group management – proposals which are then submitted by the Board to the Annual General Meeting for resolution. The application of the guidelines and relevant remuneration structures and levels within the company is also followed up by the Committee and the results of this evaluation are published on the company's website. See Note 3 for an account of the remuneration paid to the Group management.

The Remuneration Committee works on the basis of a set of "Instructions for the Remuneration Committee" adopted every year by the Board of Directors and reports back to the Board on the results of its work. The Remuneration Committee comprises Anders Ullberg (Committee Chairman), and Mikael G:son Löw. The Committee has held two meetings during the year and has also had telephone contacts on a number of occasions.

### The President and Group management

The President has ultimate responsibility for Boliden's strategic orientation and for ensuring the compliance with and implementation of the Board of Directors' decisions, and for ensuring that risk management, steering, systems, organisation and processes are all of a satisfactory standard. The President is supported in his

work by the Group's management team which, in addition to the President, comprises the SVPs for Boliden's two Business Areas, Mines and Smelters, the CFO, and the SVP Corporate Responsibility (CR). The Group management meets once a month to follow up on operations and to discuss Group-wide issues, and to draw up proposals for strategic plans, business plans, and budgets that the President submits to the Board of Directors for their consideration. The areas addressed by the Board have largely reflected the work of the Group management during the year. The Group management also holds two meetings every year on strategy planning. The Group management, together with the management of the respective Business Areas, also meet six times a year to review Business Area-specific issues including a review of budgets and operations. For large scale projects, relevant parts of the Group management form special steering groups, together with project managers and other stakeholders, and meet regularly. The Group management also meets with the company's employee representative Board Members and their deputies ahead of every Board Meeting, at which time the Board Meeting agenda and other topical issues are discussed. See page 68 for a presentation of the Group management team.

### Business management

Management by the Board goes through a chain of command from the President and the Group management to the operating units. Boliden has an organisation in which responsibilities and authority



are delegated within clear frameworks. These frameworks are defined by Boliden's steering documents, budget and strategic plan. The steering documents, which are available on Boliden's internal web site and which comprise the internal framework required for effective management, include the Financial Policy, the Code of Conduct, the Anti-Corruption Policy, the Competition Law Policy, the Communications Policy, the Environmental Policy, the Health & Safety Policy, the Insider Trading Policy, and documentation on sanctions control, delegation and decision-making.

### Sustainability governance in Boliden

Sustainability issues are an integral part of Boliden's operations and the work is conducted from the starting point of the most operationally critical issues. Sustainability issues are discussed at every management group and Board meeting, as is the case at the local management group meetings. One member of the Group management works primarily, furthermore, with CR issues. The day-to-day responsibility is decentralised to the respective units. Central sustainability, environmental, energy and HR functions follow up on the units' work and are responsible for creating a structure and orientation for the work.

The sustainability issues identified by Boliden as material are linked to Boliden's budget and strategy. Factors that form the basis for the prioritisation include Boliden's operations and their impact on people and the environment, the way in which work on these issues can support the operations, expectations of Boliden from internal and external stakeholders, risks and opportunities, external factors, and applicable regulations. The challenges that will be prioritised change over time and are, therefore, regularly reviewed – usually once every year. It is the responsibility of the various controlling parties within the Group to set local goals with regard to the overall issues. In 2013, Boliden set new goals in the sustainability sphere that will apply until 2018, inclusive – see pages 10–11 of the Annual Report.

Boliden's environmental work is value-based, which means that measures are approved not solely on the basis of official requirements, but on the basis of what can be done to improve the environment at the operational sites. This means that investments that yield a substantial environmental benefit for the amount invested are approved and implemented,

independently of external requirements or charges. Investments have, consequently, been approved with regard to, amongst other things, evaluating a change to electric trucks at Aitik, dewatering of Kokkola's tailings pond, and a new sulphuric acid plant at Rönnskär. Work continues on the underground storage facility at Rönnskär, where certain types of waste will be stored.

Viewed over a longer perspective, Boliden's long-term health and safety work has failed to yield the desired result, namely a downwards accident trend. The accident frequency is consistently at a level which is high in comparison to international industry figures, and decisions have consequently been made for further measures in addition to those already initiated. These further measures are, in part, of a technical nature and aim to raise the physical standard and quality of the workplaces, e.g. by separating pedestrians and vehicle traffic, improving signposting and reviewing parking regulations. The measures taken over recent years relating to managerial development that aims to create wider ranging employee commitment, and thereby improved safety culture, continue unabated, and also involve contractors and business partners. Furthermore, a number of investments focusing on the work environment have been approved during the year, including the separation of plastics at Bergsöe. The work environment activities are, in common with the environmental work, value-based, and investments are approved on the basis of risk analyses as well as of mandatory laws and regulations. Boliden also imposes stringent demands on its business partners with regard to respect for, and compliance with, applicable health and safety directives and regulations. Business partners are investigated, selected, and evaluated on the basis of these issues, amongst others.

Efficient and appropriate licensing processes and reasonable operating conditions are, in the light of the nature of Boliden's operations, important issues for the company. Boliden works actively with industry organisations to monitor and promote the interests of the mining industry.

As of 2017, the Sustainability Report is included in the Annual Report. As in previous years, a GRI Report, which is subject to an external review by auditors, is published separately. This review aims, amongst other things, to underline the importance of the sustainability work to Boliden and

to further reinforce the confidence of the market and other stakeholders in the work conducted by the company in this respect.

Matters of business ethics are constantly topical and an area with which the company actively works. During the year, Boliden prioritised a review of the business partner evaluation process and conducting an implementation project relating to the impending General Data Protection Regulation (GDPR). Boliden has also strengthened its work with sanctions compliance and implemented new tools for sanctions monitoring, which are included in the evaluation of business partners. Boliden has a whistle blower function to facilitate the reporting of suspected cases of impropriety. New steering documents in the anti-corruption sphere have been produced during the year. Implementation and rolling out of the updated material and regulations will begin during early 2018 using the web and physical meetings.

### Auditors

The external auditor conducts independent audits of Boliden's accounts in order to ensure that they provide a correct, fair and comprehensive picture of the company's position and results. The auditor also reviews the management by the Board of Directors and the President and presents his/her observations to the Board in the absence of the management. The auditor has been in contact with the Group management in 2017 in conjunction with audits or issues arising. The auditor is a regular attendee at the Audit Committee's meetings and has also met with the Board in the absence of the management on one occasion in 2017. The auditor also reports to the shareholders at the Annual General Meeting.

The accounting firm of Deloitte AB was elected at the 2017 Annual General Meeting to serve as the company's auditors until the conclusion of the 2018 Annual General Meeting. Authorised Public Accountant, Jan Berntsson, is the auditor in charge. He is a partner in and CEO of Deloitte Sweden and his other audit engagements include Kinnevik. Remuneration to the company's auditors is payable in accordance with the approved invoices. See Note 4 for information on remuneration disbursed in 2017.

## THE BOARD OF DIRECTORS



| Name  | Anders Ullberg<br>Chairman of the Board   |                                  | Marie Berglund<br>Member of the Board   | Tom Erixon<br>Member of the Board  | Lennart Evrell<br>Member of the Board  |
|---|---|----------------------------------|---|--|--|
| Position                                    | –   |                                  | Vice President, Raw Materials and Environment, NCC Industry   | President & CEO, Alfa Laval  | President & CEO of Boliden   |
| Education                                   | M.Sc. Economics   |                                  | M.Sc. Biology   | LL.B, MBA  | M.Sc. Engineering, Economics   |
| Elected                                     | 2005  |                                  | 2003  | 2013   | 2008   |
| Born  | 1946  |                                  | 1958  | 1960   | 1954   |
| Directorships                               | Chairman of the Boards of Eneqvist Consulting and Studsvik. Member of the Boards of Atlas Copco, Beijer Alma, Epiroc and Valedo Partners. Chairman of the Swedish Financial Reporting Board, and Member of the Board of the European Financial Reporting Advisory Group |                                  | Chairman of the Board of Eurocon Consulting. Member of the Boards of Baltic Sea 2020, the Water Delegation of the Gulf of Bothnia's Water District, and the Advisory Council of the County Administrative Board of Västernorrland |  | Chairman of the Board of the Employers' Association of the Swedish Mining Industry. Member of the Boards of Epiroc, SCA, SveMin, and the Confederation of Swedish Enterprise |
| Previous positions                          | CFO of Svenska Varv, CFO, Executive Vice President, and President and CEO of SSAB   |                                  | Group Ecologist in the former MoDo Group, Environmental Manager of Botniabanan AB, President of BioEndev (consultant)   | Managing partner Boston Consulting Group, a variety of senior positions within Sandvik, and President and CEO of Ovako | President & CEO of Sapa and Munters, and a variety of senior positions within ASEA, Atlas Copco and Sphinx Gustavsberg   |
| Number of shares <sup>1)</sup>              | 45,000  |                                  | 1,250   | 6,900  | 43,435   |
| Meetings attended                           | 7 of 7  |                                  | 6 of 7  | 7 of 7   | 7 of 7   |
| Committee work (present)                    | Audit Committee<br>5 of 5   | Remuneration Committee<br>2 of 2 | –   | Audit Committee<br>5 of 5  | –  |
| Director's fees, SEK                        | 1,575,000   |                                  | 525,000   | 525,000  | –  |
| Committee fees, SEK                         | 90,000  | 50,000                           | –   | 90,000   | –  |
| Combined fees                               | 1,715,000   |                                  | 525,000   | 615,000  | –  |
| Independent from the company and management | Yes   |                                  | Yes   | Yes  | No   |
| Independent from major shareholders         | Yes   |                                  | Yes   | Yes  | Yes  |



| Name                           | Peter Baltzari<br>Employee Representative  | Marie Holmberg<br>Employee Representative   | Kenneth Ståhl<br>Employee Representative  |
|--------------------------------|--|---|---|
| Position                       | Member of the Board since 2017, Representative in Boliden's Group Council, Deputy Member of the Board since 2014 | Member of the Board since 2008, Deputy Member of the Board 2005–2008, Representative of the Swedish Association of Graduate Engineers | Member of the Board since 2014, Process operator, Representative of IF Metall (the Swedish Metalworkers' Union), Chairman of the IF Metall Bergsöe branch |
| Elected                        | 2014   | 2008  | 2014  |
| Born                           | 1953   | 1963  | 1973  |
| Number of shares <sup>1)</sup> | 1,424  | 50  | 0   |
| Meetings attended              | 6 of 7   | 7 of 7  | 7 of 7  |

## THE BOARD OF DIRECTORS



| Name  | Michael G:son Löw<br>Member of the Board   | Elisabeth Nilsson<br>Member of the Board  | Pia Rudengren<br>Member of the Board  | Pekka Vauramo<br>Member of the Board   |
|---|--|---|---|--|
| Position                                    | –  | The County Governor of the County of Östergötland   | –   | President & CEO, Finnair   |
| Education                                   | M.Sc. Economics  | M.Sc. Engineering   | M.Sc. Economics   | M.Sc. Engineering  |
| Elected                                     | 2010   | 2015  | 2017  | 2016   |
| Born  | 1951   | 1953  | 1965  | 1957   |
| Directorships                               | Chairman of the Boards of Recon Oil. Member of the Boards of Concordia Maritime, Preem, Stena Bulk, and AP Sten Sweden. Deputy Chairman of the Boards of the Swedish Chamber of Commerce for Russia & CIS, and the Swedish Association for Energy Economics. Member of Royal Swedish Academy of Engineering Sciences | Chairman of the Board of Gota Kanalbolaget. Member of the Board of EKN, member of Skandia's council                                       | Chairman of the Board of Social Initiative. Member of the Boards of Duni, WeMind, Academedia, KappAhl and Tikkurila | Chairman of the Board of Palta (Finland's Service Sector Employers). Member of the Boards of Ilmarinen, Glaston Plc and I.S. Mäkinen |
| Previous positions                          | A variety of senior positions within Conoco Inc. in Stockholm, Houston, Copenhagen, Bangkok, Prague, and London. President & CEO of Preem  | CEO of Jernkontoret (the Swedish Steel Producers' Association) and a variety of senior positions within the SSAB Group. CEO of SSAB Merox | CFO of Investor and Vice President of W Capital Management  | A variety of senior positions within Sandvik Mining and Cargotec   |
| Number of shares <sup>1)</sup>              | 100  | 200   | 0   | 1,000  |
| Meetings attended                           | 7 of 7   | 7 of 7  | 4 of 4  | 5 of 7   |
| Committee work (present)                    | Remuneration Committee<br>2 of 2   | –   | Audit Committee<br>(3 of 3)   | –  |
| Director's fees, SEK                        | 525,000  | 525,000   | 525,000   | 525,000  |
| Committee fees, SEK                         | 50,000   | –   | 190,000   | –  |
| Combined fees                               | 575,000  | 525,000   | 715,000   | 525,000  |
| Independent from the company and management | Yes  | Yes   | Yes   | Yes  |
| Independent from major shareholders         | Yes  | Yes   | Yes   | Yes  |



| Name                           | Lars Engström<br>Employee Representative   | Ola Holmström<br>Employee Representative  | Jussi Lehtinen<br>Employee Representative   |
|--------------------------------|--|---|---|
| Position                       | Deputy Member of the Board since 2015, Representative of the Unionen trade union, Deputy Chairman of the Unionen Boliden office branch. Member of Boliden's Council for Negotiation and Cooperation as well as Boliden's Group Council | Deputy Member of the Board since 2017, Representative of IF Metall (the Swedish Metalworkers' Union), Chairman of the IF Metall Kristineberg branch, FSG (Trade union cooperation), Boliden's Group Council | Deputy Member of the Board since 2016, Representative of the Trade Union Pro, Production engineer at Harjavalta |
| Elected                        | 2015   | 2017  | 2016  |
| Born                           | 1966   | 1965  | 1978  |
| Number of shares <sup>1)</sup> | 174  | 170   | 0   |
| Meetings attended              | 7 av 7   | 4 av 4  | 7 av 7  |

<sup>1)</sup> Own holdings and those of related legal or natural persons, on 31 December 2017.



## GROUP MANAGEMENT



| Name                           | Lennart Evrell   | Kerstin Konradsson   | Mikael Staffas  |
|--------------------------------|--|--|---|
| Position                       | President & CEO of Boliden   | President Boliden Smelters   | President Boliden Mines   |
| Education                      | M.Sc. Engineering, Economics   | M.Sc. Engineering  | M.Sc. Engineering, MBA  |
| Employed                       | 2007   | 2012   | 2011  |
| Born                           | 1954   | 1967   | 1965  |
| Directorships                  | Chairman of the Board of the Employers' Association of the Swedish Mining Industry. Member of the Boards of Epiroc, SCA, SveMin, and the Confederation of Swedish Enterprise | Member of the Board of Höganäs   | Member of the Boards of SJ, the Employers' Association of the Swedish Mining Industry, and SveMin |
| Previous positions             | President & CEO of Sapa and Munters, and a variety of senior positions within ASEA, Atlas Copco, and Sphinx Gustavsberg  | Business Area President and CEO within the Åkers Group and a variety of senior positions within SSAB | CFO of Södra Skogsägarna, Partner at McKinsey & Co  |
| Number of shares <sup>1)</sup> | 43,435   | 2,000  | 8,700   |



| Name                           | Håkan Gabrielsson  | Thomas Söderqvist  |
|--------------------------------|--|--|
| Position                       | CFO  | Senior Vice President – Corporate Responsibility                                   |
| Education                      | M.Sc. Business Administration and Economics  | Mining Engineer  |
| Employed                       | 2009–2011, 2016  | 2012   |
| Born                           | 1967   | 1957   |
| Directorships                  | –  | –  |
| Previous positions             | CFO of Fagerhult, Director Group Controlling at Boliden, and a variety of positions within Sapa, Ericsson and Electrolux | Area Manager for the Boliden Area and a variety of senior positions within Sandvik |
| Number of shares <sup>1)</sup> | 600  | 475  |

<sup>1)</sup> Own holdings and those of related legal or natural persons, on 31 December 2017.

### Internal control report by the Board of Directors

The purpose of internal control over financial reporting is to provide reasonable assurance with regard to the reliability of the external financial reporting and to ensure that the reports are produced in accordance with generally accepted accounting principles, applicable legislation and statutes, and with other requirements imposed on listed companies.

The Board of Directors has overall responsibility for ensuring that an efficient internal control system exists within the Boliden Group. The President is responsible for the existence of a process and organisation that ensure internal control and the quality of the internal and external financial reporting.

### Internal control function

Boliden has an internal control function responsible for implementing processes and frameworks that secure internal control and ensure the quality of the financial reporting. The internal control function reports to the CFO and presents reports on issues relating to internal control at the Audit Committee's meetings.

### Control environment

The control environment within Boliden is characterised by the fact that the Group has relatively few but large operating units that have carried out their operations for many years, using well-established processes and control activities. A structure of steering documents in the form of binding policies and guidelines for the organisation's delegated responsibilities has been established to ensure a collective attitude and methodology within the Group.

The starting point is the New Boliden Way, which includes the Code of Conduct, decision-making and authorisation instructions, and a financial manual covering financial policy, accounting and reporting instructions. Local management systems with more detailed instructions and descriptions of important processes have also been set up.

Boliden has a uniform and standardised internal control framework known as the Boliden Internal Control System (BICS).

### Risk analysis

The operating units conduct ongoing risk analyses with regard to financial reporting. The risks inherent in the various accounting and reporting processes are identified, analysed and documented in BICS.

### Control activities

Various types of control activities are carried out within the Group and within every different aspect of the accounting and reporting process on an ongoing basis. The control activities are carried out in order to manage known risks and to detect and rectify any errors and discrepancies in the financial reporting.

Documentation of significant control activities within the accounting and reporting process continued in BICS in 2017. For every risk identified, the controls that manage the risk are documented.

### Information and communication

Information on policies, guidelines and manuals is available on Boliden's intranet. Information on updates and changes to reporting and accounting principles is issued via email and at the regular treasury and controller meetings. External communication is conducted in accordance with the Group's Communications Policy. All information must be communicated in a discerning, open and transparent manner.

Work on follow-ups of, improvements to and development of systems, processes and controls within the Group is ongoing. Annual testing of documented controls within the framework of BICS has been conducted since 2009, both by internal resources and external auditors. Areas where scope for improvement is identified in conjunction with audits are documented, analysed and actioned.

### Follow-ups

Work on follow-ups of, improvements to and development of systems, processes and controls within the Group is ongoing. Annual testing of documented controls within the framework of BICS has been conducted since 2009, both by internal resources and external auditors. Areas where scope for improvement is identified in conjunction with audits are documented, analysed and actioned.

| Control activity                            | Responsible                            | Follow-up   |
|---|--|---|
| Compliance with Boliden's accounting manual | Group accounting/Controller department | Group management  |
| Control of consolidated results             | Group accounting/Controller department | Group management  |
| Analysis and follow-up work                 | Business Areas/Controller department   | Group management  |
| Budget and forecasts                        | Business Areas/Controller department   | Group management  |
| Correct financial reporting controls        | Operating units/Business Areas         | Group accounting/Internal control/Controller department |
| Tax control                                 | Operating units                        | Group Tax Director                                      |

# Financial reports

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## Consolidated Income Statement

| SEK m  | Note          | 2017          | 2016         |
|--|---------------|---------------|--------------|
| Revenues   | 2             | 49,531        | 40,316       |
| Cost of goods sold   | 5             | -38,988       | -33,204      |
| <b>Gross profit</b>  |               | <b>10,543</b> | <b>7,111</b> |
| Selling expenses   | 5             | -417          | -390         |
| Administrative expenses                                    | 4, 5          | -452          | -607         |
| Research and development costs                             | 5             | -659          | -530         |
| Other operating income                                     | 6             | 206           | 235          |
| Other operating expenses                                   |               | -212          | -140         |
| Results from participations in associated companies        | 16            | 6             | 3            |
| <b>Operating profit</b>                                    | 2-6, 9, 11-14 | <b>9,015</b>  | <b>5,682</b> |
| Financial income   | 7             | 4             | 4            |
| Financial expenses   | 8             | -282          | -311         |
| <b>Profit after financial items</b>                        |               | <b>8,737</b>  | <b>5,375</b> |
| Tax  | 17            | -1,881        | -1,135       |
| <b>Net profit for the year</b>                             |               | <b>6,856</b>  | <b>4,239</b> |
| Net profit for the year attributable to:                   |               |               |              |
| Owners of the Parent Company                               |               | 6,854         | 4,237        |
| Non-controlling interests                                  |               | 2             | 3            |
| Earnings per share, SEK                                    | 22            | 25.06         | 15.49        |
| There are no potential shares and hence no dilution effect |               |               |              |
| Average number of shares, basic and diluted                |               | 273,511,169   | 273,511,169  |

## Consolidated Statement of Comprehensive Income

| SEK m  | Note | 2017         | 2016         |
|--|------|--------------|--------------|
| <b>Net profit for the year</b>   |      | <b>6,856</b> | <b>4,239</b> |
| <b>Other comprehensive income</b>  |      |              |              |
| <i>Items that will be reclassified to the profit/loss</i>                    |      |              |              |
| Cash flow hedging  |      |              |              |
| Change in market value of derivative instruments                             |      | -26          | -140         |
| Fiscal effect on derivative instruments                                      |      | 5            | 31           |
| Transfers to the Income Statement  |      | 31           | 49           |
| Tax on transfers to the Income Statement                                     |      | -7           | -11          |
|  |      | <b>3</b>     | <b>-71</b>   |
| Year's translation difference when converting overseas operations            |      | 320          | 658          |
| Result of hedging of net investments in overseas operations                  |      | -94          | -186         |
| Tax on the net profit for the year from hedging instruments                  |      | 21           | 41           |
|  |      | <b>247</b>   | <b>513</b>   |
| <b>Total items that will be reclassified to the profit/loss</b>              |      | <b>250</b>   | <b>442</b>   |
| <i>Items that will not be reclassified to the profit/loss</i>                |      |              |              |
| Revaluation of defined benefit pension plans                                 | 23   | -12          | -274         |
| Tax attributable to items not reclassified to the profit/loss for the period |      | 2            | 68           |
| <b>Total items that will not be reclassified to the profit/loss</b>          |      | <b>-9</b>    | <b>-206</b>  |
| <b>Total other comprehensive income</b>                                      |      | <b>241</b>   | <b>236</b>   |
| <b>Comprehensive income for the year</b>                                     |      | <b>7,096</b> | <b>4,476</b> |
| Comprehensive income for the year attributable to:                           |      |              |              |
| Owners of the Parent Company   |      | 7,094        | 4,473        |
| Non-controlling interests  |      | 2            | 3            |

## Consolidated Balance Sheets

| SEK m  | Note       | 31-12-2017    | 31-12-2016    |
|--|------------|---------------|---------------|
| <b>ASSETS</b>  |            |               |               |
| <b>Non-current assets</b>                                      |            |               |               |
| <i>Intangible assets</i>                                       | 12         | 3,482         | 3,508         |
| <i>Property, plant &amp; equipment</i>                         | 13, 14     |               |               |
| Buildings and land   |            | 5,410         | 5,505         |
| Deferred mining costs  |            | 7,907         | 7,913         |
| Machinery and other technical facilities                       |            | 18,725        | 19,052        |
| Equipment, tools, fixtures and fittings                        |            | 301           | 260           |
| Work in progress   |            | 3,970         | 2,120         |
|  |            | <b>36,313</b> | <b>34,850</b> |
| <i>Other non-current assets</i>                                |            |               |               |
| Participations in associated companies                         | 16         | 29            | 25            |
| Other shares and participations                                | 29         | 30            | 31            |
| Deferred tax assets  | 17         | 58            | 152           |
| Long-term receivables  |            | 133           | 296           |
|  |            | <b>251</b>    | <b>504</b>    |
| <b>Total non-current assets</b>                                |            | <b>40,046</b> | <b>38,861</b> |
| <b>Current assets</b>  |            |               |               |
| Inventories  | 18         | 9,500         | 10,077        |
| Trade and other receivables                                    | 19, 29     | 2,324         | 2,017         |
| Tax receivables  |            | 71            | 22            |
| Interest-bearing receivables                                   | 29         | 2             | 2             |
| Derivative instruments   | 27, 29     | 141           | 298           |
| Other current receivables                                      | 20         | 1,288         | 1,097         |
| Cash and cash equivalents                                      | 10, 29     | 2,510         | 1,503         |
| <b>Total current assets</b>                                    |            | <b>15,836</b> | <b>15,016</b> |
| <b>TOTAL ASSETS</b>  |            | <b>55,882</b> | <b>53,877</b> |
| <b>EQUITY AND LIABILITIES</b>                                  |            |               |               |
| <b>Equity</b>  |            |               |               |
| Share capital  | 22         | 579           | 579           |
| Other capital provided   |            | 5,940         | 5,940         |
| Translation reserve  |            | 342           | 95            |
| Hedging reserve  |            | 1             | -2            |
| Defined benefit pension plans                                  |            | -817          | -808          |
| Retained earnings  |            | 28,999        | 23,582        |
| <b>Equity attributable to the Owners of the Parent Company</b> |            | <b>35,044</b> | <b>29,386</b> |
| <b>Non-controlling interests</b>                               |            | <b>9</b>      | <b>8</b>      |
| <b>Total equity</b>  |            | <b>35,053</b> | <b>29,394</b> |
| <b>Long-term liabilities</b>                                   |            |               |               |
| Provisions for pensions  | 23         | 943           | 925           |
| Other provisions   | 24         | 2,911         | 2,655         |
| Deferred tax liabilities                                       | 17         | 3,089         | 3,062         |
| Liabilities to credit institutions                             | 26, 29     | 4,004         | 8,187         |
| Other interest-bearing liabilities                             | 26, 29     | 2             | 7             |
| <b>Total long-term liabilities</b>                             |            | <b>10,949</b> | <b>14,837</b> |
| <b>Current liabilities</b>                                     |            |               |               |
| Liabilities to credit institutions                             | 26, 29     | 1,331         | 1,903         |
| Other interest-bearing liabilities                             | 26, 29     | 5             | 4             |
| Trade and other payables                                       | 26, 29     | 4,426         | 4,239         |
| Other provisions   | 24         | 226           | 236           |
| Current tax liabilities  |            | 1,166         | 835           |
| Derivative instruments   | 26, 27, 29 | 92            | 46            |
| Other current liabilities                                      | 28         | 2,633         | 2,382         |
| <b>Total current liabilities</b>                               |            | <b>9,880</b>  | <b>9,646</b>  |
| <b>TOTAL EQUITY AND LIABILITIES</b>                            |            | <b>55,882</b> | <b>53,877</b> |

## Consolidated Statements of Changes in Equity

| SEK m                                    | Note      | Equity attributable to the Owners of the Parent Company |                        |                     |                 |                              |                   |                                | Non-controlling interests | Total equity  |
|--|-----------|---|------------------------|---------------------|-----------------|------------------------------|-------------------|--------------------------------|---------------------------|---------------|
|  |           | Share capital   | Other capital provided | Translation reserve | Hedging reserve | Defined benefit pension plan | Retained earnings | Total - Boliden's shareholders |                           |               |
| <b>Opening equity 01-01-2016</b>         |           | <b>579</b>  | <b>5,940</b>           | <b>-418</b>         | <b>68</b>       | <b>-602</b>                  | <b>20,234</b>     | <b>25,801</b>                  | <b>6</b>                  | <b>25,807</b> |
| Net profit for the year                  |           |   |                        |                     |                 |                              | 4,237             | 4,237                          | 3                         | 4,239         |
| Other comprehensive income               |           | -   | -                      | 513                 | -71             | -206                         | -                 | 236                            | 0                         | 236           |
| <b>Comprehensive income for the year</b> |           | <b>-</b>  | <b>-</b>               | <b>513</b>          | <b>-71</b>      | <b>-206</b>                  | <b>4,237</b>      | <b>4,473</b>                   | <b>3</b>                  | <b>4,476</b>  |
| Dividend to Boliden AB's shareholders    |           | -   | -                      | -                   | -               | -                            | -889              | -889                           | -                         | -889          |
| Dividend to non-controlling interests    |           | -   | -                      | -                   | -               | -                            | -                 | -                              | 0                         | 0             |
| <b>Closing equity, 31-12-2016</b>        |           | <b>579</b>  | <b>5,940</b>           | <b>95</b>           | <b>-2</b>       | <b>-808</b>                  | <b>23,582</b>     | <b>29,386</b>                  | <b>8</b>                  | <b>29,394</b> |
| <b>Opening equity, 01-01-2017</b>        |           | <b>579</b>  | <b>5,940</b>           | <b>95</b>           | <b>-2</b>       | <b>-808</b>                  | <b>23,582</b>     | <b>29,386</b>                  | <b>8</b>                  | <b>29,394</b> |
| Net profit for the year                  |           |   |                        |                     |                 |                              | 6,854             | 6,854                          | 2                         | 6,856         |
| Other comprehensive income               |           | -   | -                      | 247                 | 3               | -9                           | -                 | 241                            | 0                         | 241           |
| <b>Comprehensive income for the year</b> |           | <b>-</b>  | <b>-</b>               | <b>247</b>          | <b>3</b>        | <b>-9</b>                    | <b>6,854</b>      | <b>7,094</b>                   | <b>2</b>                  | <b>7,096</b>  |
| Dividend to Boliden AB's shareholders    |           | -   | -                      | -                   | -               | -                            | -1,436            | -1,436                         | -                         | -1,436        |
| Dividend to non-controlling interests    |           | -   | -                      | -                   | -               | -                            | -                 | -                              | 0                         | 0             |
| <b>Closing equity, 31-12-2017</b>        | <b>22</b> | <b>579</b>  | <b>5,940</b>           | <b>342</b>          | <b>1</b>        | <b>-817</b>                  | <b>28,999</b>     | <b>35,044</b>                  | <b>9</b>                  | <b>35,053</b> |

### Other capital provided

Refers to equity contributed by the owners. When shares are issued at a premium, an amount corresponding to the amount received in excess of the nominal value of the shares is reported as Other capital provided.

### Translation reserve

The Balance Sheets for overseas companies are converted at the exchange rates applicable at the end of the reporting period. Income Statements are converted at the average rates for the reporting period. Any exchange rate differences arising are reported under Other comprehensive income. Boliden currency hedges net investments in overseas subsidiaries to some extent by adopting the opposite position in the form of loans in the relevant foreign currency. The exchange rate difference on loans raised is, after the fiscal effect, reported under Other comprehensive income.

### Hedging reserve

Boliden applies hedge accounting for financial derivatives acquired with a view to hedge part of the forecast currency, metal and interest flows. Changes in the market value of hedging instruments are reported under Other comprehensive income until such time as the underlying flows are reported in the Income Statement.

### Defined benefit pension plans

Revaluations of pension undertakings have been reported under Other comprehensive income.

### Retained earnings

Refers to profit earned.

| Net debt, SEK m                    | 31-12-2017   | 31-12-2016   |
|------------------------------------|--------------|--------------|
| Liabilities to credit institutions | 5,335        | 10,090       |
| Other interest-bearing liabilities | 8            | 11           |
| Pension liabilities                | 943          | 925          |
| Interest-bearing assets            | -24          | -184         |
| Short-term investments             | 0            | 0            |
| Cash and cash equivalents          | -2,510       | -1,503       |
|                                    | <b>3,752</b> | <b>9,339</b> |

| Capital employed, SEK m                     | 31-12-2017    | 31-12-2016    |
|---|---------------|---------------|
| Intangible assets                           | 3,482         | 3,508         |
| Tangible assets                             | 36,313        | 34,850        |
| Participations in associated companies      | 29            | 25            |
| Other shares and participations             | 30            | 31            |
| Inventories                                 | 9,500         | 10,077        |
| Trade and other receivables                 | 2,324         | 2,017         |
| Other receivables                           | 1,541         | 1,509         |
| Provisions, other than for pensions and tax | -3,137        | -2,891        |
| Trade and other payables                    | -4,426        | -4,239        |
| Other non-interest bearing liabilities      | -2,726        | -2,429        |
|   | <b>42,931</b> | <b>42,457</b> |

## Consolidated Statements of Cash Flow

| SEK m  | Note      | 2017          | 2016          |
|--|-----------|---------------|---------------|
| <b>Operating activities</b>  |           |               |               |
| Profit after financial items   |           | 8,737         | 5,375         |
| Adjustment for items not included in the cash flow                           |           |               |               |
| Depreciation, amortisation, and write-down of assets                         | 12, 13    | 4,601         | 4,199         |
| Provisions   |           | 5             | -434          |
| Revaluation of process inventory   |           | -102          | -588          |
| Translation differences and Other  |           | 52            | 74            |
| Tax paid   |           | -1,457        | -709          |
| <b>Cash flow from operating activities before changes in working capital</b> | <b>10</b> | <b>11,837</b> | <b>7,918</b>  |
| <b>Cash flow from changes in working capital</b>                             |           |               |               |
| Increase (-)/Decrease (+) in inventories                                     |           | 709           | -1,373        |
| Increase (-)/Decrease (+) in operating receivables                           |           | -319          | -962          |
| Increase (+)/Decrease (-) in operating liabilities                           |           | 530           | 1,407         |
| Other  |           | -20           | 5             |
| <b>Cash flow from changes in working capital</b>                             |           | <b>900</b>    | <b>-923</b>   |
| <b>Cash flow from operating activities</b>                                   |           | <b>12,737</b> | <b>6,995</b>  |
| <b>Investment activities</b>   |           |               |               |
| Acquisition of operations  | 11        | -             | -5,925        |
| Disposal of operations   |           | -             | 121           |
| Acquisition of intangible assets   | 12        | -20           | -14           |
| Acquisition of property, plant and equipment                                 | 13        | -5,575        | -3,975        |
| Sale of property, plant and equipment  |           | 6             | 6             |
| Disposal/acquisition of financial assets                                     |           | 160           | -9            |
| <b>Cash flow from investment activities</b>                                  |           | <b>-5,428</b> | <b>-9,795</b> |
| <b>Free cash flow</b>  |           | <b>7,309</b>  | <b>-2,801</b> |
| <b>Financing activities</b>  |           |               |               |
| Dividend   |           | -1,436        | -889          |
| Loans raised   |           | 1,143         | 7,559         |
| Amortisation of loans  |           | -6,011        | -3,295        |
| <b>Cash flow from financing activities</b>                                   | <b>10</b> | <b>-6,304</b> | <b>3,376</b>  |
| <b>Cash flow for the year</b>  |           | <b>1,005</b>  | <b>575</b>    |
| <b>Opening cash and cash equivalents</b>                                     |           | <b>1,503</b>  | <b>923</b>    |
| <b>Exchange rate difference on cash and cash equivalents</b>                 |           | <b>1</b>      | <b>5</b>      |
| <b>Closing cash and cash equivalents</b>                                     | <b>10</b> | <b>2,510</b>  | <b>1,503</b>  |



## Income Statements, the Parent Company

| SEK m                               | Note | 2017         | 2016     |
|-------------------------------------|------|--------------|----------|
| Dividends from subsidiaries         | 15   | 3,000        | –        |
| <b>Profit after financial items</b> |      | <b>3,000</b> | <b>–</b> |
| Tax                                 |      | –            | –        |
| <b>Net profit for the year</b>      |      | <b>3,000</b> | <b>–</b> |

The operations of Boliden AB are limited in scale and are conducted, fiscally speaking, on commission from by Boliden Mineral AB, which means that the profit is reported as part of Boliden Mineral AB. Boliden AB has no amounts to report under Other comprehensive income.

## Balance Sheets, the Parent Company

| SEK m   | Note | 31-12-2017    | 31-12-2016    |
|---|------|---------------|---------------|
| <b>ASSETS</b>                                 |      |               |               |
| <b>Non-current assets</b>                     |      |               |               |
| <i>Financial assets</i>                       |      |               |               |
| Participations in Group companies             | 15   | 3,911         | 3,911         |
| Participations in other companies             |      | 5             | 5             |
| Long-term receivables from Group companies    |      | 8,897         | 7,334         |
| <b>Total non-current assets</b>               |      | <b>12,813</b> | <b>11,250</b> |
| <b>Current assets</b>                         |      |               |               |
| Current receivables from Group companies      |      | 519           | 1,687         |
| <b>Total current assets</b>                   |      | <b>519</b>    | <b>1,687</b>  |
| <b>TOTAL ASSETS</b>                           |      | <b>13,333</b> | <b>12,938</b> |
| <b>EQUITY AND LIABILITIES</b>                 |      |               |               |
| <b>Equity</b>                                 |      |               |               |
| <i>Restricted equity</i>                      |      |               |               |
| Share capital                                 | 22   | 579           | 579           |
| Statutory reserve                             |      | 5,252         | 5,252         |
|   |      | <b>5,831</b>  | <b>5,831</b>  |
| <i>Non-restricted equity</i>                  |      |               |               |
| Retained earnings                             |      | 3,484         | 4,920         |
| Net profit for the year                       |      | 3,000         | –             |
|   |      | <b>6,484</b>  | <b>4,920</b>  |
| <b>Total equity</b>                           |      | <b>12,314</b> | <b>10,751</b> |
| <b>Liabilities</b>                            |      |               |               |
| Long-term liabilities to credit institutions  | 26   | 500           | 500           |
| Short-term liabilities to credit institutions | 26   | 519           | 1,687         |
| <b>Total liabilities</b>                      |      | <b>1,019</b>  | <b>2,187</b>  |
| <b>TOTAL EQUITY AND LIABILITIES</b>           |      | <b>13,333</b> | <b>12,938</b> |

## Changes in equity, the Parent Company

| SEK m                             | Share capital | Statutory reserve | Non-restricted equity | Total equity  |
|-----------------------------------|---------------|-------------------|-----------------------|---------------|
| <b>Opening equity, 01-01-2016</b> | <b>579</b>    | <b>5,252</b>      | <b>5,809</b>          | <b>11,640</b> |
| Dividend                          | –             | –                 | –889                  | –889          |
| Net profit for the year           | –             | –                 | –                     | –             |
| <b>Closing equity, 31-12-2016</b> | <b>579</b>    | <b>5,252</b>      | <b>4,920</b>          | <b>10,751</b> |
| <b>Opening equity, 01-01-2017</b> | <b>579</b>    | <b>5,252</b>      | <b>4,920</b>          | <b>10,751</b> |
| Dividend                          |               |                   | –1,436                | –1,436        |
| Net profit for the year           |               |                   | 3,000                 | 3,000         |
| <b>Closing equity, 31-12-2017</b> | <b>579</b>    | <b>5,252</b>      | <b>6,484</b>          | <b>12,314</b> |

The statutory reserve includes amounts which, prior to 1 January 2006, were transferred to the share premium reserve. The retained earnings comprises, together with the net profit for the year, the total non-restricted equity. The non-restricted equity in the Parent Company is available for distribution to the shareholders.

## Statements of Cash Flow, the Parent Company

| SEK m                                      | 2017          | 2016     |
|--|---------------|----------|
| <b>Operating activities</b>                |               |          |
| Profit after financial items               | 3,000         | –        |
| <b>Cash flow from operating activities</b> | <b>3,000</b>  | <b>–</b> |
| <b>Financing activities</b>                |               |          |
| Loans raised                               | 1,143         | 1,514    |
| Amortisation of loans                      | –2,312        | –1,978   |
| Dividend                                   | –1,436        | –889     |
| Loans raised from Group companies          | –395          | 1,353    |
| <b>Cash flow from financing activities</b> | <b>–3,000</b> | <b>–</b> |
| <b>Cash flow for the year</b>              | <b>–</b>      | <b>–</b> |
| <b>Opening cash and cash equivalents</b>   | <b>–</b>      | <b>–</b> |
| <b>Closing cash and cash equivalents</b>   | <b>–</b>      | <b>–</b> |

## Notes

All amounts are in SEK million unless otherwise stated. All notes refer to the Group unless otherwise stated.

### Note 01 Significant accounting and valuation principles

#### General accounting principles

Boliden AB (publ.) Swedish corporate ID no. 556051-4142, is a limited liability company registered in Sweden. The Company's registered office is in Stockholm at the address: Klarabergsviadukten 90, SE-101 20 Stockholm. The Boliden share is listed on NASDAQ Stockholm's Large Cap list.

The Company is the Boliden Group's Parent Company, whose principal operations involve the mining and production of metals and operations compatible therewith.

The Consolidated Statements have been compiled in accordance with the EU-approved International Financial Reporting Standards (IFRS) and interpretations of the IFRS Interpretations Committee (IFRS IC). In addition, the Group applies the Swedish Financial Reporting Board's recommendation RFR 1 "Supplementary accounting regulations for corporate conglomerates" specifying the supplements to IFRS required pursuant to the stipulations of the Swedish Annual Accounts Act.

The Parent Company's functional currency is the Swedish krona (SEK) and this is also the reporting currency for both the Group and the Parent Company.

Items have been valued at their historical cost in the consolidated accounts, with the exception of certain financial assets and liabilities (derivative instruments), which have been valued at their fair value, and inventories in those cases where they are hedged at fair value.

The Parent Company's accounting principles follow those of the Group with the exception of the mandatory regulations stipulated in the Swedish Financial Reporting Board's recommendation, RFR 2 "Accounting for legal entities". The Parent Company's accounting principles are presented under the heading, "The Parent Company's accounting principles".

The most important accounting principles that have been applied are described below. These principles have been applied consistently for all years presented, unless otherwise specified.

The Annual Report was approved for publication by the Board of Directors on 14 February 2018. The Balance Sheets and Income Statements are subject to approval by the Annual General Meeting on 27 April 2018.

#### New or amended standards and interpretations from IASB and IFRS IC pronouncements that came into force in the 2017 calendar year

New or amended standards and interpretations from IASB and IFRS IC have had no effect on the Group's financial position or profits. Amendments to IAS 7 Statement of Cash Flows has resulted in additional disclosures by the Group that afford the user the opportunity to understand both cash flow- and non-cash flow-related changes in liabilities attributing to financing activities. The disclosures are detailed in Note 10 Supplementary Information to the Statements of Cash Flow.

#### New standards and interpretations that come into force in the 2018 calendar year or thereafter

The accounting principles that will be applied from 1 January 2018 are presented below.

IFRS 9 Financial instruments replaces IAS 39 Financial Instruments: Recognitions and Measurement. IFRS 9 includes a model for the classification and valuation of financial instruments, a forward-looking write down model for financial assets, and a revised approach to hedge accounting.

Classification and valuation under IFRS 9 is based on the business model applied by a company for the management of financial assets and the properties of the contractual cash flows from the financial assets. Other than certain changes to naming, the amendment has no effect on the classification of Boliden's financial instruments.

A loss reserve shall be reported for all financial assets valued at amortised cost or fair value via Other comprehensive income. In Boliden's case, this is applicable to Trade and other receivables. This loss reserve will not be significant for the Group.

No opening balance is presented in that there is no effect on the financial reports.

IFRS 15, Revenue from Contracts with Customers replaces existing standards and interpretations regarding revenues. The standard introduces a new revenue recognition model for contracts with customers and shall be applied to all contracts with customers with the exception of insurance contracts, financial instruments and leasing contracts in that separate standards exist in these areas. The new standard also entails new starting points for when revenue shall be recognised and requires new evaluations by the Company management that differ from those currently applied.

Boliden has carried out analyses of customer contracts to determine the effects on revenue recognition. Boliden's primary income derives from the sale of metals. It has become apparent that the freight in conjunction with certain freight terms can be regarded as a separate performance obligation. Freight will not be reported separately from sales in that there are limited numbers of this type of contract and the amounts involved are insignificant. The conclusion of the analysis work is that IFRS 15 will have no material effect on the Group's net sales in terms either of amount or of differences in periodicity. No opening balance is presented in that there are no effects on the financial reports. Boliden will adjust the structure of its financial reports in 2018 in accordance with the new disclosure requirements.

The new accounting principles that shall be applied from 2019 are presented below.

IFRS 16, Leasing: the standard comes into force on 1 January 2019 and replaces existing standards and interpretations with regard to leasing. Under the new standard, assets and liabilities attributable to leasing agreement shall, with a few exceptions, be reported in the Balance Sheet. This reporting is based on the attitude that the lessee is entitled to use an asset for a fixed period of time and has, at the same time, a duty to pay for this right. The reporting by the lessor will, in every significant respect, remain unchanged.

Boliden is currently carrying out an analysis of existing leasing contracts and other similar contracts to determine which contracts are covered by IFRS 16. The preliminary assessment is that Boliden's financial reports and key ratios will be affected in conjunction with the introduction of IFRS 16, but that the precise effect has not, as yet, been determined.

#### Estimates and assessments

In order to compile the Financial Statements in accordance with IFRS accounting principles, assessments and assumptions must be made that impact the reported asset and liability amounts and the income and expense amounts, as well as other information provided in the Financial Statements. The estimates and assessments of the Board of Directors and the Company's management are based on historical experience and forecast future trends. The actual outcome may differ from these assessments.

#### Valuation of inventories

It is not easy, in the smelters' process inventories and stocks of finished metals, to differentiate between externally purchased material and mined concentrate from the Group's own operations. Calculating the internal profit of inventories and the reported value of process inventory consequently entails estimations of the share of the process inventory and finished metal stocks that comes from the in-house mining operations, based on the quantities of mined concentrate bought in and produced in-house.

#### Pension undertakings

Pension provisions are dependent on the assumptions made in conjunction with the calculations of the amounts. The assumptions refer to discount interest rates, rate of salary increases, future increases in pensions, the number of remaining working years for employees, life expectancy, inflation and other factors, and are reviewed annually. The assumptions are made for every country in which Boliden has defined benefit pension plans. The most significant assumptions, in Boliden's opinion, are with regard to the discount rate, the rate of salary increases, and life expectancy, and Boliden has elected to present sensitivity analyses for these factors. Boliden's assumptions and sensitivity analyses are presented in Note 23.

### Legal disputes

Boliden regularly analyses and evaluates outstanding legal disputes using internal company legal counsels and, when necessary, with the help of external advisors, in order to assess the need for provisions to be made. See Note 30, Pledged assets and contingent liabilities.

### Reclamation costs

Provisions for reclamations are made on the basis of an assessment of future costs based on current conditions. Provisions are reviewed regularly by internal or external specialists and updates made when necessary when the estimated useful lives, costs, technical preconditions, regulations or other conditions of mine and smelter assets change. See Note 13, Property, Plant & Equipment and Note 24, Other provisions.

Boliden also has a responsibility for the reclamation of a number of decommissioned mines and continuously reviews the requirement to make provisions in respect of these objects. Inspection of and risk assessments in relation to reclamation measures are conducted on a systematic basis.

In the event of complementary reclamation work on a decommissioned mine being deemed necessary in order to comply with the requirements of external regulations, a provision is reported for the anticipated future costs. The provision is reviewed as investigations and action plans provide underlying data for revised costings.

### Valuation of non-current assets

Impairment tests for tangible and intangible assets are based on the Company's internal business plan and on assumptions with regard to future trends in metal prices, treatment and refining charges, and exchange rates, amongst other things. Changes in market prices of metals, treatment and refining charges and currencies have a substantial effect on the Company's future cash flows and hence on the estimated write-down requirement. Assumptions with regard to price trends for metals, treatment and refining charges and currencies are made by the Company management with the help of external experts. The assumptions are reviewed on an annual basis and adjusted when necessary. For further information, see Note 13, Property, Plant & Equipment.

The depreciation period for deferred mining costs, installations and equipment in mines depend on future ore extraction and the lifespan of the mine. The assessment of these aspects is, in turn, heavily dependent on mineral reserves and, consequently, on factors such as anticipated future metal prices. Changes to conditions may entail changes to the rate of depreciation applied in future. Business Area Mines draws up annual production plans for the mines' lifespans.

### Mineral reserves

Boliden's mineral reserves are divided into two categories, namely probable and proven. The assessment is based on geological measurements and assumptions that are explained in greater detail on pages 106-110. Boliden's assessment of the size of the mineral reserves affects annual depreciation costs and impairment tests.

### Consolidated Statements

The Consolidated Statements cover the Parent Company and all companies over which the Parent Company through ownership, directly or indirectly, exercises a controlling influence. The term "controlling influence" refers to companies in which Boliden exerts influence, is exposed to, or is entitled to a variable return from its involvement and in which it can use its influence over the company to influence its return. This is generally achieved by ensuring that its ownership share, and the share of votes, exceeds 50 per cent. The existence and effect of potential voting rights that can currently be utilised or converted are taken into account when assessing whether the Group is capable of exercising a controlling influence over another company. Subsidiaries are included in the Consolidated Statements as of the point in time at which a controlling influence has been attained, while companies that have been sold are included in the Consolidated Statements up to the time when the sale occurred, i.e. up to the point in time when controlling influence ceased to be exercised.

The Consolidated Statements have been compiled in accordance with the acquisition accounting method, which means that the historical cost of a company comprises the fair value of the payment made (including the fair value of any assets, liabilities and own equity instruments issued). The identifiable assets, liabilities and contingent liabilities

acquired are reported at their fair value on the acquisition date. A determination of whether a holding without a controlling influence shall be reported at fair value or at the holding's proportional share of the acquired company's net assets is conducted in conjunction with every acquisition. When required, the subsidiaries' accounts are adjusted to ensure that they follow the same principles applied by other Group companies. All internal transactions between Group companies and intra-Group transactions are eliminated when the Consolidated Statements are compiled.

### Associated companies

Shareholdings in associated companies, in which the Group has a minimum of 20 per cent and a maximum of 50 per cent of the votes, or otherwise has a significant influence over operational and financial management, are reported in accordance with the equity method. Under the equity method, the consolidated book value of the shares in the associated companies corresponds to the Group's share of the associated companies' equity and any consolidated surplus values. Shares in associated companies' profits/losses are reported in the Consolidated Income Statement as part of the operating profit and comprise the Group's share in the associated companies' net profits/losses.

### Conversion of foreign subsidiaries and other overseas operations

The currency in the primary economic environments in which the subsidiary companies operate is the functional currency. When consolidating to the reporting currency, the Balance Sheets for overseas subsidiary companies are converted at the exchange rates applicable at the reporting period end, while the Income Statements are converted at the average exchange rates for the reporting period. Any exchange rate differences arising and accumulated translation differences in respect of the conversion of subsidiaries are reported as Other comprehensive income.

Boliden hedges its net investments in foreign subsidiaries to some extent by taking an opposite position (in the form of loans) in the relevant foreign currency. Exchange rate differences on hedging measures are reported as Other comprehensive income.

In conjunction with the sale of overseas operations whose functional currency is different from the Group's reporting currency, the accumulated translation differences attributable to the operations are realised in the Consolidated Income Statement, after deductions for any currency hedging activities.

### Financial instruments

The following financial instruments, i.e. financial assets and liabilities, are recognised in the Balance Sheet: shares, receivables, cash and cash equivalents, liabilities and derivatives.

Financial instruments are recognised in the Balance Sheet when the company becomes bound by the instrument's contractual terms (the economic approach). Liabilities to credit institutions are, however, not reported until the settlement date. Financial assets are removed from the Balance Sheet when the rights entailed by the agreement are utilised, mature or are transferred to another counterparty. Financial liabilities are removed from the Balance Sheet when the agreement's obligations are fulfilled or if significant aspects of the loan terms are renegotiated.

Financial instruments are reported at the fair value or amortised cost, depending on the initial categorisation under IAS 39. On each reporting occasion, the Group performs an impairment test to determine whether objective indications exist of the need to write down a financial asset or group of assets.

### Valuation principles

#### Fair value

The fair value of derivatives is based on listed bid and ask prices on the closing day and on a discounting of estimated cash flows, and includes risk assumptions. Market prices for metals are taken from the trading locations of metal derivatives, i.e. the London Metal Exchange (LME) and the London Bullion Market Association (LBMA). Discount rates are based on current market rates per currency and time to maturity for the financial instrument. Exchange rates are obtained from the Swedish central bank.

When presenting the fair value of liabilities to credit institutions, the fair value is calculated as discounted agreed amortisations and interest payments at estimated market interest rate levels. The fair value of trade and other receivables and trade and other payables is

deemed to be the same as the reported value due to the short term to maturity, to the fact that provisions are made for bad debts, and to the fact that any penalty interest incurred will be debited.

If changes in value cannot be determined for financial assets or liabilities reported at fair value, they are reported at the historical costs of the instruments at their time of acquisition, which corresponds to the fair value at the time of acquisition.

Boliden provides information on all financial assets and liabilities reported at fair value in the Balance Sheet on the basis of a three-level fair value hierarchy. Level one comprises instruments that are listed and traded on an active market where identical instruments are traded. Level two comprises instruments that are not traded on an active market, but where observable market data is used for valuation of the instrument (either directly or indirectly). Level three comprises instruments where the valuation is, to a considerable extent, based on unobservable market data.

The assessments have been conducted on the basis of the circumstances and factors obtaining with regard to the various instruments. Metal futures are classified as level two, in that the discounted prices are based on listed daily prices from the exchanges. Currency futures and interest swaps have also been classified as level two, with reference to the fact that the valuation is based on observable market data. The fair value of liabilities to credit institutions has been classified as level two. Shares and participations that are not listed have been classified as level three. Exceptions to classification on the basis of the fair value hierarchy are made for trade and other receivables, cash and cash equivalents, and trade and other payables where the reported value is deemed to constitute a reasonable estimation of the fair value.

#### **Amortised cost**

Amortised cost is calculated using the effective interest rate method. This means that any premiums or discounts, as well as expenses or income directly attributable to them, are distributed over the duration of the contract with the aid of the estimated effective interest rate. The effective interest rate is the rate that yields the instrument's historical cost as a result in conjunction with current value calculation of future cash flows.

#### **Valuation category**

Boliden divides financial instruments into the following valuation categories. See also Note 29.

#### **Held at fair value**

Derivatives valued at fair value and for which changes in value are reported under net financial items. The derivatives comprise currency futures and are not included in hedge accounting.

#### **Loans and trade and other receivables**

This category includes financial investments, receivables not listed on an active market, and cash and cash equivalents. Cash and cash equivalents are defined as, in addition to cash and bank balances, short-term investments with a maximum term of three months at the time of acquisition and which can easily be converted to cash. Cash and cash equivalents are only exposed to an insignificant risk of fluctuations in value and are reported according to the amortised cost method. Receivables are defined as trade and other receivables and interest-bearing short-term holdings of securities or other investments which are not classified as non-current assets and which are not attributable to cash and cash equivalents. Receivables are reported in the anticipated recoverable amount, i.e. after deductions for bad debts, which are assessed on an individual basis. The anticipated term of trade and other receivables and other current receivables is short and the value is, therefore, reported at the nominal amount without discounting in accordance with the amortised cost method.

#### **Financial assets available for sale**

Assets in this category comprise shares valued at fair value with changes in value recognised under Other comprehensive income. If it is not possible to establish the fair value of such shares, they are reported at their historical cost, taking into account accumulated write-downs.

#### **Derivatives used in hedge accounting**

This category comprises derivatives valued at fair value and which form part of fair value hedging or cash flow hedging. The derivatives

comprise metals futures, currency futures, and interest derivatives. See Note 27 for details of derivatives used for hedging purposes.

#### **Other financial liabilities**

Financial liabilities primarily comprise liabilities to credit institutions and trade and other payables. The anticipated term of trade and other payables is short and the value is, consequently, reported at a nominal amount in accordance with the amortised cost method. Liabilities to credit institutions are initially valued at amounts received, less any set-up fees, and are then valued at the amortised cost method. Interest expenses are reported on a rolling basis in the Income Statement with the exception of the part included in the historical cost for property, plant & equipment. Capitalised set-up fees are reported directly against the loan liability to the extent that the loan agreement's underlying loan guarantee has been utilised, and are recognised in the Income Statement under Other financial expenses over the contractual term of the loan. If a loan agreement is terminated or otherwise ceases to obtain at a point in time prior to the end of the original contractual term, capitalised set-up fees are taken up as income. If a current agreement is renegotiated during the contractual term, any additional fees in connection with the renegotiation are allocated over the remaining contractual term of the loans.

#### **Assets and liabilities in foreign currencies**

Receivables, liabilities and derivatives in foreign currencies are converted to Swedish kronor at the exchange rate applying on the closing day. Exchange rate differences on operating receivables and operating liabilities are included in the operating profit, while exchange rate differences on financial assets and liabilities, including any profit/loss, are reported under financial items. Exchange rate effects on financial instruments used in cash flow hedging and the hedging of net investments in overseas operations, are reported under Other comprehensive income with the exception of any exchange rate differences on currency swaps in foreign currencies reported under net financial items.

#### **Classification and reporting of derivatives used for hedging purposes**

See also "Risk management" in the Directors' Report on pages 56–59.

#### **Fair value hedging (binding undertaking)**

Changes in the value of financial derivatives used to hedge a binding undertaking are reported under the operating profit together with changes in the value of the asset or liability that the hedging is designed to counter. The fair value of the derivatives is reported in the Balance Sheet as other assets and liabilities. Parts of inventories constitute binding undertakings and are reported at market value as inventory value, and changes in the value of derivatives consequently effectively match the changes in value from hedged items in the Income Statement and Balance Sheet.

#### **Cash flow hedging (forecast cash flows)**

Hedge accounting is applied to financial derivatives that refer to the hedging of forecast flows, which means that the effective share of the unrealised market values is reported under Other comprehensive income up to the point in time when the hedged item, such as forecast metal sales, US dollar income, and interest expenses, is realised and thus reported in the Income Statement. Realised profits/losses attributable to metal and currency derivatives are reported under net sales, while the profit/loss on interest derivatives is reported under net financial items. Individual interest swaps and multiple interest swaps – known as portfolio hedging – are both used to hedge future interest payments. Any ineffective part of cash flow hedging is reported under net financial items.

#### **Hedging of net investments**

Hedge accounting is applied to the profit/loss on hedging in respect of net investments in overseas operations under Other comprehensive income. Any ineffective component of these hedges is reported under net financial items. Associated hedging results are, in conjunction with the sale of overseas operations, reported in the Income Statement, together with the translation effect of the net investment.

#### **Offsetting of financial assets and liabilities**

The offsetting of financial assets and liabilities is regulated by ISDA (International Swaps and Derivatives Association) agreements,



which regulate both offsetting between contracted counterparties as part of operating activities and in conjunction with circumstances relating to breach of contract or early termination. In its operating activities, Boliden offsets payments on undertakings with the same maturity date, which are in the same currency, which have the same counterparty, and which are for the same type of instrument. Surplus amounts per instrument and currency only are paid by the party with the biggest outstanding liability. All terminated undertakings comprised by ISDA agreements are, in conjunction with breach of contract or early termination, which may be caused by circumstances not directly linked to neglect by any party, offset in a sum that is paid by the party with the biggest outstanding liability.

#### Government contributions and support

Government support refers to subsidies, grants or premiums designed to provide an economic benefit, or Government support in the form of transfers of resources to the company that may be applied to an undertaking. Government support attributable to assets is reported either by recognising the support as a prepaid income or by reducing the reported value of the asset.

#### Revenue recognition

Sales of metal concentrates, metals and by-products are reported at the time of delivery to the customer in accordance with the terms and conditions of sale, that is to say revenue is recognised whenever significant rights and obligations associated with the title transfer to the purchaser. These sales are reported net after VAT, discounts and exchange rate differences when sales are made in foreign currencies.

Preliminary invoices are issued for the Group's metal concentrates at the time of delivery. Final invoices are issued when all component parameters (concentrate quantity, metal content, impurity content, and the metal price for the agreed pricing period – normally the average price on the LME in the month after delivery) have been established.

The Group's metals are invoiced to the customers at the time of delivery. The Group eliminates the price risk in conjunction with the sale and purchase of metals by hedging the imbalance between quantities purchased and sold on a daily basis. The smelters' income comprises treatment and refining charges (TC/RC), free metals, compensation for impurities in the raw materials, and the worth of by-products.

Income from activities outside the sphere of the regular operations is reported as Other operating income.

#### Exploration, research and development

Boliden's R&D primarily comprises exploration. Boliden is also involved, to a limited extent, in developing mining and smelting processes. Expenses associated with research and development are primarily booked as costs when they arise. When the financial potential for the exploitation of a mine deposit has been confirmed, the expenses are booked as costs up to that date. After that date, the expenses are capitalised as deferred mining costs, the governing principles of which are described under the Property, Plant & Equipment heading. Exploration rights acquired in conjunction with operational acquisitions have been capitalised as intangible assets.

#### Intangible assets

Intangible assets include patents, licenses, similar rights, emission rights, exploration rights acquired in conjunction with operational acquisitions and goodwill. Goodwill comprises the amount by which the historical cost exceeds the fair value of the Group's share of the identifiable net assets of the subsidiary company acquired at the time of acquisition. Goodwill is reported in the Balance Sheet at the value given in conjunction with the acquisition, converted, where relevant, at the closing day rate, after deduction for accumulated impairments. Calculations of the profit or loss on the sale of a unit include any remaining reported goodwill value ascribed to the operations sold.

Goodwill has been assessed as having an indefinite useful life. Goodwill is allocated to the smallest possible unit or group of units that generate cash where separate cash flows can be identified, and an impairment test is performed on the reported value at least once a year to determine whether there is any need for an impairment. Such impairment tests are, however, performed more frequently if there are indications that the value may have fallen during the year.

Other intangible assets, with the exception of emission and exploration rights, are amortised over their anticipated useful lives.

#### Emission rights

The Boliden Group participates in the European system for emission rights. Rights are allocated across the European market. One emission right grants entitlement to emit the equivalent of one tonne of carbon dioxide or similar gas and is classified as an intangible asset. Emission rights allocated are valued at the historical cost of zero, while rights acquired are valued at the purchase price. An intangible asset and a provision in the corresponding amount are reported during the current year in the event of any need arising to purchase additional emission rights. The asset is amortised over the remaining months of the year, thereby distributing the cost in line with production. The intangible asset is thereby exhausted and the provision for emissions made is settled. If the liability to deliver emission rights exceeds the remaining emission rights allocation, the liability is revalued at the market value of the number of emission rights required to clear the undertaking on the closing day.

#### Property, plant & equipment

Land, plants and equipment, and capitalised costs associated therewith for development, pre-production measures and future reclamation costs, are booked at the historical cost less depreciations and any impairment. Interest expenses attributable to financing development and completion of significant property, plant & equipment are included in the acquisition value. Repair and maintenance expenses are booked as costs, while substantial improvements and replacements are capitalised.

Estimated future expenses for the dismantling and removal of a tangible asset and the restoration of a site or area where the tangible asset is located (reclamation costs) are capitalised. Capitalised amounts comprise estimated expenses, calculated at current value, which are simultaneously reported as provisions. Effects of subsequent events that result in costs that exceed the provision are discounted, capitalised as a fixed asset, and increase the provisions, and are depreciated over the remaining life of the asset.

Deferred mining costs at mines comprise the waste rock excavation required to access the ore body, work relating to infrastructural facilities, roads, tunnels, shafts and inclined drifts, as well as service, electricity and air distribution facilities. Deferred mining costs arising from capacity expansion of the mining operation, the development of new ore bodies, and the preparation of mining areas for future ore production are capitalised. Mining costs arising from waste rock removal from open-pit mines are capitalised as part of an asset when it becomes possible to identify the part of an ore body to which access has been improved.

#### Depreciation principles for property, plant & equipment

Depreciation according to plan is based on the original capitalised values and the estimated useful life. Depreciation of an asset begins when an asset becomes operational.

Plant and capitalised values attributable to waste rock are depreciated per push-back and in conjunction with metal extraction in relation to the anticipated metal extraction for the entire push-back. Installations and capitalised values included in deferred mining costs are depreciated in accordance with a production-based depreciation method that is based on the proven and probable mineral reserves in the respective ore bodies. Depreciation is effected to the estimated residual value. Estimated residual values and production capacity are subject to ongoing review. Plant not directly linked to production capacity is depreciated on the basis of their anticipated useful lives.

Smelters and production plants are depreciated linearly over their anticipated useful lives.

The following depreciation periods are applied to property, plant & equipment, including future reclamation costs:

|   |  |
|---|--|
| Buildings   | 20–50 years                            |
| Land improvements                                   | 20 years                               |
| Deferred mining costs and waste rock capitalisation | Concurrently with metal depletion      |
| Capitalised reclamation costs                       | Linearly over the anticipated lifespan |
| Processing facilities                               | 10–25 years                            |
| Machinery   | 3–10 years                             |
| Equipment, tools, fixtures and fittings             | 3–10 years                             |

Boliden applies component depreciation, which means that larger processing facilities are broken down into component parts with different useful lives and thus different depreciation periods.

### Impairment

On each reporting occasion, an assessment is performed to determine whether there is any indication that the value of the Group's assets has depreciated or been impaired. Should this be the case, a calculation is performed of the recoverable amount of the asset in question. Goodwill is, together with any intangible assets with an indefinite useful life, subject to annual impairment tests even if there are no indications of a reduction in its value. The recoverable amount comprises whichever is the higher of the value in use of the asset in the operations and the value that would result if the asset were sold to an independent party, fair value minus selling expenses. The value in use comprises the present value of all incoming and outgoing payments attributable to the asset for the duration of its expected use in the operations, plus the present value of the net sales value at the end of the asset's useful life. If the estimated recoverable amount is lower than the book value, the latter is written down to the former. Impairments are reported in the Income Statement. Any impairment is reversed if changes in the assumptions leading to the original impairment mean that the impairment is no longer warranted. Impairments that have been performed are not reversed in such a way that the reported value exceeds the amount that would, following deductions for depreciation according to plan, have been reported if no impairment had been performed. Reversals of impairments performed are reported in the Income Statement. Goodwill impairments are not reversed. See also the section on Valuation of non-current assets.

### Leasing

A financial leasing agreement is an agreement whereby the financial risks and benefits associated with a title are, in all significant respects, transferred from the lessor to the lessee. Leasing agreements that are not classified as financial leasing agreements are classified as operational leasing agreements.

Assets held in accordance with financial leasing agreements are reported initially as non-current assets in the Consolidated Balance Sheet at the present value of the future lease payments. The Group's liability in relation to the lessor is reported in the Balance Sheet under the heading of Liabilities to credit institutions, broken down into short-term and long-term components.

Lease payments are broken down into interest and amortisation of the liability. The interest is distributed over the leasing period so that an amount corresponding to the fixed interest amount payable on the liability reported in each period is charged to each reporting period. The leased asset is depreciated according to the same principles as those that apply to other assets of the same type.

The leasing charges for operational leasing agreements are booked as costs on a linear basis over the leasing period.

### Inventories

The Group's inventories primarily comprise mined concentrates, materials tied up in the smelters' production processes, and finished metals. Inventories are valued at whichever is the lower of the historical cost in accordance with the first-in-first-out principle and the net sale value, taking into account the risk of obsolescence. The historical cost of inventories of metals from the company's mines and semi-finished and finished products manufactured in house comprises the direct manufacturing costs plus a surcharge for indirect manufacturing costs. Supplies inventories are valued at whichever is the lower of the average historical cost and the replacement value. When mined concentrates are bought in from external sources and definitive pricing has not yet occurred, the acquisition value is estimated at the closing day price. Fair value hedging is effected in conjunction with the definitive pricing of mined concentrates. The change in the value of hedged items in the inventory value is also reported in conjunction with fair value hedging of mined concentrates and finished metals.

### Tax

The tax expense (income) for the period comprises current tax and deferred tax. Tax is reported in the Income Statement under Other comprehensive income or Equity, depending on where the underlying transaction has been reported.

Current tax is the tax calculated on the taxable profit/loss for each period. The year's taxable profit/loss differs from the year's reported profit/loss before tax in that it has been adjusted for non-taxable and non-deductible items and temporary differences. The Group's current tax liability is calculated in accordance with the taxation rates stipulated or announced on the closing day.

Deferred tax is reported using the Balance Sheet method, under

which deferred tax liabilities are reported in the Balance Sheet for all taxable temporary differences between reported and fiscal values of assets and liabilities. Deferred tax assets are reported in the Balance Sheet in respect of loss carry-forwards and all deductible temporary differences to the extent that it is likely that these amounts can be used to offset future taxable surpluses. The reported value of deferred tax assets is checked at the end of each accounting period and reduced to the extent that it is no longer likely that sufficient taxable surpluses will be available for its use. Deferred tax is calculated in accordance with the taxation rates that are expected to apply to the period in which the asset is recovered or the liability settled.

Both deferred and current tax receivables and tax liabilities are offset when they relate to income tax levied by the same tax authority.

### Provisions

Provisions are reported when the Group has, or may be considered to have an obligation as a result of events that have occurred and it is likely that disbursements will be required in order to fulfil this obligation. A further prerequisite is that it should be possible to make a reliable estimate of the amount to be paid.

When a significant effect arises due to the point in time at which a provision is made, the provision is valued at the present value of the amount estimated to be required to fulfil the obligation. A discount interest rate before tax that reflects current market evaluations of the time value of money and the risks associated with the provision is applied in conjunction herewith. The increase that is due to time passing is reported as an interest expense. Provisions are broken down into short-term and long-term provisions.

Boliden's provisions primarily, with the exception of pensions (see separate section), refer to reclamation costs that are expected to arise when operations are decommissioned. Provisions are also made for any purchases of emission rights and for any remuneration payable in conjunction with the termination of employment that may be payable to employees to whom a commitment of termination has been given or to employees who accept voluntary redundancy. The Group reports a provision and a cost in conjunction with termination when Boliden is obligated either to give the employee notice prior to the normal point in time for employment cessation, or to provide remuneration with a view to encouraging early retirement.

### Contingent liabilities

A contingent liability is a potential undertaking that derives from events which have occurred and whose incidence is only confirmed by one or more uncertain future events. A contingent liability can also be an existing undertaking that has not been reported in the Balance Sheet because it is unlikely that an outflow of resources will be required or because the size of the undertaking cannot be reliably calculated. See Note 30.

### Employee benefits

#### Pension undertakings

The Group's companies have a variety of pension systems in accordance with local conditions and practices in the countries in which they operate. They are generally financed through payments made to insurance companies or through the company's own provisions which are determined through periodic actuarial calculations. The Group's provisions for pension undertakings are calculated in accordance with IAS 19, Employee benefits.

For pension systems where the employer is committed to defined contribution systems, the undertaking in relation to the employee ceases when the agreed premiums have been paid. Premiums paid are booked as costs on an ongoing basis.

The undertaking does not cease for pension systems where a defined benefit pension has been contractually agreed, until the agreed pensions have been paid out. Boliden commissions independent actuaries to calculate pension undertakings relating to the defined benefit pension plan arrangements in each country. For information on calculation parameters, see the section entitled "Estimates and assessments – pension undertakings" and Note 23.

Revaluations of the defined benefit net pension liability, such as actuarial profits and/or losses and the difference between the return on plan assets and the discount rate, are reported under Other comprehensive income. The financing cost of the net pension liability is calculated using the discount rate for the pension liability. The financing cost, the cost of service during the current period and any previous periods, losses from settlements and costs in connec-

tion with special payroll tax are all reported in the Income Statement. Special payroll tax is regarded as part of the total net pension liability.

### Share capital

Ordinary shares are classified as share capital. Transaction costs in conjunction with a new share issue are reported as a net amount after tax for deduction from the issue proceeds received.

### Buy-back of own shares

Boliden's holdings of its own shares are reported as a reduction in equity. Transaction costs are reported directly against equity.

### Dividend

A dividend payment proposed by the Board of Directors does not reduce the equity until it has been approved by the Annual General Meeting.

### Information per segment and geographical market

Boliden's operations are organised into two segments: Business Area Mines and Business Area Smelters. The Business Areas correspond to Boliden's operating segments in that 1) the Business Area Managers are directly responsible to the CEO, 2) the CEO controls the Group's component parts via two "Business Area Boards", one for each Business Area, through which the financial results in relation to financial goals are evaluated, 3) financial goals and investment plans and overhead budgets for the respective Business Areas are set in the business plan and budget process, 4) decisions on goals and resource allocation for units within the respective Business Areas are made within the respective Business Areas' management groups, and 5) heads of operating units report not to the CEO but to the Business Area Managers.

Business Area Mines comprises the operations of the Swedish mines, Aitik, the Boliden Area and Garpenberg, the Tara mine in Ireland, the Kylylahti mine in Finland and, as of the second quarter of 2016, the Kevitsa mine in Finland. Aitik produces copper concentrate with some gold and silver content. The other Swedish mines produce zinc, copper and lead concentrates with variable gold and silver content. Tara produces zinc and lead concentrates and Kylylahti produces concentrate that contains copper, gold, zinc and silver. Kevitsa primarily produces nickel and copper concentrates. Business Area Mines is also responsible for sales of mined concentrates.

Business Area Smelters includes the Kokkola and Odda zinc smelters in Finland and Norway, respectively, the Rönnskär and Harjavalta copper smelters in Sweden and Finland, respectively, and the Bergsöe lead smelter in Sweden. The Business Area is responsible for all sales of the smelters' products and handles all raw material flows between the Group's mines, smelters and customers. This includes responsibility for purchases of metal concentrates and recycling materials from external suppliers. The zinc smelters' production primarily comprises zinc metal, but also includes silver in concentrate, aluminium fluoride and sulphuric acid. The copper smelters' production primarily comprises copper, gold, silver, lead and sulphuric acid. The copper smelters also recycle metal and electronic scrap and smelt nickel. The Bergsöe lead smelter recycles lead metal, mainly from scrap car batteries.

Transactions between the Business Areas, primarily involving metal concentrates, are settled on an arms' length basis.

Group staff functions and Group-wide functions that are not assigned to Mines or Smelters are reported under the heading Other. Items where the accounting method differs between the Business Areas and the Group are reported under the heading Accounting principles. The market valuation of financial derivative instruments used to manage currency risks, metal price risks and interest risks are, for example, reported under Accounting principles until such time as the underlying flows are reflected in the Income Statement and distributed between the respective segments.

Note 2 contains details of revenues per segment and geographical market, showing the location of external customers, and providing information on major customers. Assets and investments per geographical market are also reported there.

### The Parent Company's accounting principles

The Parent Company's annual accounts are compiled in accordance with the Swedish Annual Accounts Act, the Swedish Financial Reporting Board's recommendation, RFR 2, Accounting for legal entities, and the statements issued by the Swedish Financial Reporting

Board. Under RFR 2, the Parent Company shall, in the accounts for the legal entity, apply all EU-approved International Financial Reporting Standards (IFRS) and statements to the extent that this is possible within the framework of the Swedish Annual Accounts Act and while taking into account the connection between reporting and taxation. The recommendation specifies the exceptions and additions to be made in relation to IFRS. The differences between the Group's and the Parent Company's accounting principles are described below.

### Reporting of Group contributions and shareholders' contributions

Group contributions received or made are reported as appropriations. Shareholders' contributions are booked directly against non-restricted equity by the recipient and as an increase in the Participations in Group companies item by the contributor.

### Anticipated dividends

Anticipated dividends can be reported in those cases where the Parent Company has the sole right to determine the size of the dividend and has ensured that the dividend does not exceed the subsidiary company's dividend payment capacity.

### Financial instruments

Financial instruments are not valued in the Parent Company in accordance with IAS 39. The valuation is conducted on the basis of the historical cost (see the Group's accounting principles).

### Subsidiaries

Participations in subsidiary companies are reported in the Parent Company in accordance with the historical cost method. Transaction expenses in conjunction with the acquisition of subsidiaries are reported as costs in the consolidated accounts, while in the Parent Company, they are reported as part of the historical cost.

Determination of the value of subsidiary companies is effected when there are indications of a decline in value.

**Note 02** Information per segment and geographical market

For additional information, please refer to "General accounting principles" for segment reporting on page 81.

**Segment – Business Areas**

| 31-12-2017   | Mines         | Smelters      | Other       | Accounting principles <sup>2)</sup> | Eliminations   | The Group     |
|--|---------------|---------------|-------------|-------------------------------------|----------------|---------------|
| External revenues                                    | 1,826         | 47,727        | 1           | –                                   | –              | 49,553        |
| Effect on profit of metal price and currency hedging | –22           | –             | –           | –                                   | –              | –22           |
| Internal revenues                                    | 16,391        | –36           | 94          | –                                   | –16,450        | –             |
| <b>Revenues</b>                                      | <b>18,195</b> | <b>47,691</b> | <b>95</b>   | <b>–</b>                            | <b>–16,450</b> | <b>49,531</b> |
| Results from participations in associated companies  | 5             | 0             | –           | –                                   | –              | 6             |
| <b>Operating profit</b>                              | <b>6,681</b>  | <b>2,834</b>  | <b>–500</b> | <b>–</b>                            | <b>–</b>       | <b>9,015</b>  |
| Net financial items                                  |               |               |             |                                     |                | –278          |
| <b>Profit after financial items</b>                  |               |               |             |                                     |                | <b>8,737</b>  |
| Tax  |               |               |             |                                     |                | –1,881        |
| <b>Net profit for the year</b>                       |               |               |             |                                     |                | <b>6,856</b>  |
| Intangible assets                                    | 372           | 3,104         | 7           |                                     |                | 3,482         |
| Property, plant and equipment                        | 26,509        | 9,729         | 75          |                                     |                | 36,313        |
| Equity shares and other financial assets             | 21            | 10            | 29          |                                     |                | 59            |
| Inventories  | 1,117         | 9,171         | –789        |                                     |                | 9,500         |
| Other receivables                                    | 2,744         | 2,828         | 203         | 1                                   | –1,911         | 3,864         |
| <b>Assets in capital employed</b>                    | <b>25,502</b> | <b>18,018</b> | <b>–589</b> | <b>1</b>                            | <b>–1,911</b>  | <b>53,219</b> |
| Provisions, other than for pensions and tax          | 2,518         | 619           |             |                                     |                | 3,137         |
| Other liabilities                                    | 2,744         | 6,205         | 114         |                                     | –1,911         | 7,151         |
| <b>Liabilities in capital employed</b>               | <b>5,261</b>  | <b>6,824</b>  | <b>114</b>  | <b>1</b>                            | <b>–1,911</b>  | <b>10,289</b> |
| <b>Total capital employed</b>                        | <b>25,502</b> | <b>18,018</b> | <b>–589</b> |                                     |                | <b>42,931</b> |
| Depreciation   | 3,487         | 1,114         | 1           |                                     |                | 4,601         |
| Investments <sup>1)</sup>                            | 3,722         | 1,862         | 4           |                                     |                | 5,588         |

| 31-12-2016   | Mines         | Smelters      | Other       | Accounting principles <sup>2)</sup> | Eliminations   | The Group     |
|--|---------------|---------------|-------------|-------------------------------------|----------------|---------------|
| External revenues                                    | 1,776         | 38,575        | 0           | –                                   | –              | 40,351        |
| Effect on profit of metal price and currency hedging | –34           | –             | –           | –                                   | –              | –34           |
| Internal revenues                                    | 10,918        | –58           | 73          | –                                   | –10,933        | –             |
| <b>Revenues</b>                                      | <b>12,659</b> | <b>38,516</b> | <b>73</b>   | <b>–</b>                            | <b>–10,933</b> | <b>40,316</b> |
| Results from participations in associated companies  | 5             | –1            | 0           | –                                   | –              | 3             |
| <b>Operating profit</b>                              | <b>2,804</b>  | <b>3,347</b>  | <b>–469</b> | <b>–</b>                            | <b>–</b>       | <b>5,682</b>  |
| Net financial items                                  |               |               |             |                                     |                | –308          |
| <b>Profit after financial items</b>                  |               |               |             |                                     |                | <b>5,375</b>  |
| Tax  |               |               |             |                                     |                | –1,135        |
| <b>Net profit for the year</b>                       |               |               |             |                                     |                | <b>4,239</b>  |
| Intangible assets                                    | 389           | 3,114         | 4           |                                     |                | 3,508         |
| Property, plant and equipment                        | 25,874        | 8,903         | 73          |                                     |                | 34,850        |
| Equity shares and other financial assets             | 18            | 9             | 29          |                                     |                | 56            |
| Inventories  | 1,128         | 9,394         | –445        |                                     |                | 10,077        |
| Other receivables                                    | 2,038         | 2,668         | 375         | 2                                   | –1,556         | 3,525         |
| <b>Assets in capital employed</b>                    | <b>29,448</b> | <b>24,088</b> | <b>36</b>   | <b>2</b>                            | <b>–1,556</b>  | <b>52,016</b> |
| Provisions, other than for pensions and tax          | 2,312         | 579           | 0           |                                     |                | 2,891         |
| Other liabilities                                    | 2,164         | 5,670         | 389         |                                     | –1,556         | 6,668         |
| <b>Liabilities in capital employed</b>               | <b>4,476</b>  | <b>6,249</b>  | <b>389</b>  |                                     | <b>–1,556</b>  | <b>9,559</b>  |
| <b>Total capital employed</b>                        | <b>24,972</b> | <b>17,838</b> | <b>–354</b> | <b>2</b>                            |                | <b>42,457</b> |
| Depreciation   | 3,172         | 1,026         | 1           |                                     |                | 4,199         |
| Investments <sup>1)</sup>                            | 2,755         | 1,372         | 0           |                                     |                | 4,127         |

<sup>1)</sup> Excluding capitalised reclamation costs and financial leasing.

<sup>2)</sup> Comprises unrealised market values attributable to cash flow hedging and minor adjustments for other accounting principles only followed up at Group level. The market values of the cash flow hedges are, when realised, reported in the respective segments.



Boliden has three customers within Segment Smelters who account for 13% (13), 12% (13) and 6% (7), respectively, of Boliden's external revenue. Other customers each represent less than 5% (4) of Boliden's total external revenue. Boliden's metals are sold primarily to industrial customers, but are also sold to base metal dealers and international metal stocks, such as the LME.

### Geographical areas

Sales figures are based on the country in which the customer is located. Assets and investments are reported in the location of the asset.

| Revenues             | 2017          | 2016          |
|----------------------|---------------|---------------|
| Sweden               | 7,009         | 5,289         |
| Nordic region, other | 4,981         | 5,353         |
| Germany              | 16,388        | 12,116        |
| UK                   | 9,932         | 9,951         |
| Europe, other        | 10,656        | 7,141         |
| North America        | 16            | 118           |
| Other markets        | 549           | 347           |
|                      | <b>49,531</b> | <b>40,316</b> |

| Assets in capital employed | 31-12-2017    | 31-12-2016    |
|----------------------------|---------------|---------------|
| Sweden                     | 37,325        | 37,460        |
| Finland                    | 12,087        | 10,971        |
| Norway                     | 1,577         | 1,552         |
| Ireland                    | 2,194         | 2,011         |
| Other countries            | 36            | 21            |
|                            | <b>53,219</b> | <b>52,016</b> |

| Investments in non-current assets <sup>1)</sup> | 31-12-2017   | 31-12-2016   |
|---|--------------|--------------|
| Sweden  | 2,817        | 2,314        |
| Finland   | 2,093        | 1,299        |
| Norway  | 298          | 214          |
| Ireland   | 379          | 299          |
| Other countries                                 | 0            | 1            |
|   | <b>5,588</b> | <b>4,127</b> |

<sup>1)</sup> Excluding capitalised reclamation costs and financial leasing.

Boliden's total revenues of SEK 49,531 m (40,316) comprised SEK 41,008 m (32,827) from sales of metals, SEK 6,544 m (5,363) from sales of concentrates, and SEK 1,979 m (2,126) from other sales.

### Note 03 Employees and personnel costs

The Parent Company, Boliden AB, conducts no limited operations and is in a tax agreement with Boliden Mineral AB. Boliden AB has one employee who is compensated by Boliden Mineral AB.

| Average number of employees <sup>1)</sup> | 2017         | of whom,<br>women | of whom,<br>men | 2016         | of whom,<br>women | of whom,<br>men |
|---|--------------|-------------------|-----------------|--------------|-------------------|-----------------|
| <b>Subsidiaries</b>                       |              |                   |                 |              |                   |                 |
| Sweden                                    | 3,161        | 667               | 2,494           | 3,024        | 656               | 2,368           |
| Finland                                   | 1,594        | 245               | 1,349           | 1,551        | 238               | 1,313           |
| Norway                                    | 322          | 47                | 275             | 285          | 44                | 241             |
| Ireland                                   | 586          | 36                | 550             | 597          | 31                | 566             |
| Other countries                           | 21           | 7                 | 14              | 20           | 7                 | 13              |
| <b>Total in subsidiaries/Group</b>        | <b>5,684</b> | <b>1,002</b>      | <b>4,682</b>    | <b>5,477</b> | <b>976</b>        | <b>4,501</b>    |

<sup>1)</sup> Refers to full-time employees.

| Percentage of women at Board and Group management level | 2017 | 2016 |
|---|------|------|
| Board of Directors                                      | 36%  | 36%  |
| Group management  | 20%  | 20%  |

|   | 2017                      |                          | 2016                      |                          |
|---|---------------------------|--------------------------|---------------------------|--------------------------|
| Salaries, other remuneration and social security expenses | Salaries and remuneration | Social security expenses | Salaries and remuneration | Social security expenses |
| Subsidiaries  | 3,334                     | 1,197                    | 3,072                     | 853                      |
| of which, pension expenses                                |                           | (334) <sup>1)</sup>      |                           | (72) <sup>1)</sup>       |
| <b>Group, total</b>                                       | <b>3,334</b>              | <b>1,197</b>             | <b>3,072</b>              | <b>853</b>               |

<sup>1)</sup> The previous year's pension cost includes the impact of the conversion of Tara's defined benefit pension plan to a defined contribution plan, which totalled SEK +224 m and which reduced the 2016 pension cost. For further information, see Note 23 Provisions for pensions and similar undertakings.

|   | 2017  |                 | 2016  |                 |
|---|---|-----------------|---|-----------------|
| Salaries and other remuneration broken down by country and between Board Members etc. and other employees | Board of Directors, President & other senior executives | Other employees | Board of Directors, President & other senior executives | Other employees |
| Subsidiaries in Sweden  | 32  | 1,758           | 29  | 1,619           |
| Subsidiaries abroad   |   |                 |   |                 |
| Finland   | 7   | 813             | 7   | 698             |
| Norway  | 2   | 175             | 2   | 176             |
| Ireland   | 6   | 526             | 5   | 523             |
| Other   | 1   | 14              | 1   | 12              |
| <b>Group, total</b>   | <b>48</b>   | <b>3,286</b>    | <b>44</b>   | <b>3,028</b>    |

### Profit-sharing system

A profit-sharing system was introduced for all employees of the Boliden Group in 2007. A profit share is payable when the return on capital employed exceeds 8%, and the maximum profit share (SEK 30,000/full-time employee) is payable when the return on capital employed reaches 18%. The annual maximum allocation must never, however, exceed one third of the dividend paid to shareholders. The funds cannot be disbursed to employees until after 3 years. An allocation of SEK 30,000 (19,770) per full-time employee is proposed for 2017 as the return on capital employed was 21.0% (14.6). This is, however, conditional upon the dividend resolution by the Annual General Meeting. The allocation for each year is invested in liquid interest-bearing assets and shares in Boliden.

### Remuneration paid to the Board Members and senior executives Principles

Fees as approved by the Annual General Meeting are payable to the Chairman of the Board and to Members of the Board. The President and Employee representatives receive no Directors' fees.

### Remuneration and other benefits paid during the year

Specification of remuneration paid to the Board Members and senior executives.

| SEK k   | Directors' fees/<br>Basic salary |       | Variable remuneration |                     | Other benefits |      | Pension cost |       |
|---|----------------------------------|-------|-----------------------|---------------------|----------------|------|--------------|-------|
|   | 2017                             | 2016  | 2017                  | 2016                | 2017           | 2016 | 2017         | 2016  |
| <b>Board of Directors</b>                           |                                  |       |                       |                     |                |      |              |       |
| Anders Ullberg, Chairman                            | 1,715                            | 1,540 |                       |                     |                |      |              |       |
| Marie Berglund                                      | 525                              | 500   |                       |                     |                |      |              |       |
| Tom Erixon  | 615                              | 590   |                       |                     |                |      |              |       |
| Michael G:son Löw                                   | 575                              | 550   |                       |                     |                |      |              |       |
| Ulla Litzén   | –                                | 690   |                       |                     |                |      |              |       |
| Elisabeth Nilsson                                   | 525                              | 500   |                       |                     |                |      |              |       |
| Pia Rudengren                                       | 715                              | –     |                       |                     |                |      |              |       |
| Pekka Vauramo                                       | 525                              | 500   |                       |                     |                |      |              |       |
| <b>Group management</b>                             |                                  |       |                       |                     |                |      |              |       |
| Lennart Evrell, President                           | 7,700                            | 7,300 | 3,200 <sup>3)</sup>   | 2,699 <sup>2)</sup> | 214            | 179  | 2,695        | 2,555 |
| Other members of the Group management <sup>1)</sup> | 10,104                           | 9,223 | 3,800 <sup>3)</sup>   | 2,923 <sup>2)</sup> | 339            | 319  | 3,553        | 3,205 |

<sup>1)</sup> A total of 4 people in 2017 and 2016.

<sup>2)</sup> The amounts are attributable to 2016 but were disbursed in 2017.

<sup>3)</sup> The amounts are attributable to 2017 but will be disbursed in 2018.

The Directors' fees shown above also include remuneration for work on the Remuneration and Audit Committees.

### Variable remuneration

The variable remuneration paid to the President in 2017 was based on the Group's return on equity, and a combination of the Group's refining costs and the accident trend within the Group.

For other members of the Group management, 12–89% of the variable remuneration for 2017 was based on the Group's financial goals and 11–88% on their personal spheres of responsibility and individual targets. Other benefits refer primarily to company cars.

### Pensions

The President has a defined contribution pension plan to which the company allocates 35% of the fixed monthly salary on a rolling basis. The President decides for himself the level of survivor annuity, indemnity for medical treatment or disability, etc. component of his insurance solution. The President's retirement age is 65.

All other members of the Group management have defined contribution pension plans to which the company allocates 30–35% of the fixed monthly salary. The retirement age is 65.

Remuneration paid to the President and other senior executives comprises the basic salary, variable remuneration, other benefits and pensions. The term senior executives refers to those persons who have comprised the Group management during the year. The Group management comprised five persons, including the President, at the end of the year. All members of the Group management are employed in Sweden.

The breakdown between basic salary and variable remuneration shall be in proportion to the executive's responsibilities and authority. The variable remuneration is maximised to 60% of the basic salary for the President, while for other senior executives, it is maximised to 40–50% of the basic salary. 10 percentage points of this is conditional on the purchase of Boliden shares for the gross sum before tax.

Pension benefits and other benefits payable to the President and other senior executives are taken into account when determining fixed and variable remuneration.

### Severance pay

The President and the company shall give six and twelve months' notice of the termination of the President's position, respectively. If notice is given by the company, severance pay corresponding to twelve months' salary is payable, over and above the notice period pay. Other income shall be offset against the severance pay. No severance pay is payable in the event of notice being given by the President.

Other members of the Group management have a notice period of six months if they give notice themselves. If notice of termination is given by the company, the period of notice is twelve months. In addition, severance pay corresponding to a maximum of six months' salary shall be payable.

Other income shall be offset against the severance pay. No severance pay is payable in the event of notice being given by the member of the Group management.

### Preparation and decision-making process

See the 2017 Corporate Governance Report for information.

**Note 04 Auditors' fees and reimbursement of expenses**

|   | 2017     | 2016     |
|---|----------|----------|
| <b>Deloitte AB</b>                                    |          |          |
| Audit engagements                                     | 6        | 6        |
| Auditing assignments over and above audit engagements | 0        | 0        |
| Tax consultancy                                       | 0        | 0        |
| Other services  | 0        | 0        |
|   | <b>6</b> | <b>6</b> |

**Note 05 Key expense items**

|   | 2017          | 2016          |
|---|---------------|---------------|
| Raw material costs, incl. inventory changes | 21,806        | 17,775        |
| Personnel costs                             | 4,678         | 4,063         |
| Energy costs                                | 2,508         | 2,388         |
| Other external costs                        | 6,922         | 6,307         |
| Depreciation                                | 4,601         | 4,199         |
|   | <b>40,516</b> | <b>34,731</b> |

The specification of key expense items relates to the following Income Statement items: "Cost of goods sold", "Selling expenses", "Administrative expenses" and "Research and development costs".

| <b>Depreciation and amortisation are reported under the following Income Statement items:</b> | 2017         | 2016         |
|---|--------------|--------------|
| Cost of goods sold  | 4,575        | 4,175        |
| Selling expenses  | 0            | 0            |
| Administrative expenses   | 21           | 19           |
| Research and development costs  | 6            | 5            |
|   | <b>4,601</b> | <b>4,199</b> |

**Note 06 Other operating income**

|   | 2017       | 2016       |
|---|------------|------------|
| Payment for sludge deliveries                                   | 24         | 22         |
| Rental income, industrial properties                            | 19         | 24         |
| Insurance payments  | 1          | 1          |
| Profit, sale of non-current assets                              | –          | 4          |
| Capital gain, disposal of aluminium fluoride operations at Odda | –          | 47         |
| Realised exchange rate profits                                  | 74         | 67         |
| Scrap sales   | 41         | 21         |
| Profit on the sale of emissions rights                          | 7          | 5          |
| Other   | 40         | 44         |
|   | <b>206</b> | <b>235</b> |

**Note 07 Financial income**

|  | 2017     | 2016     |
|--|----------|----------|
| Interest income on cash and cash equivalents | 3        | 2        |
| Other  | 1        | 1        |
|  | <b>4</b> | <b>4</b> |

**Note 08 Financial expenses**

|                                     | 2017       | 2016       |
|-------------------------------------|------------|------------|
| Interest on loans at amortised cost | 104        | 113        |
| Interest on currency futures        | 61         | 2          |
| Interest on pension provisions      | 18         | 23         |
| Interest on reclamation reserve     | 56         | 56         |
| Other financial items               | 43         | 117        |
|                                     | <b>282</b> | <b>311</b> |

Boliden's average interest rate totalled 1.30% (1.47), weighted against rolling debt.

**Note 09 Government subsidies**

Government subsidies totalling SEK 36 m (35) were received in 2017 and SEK 36 m (32) was reported in the Income Statement. The majority of the subsidies were received in Norway under a carbon dioxide compensation scheme and for energy efficiency improvement measures and are reported under Cost of goods sold in the Income Statement.

**Note 10 Supplementary information to the Statements of Cash Flow**

The Statements of Cash Flow are drawn up in accordance with the indirect method.

|   | 2017         | 2016         |
|---|--------------|--------------|
| <b>Interest received</b>  |              |              |
| Interest on currency futures  | –            | –            |
| Bank interest   | 2            | 2            |
|   | <b>2</b>     | <b>2</b>     |
| <b>Interest paid</b>  |              |              |
| Interest on currency futures  | –62          | –2           |
| Interest on external loans  | –115         | –113         |
|   | <b>–177</b>  | <b>–115</b>  |
| <b>Cash and cash equivalents on 31 December</b>                       |              |              |
| <i>The following items are included in cash and cash equivalents:</i> |              |              |
| Cash and bank balances  | 2,510        | 1,503        |
| Short-term investments  | 0            | 0            |
|   | <b>2,510</b> | <b>1,503</b> |

The interest paid in the Statement of Cash Flow does not include accrued interest expenses, unlike in the Income Statement. Interest paid for interest capitalisation is reported as part of the investment operations.

The short-term investments included in cash and cash equivalents comprise investments with a term of three months or less at the point of acquisition and which can be easily converted into cash and cash equivalents. Cash and cash equivalents are only exposed to an insignificant risk of value fluctuation.

The following table shows changes in liabilities attributable to financing activities.

| The Group, 31-12-2017                              | Amount at the beginning of the year | Cash flow     | Items not affecting cash flow |          | Amount at year-end |
|--|-------------------------------------|---------------|-------------------------------|----------|--------------------|
|  |                                     |               | Currency                      | Other    |                    |
| Long-term liabilities to credit institutions       | 8,187                               | -4,292        | 109                           |          | 4,004              |
| Current liabilities to credit institutions         | 1,903                               | -572          |                               |          | 1,331              |
| Other interest-bearing liabilities, long-term      | 7                                   | -1            |                               | -4       | 2                  |
| Other interest-bearing liabilities, current        | 4                                   | -3            |                               | 4        | 5                  |
| <b>Total liabilities from financing activities</b> | <b>10,101</b>                       | <b>-4,868</b> | <b>109</b>                    | <b>0</b> | <b>5,342</b>       |

| The Group, 31-12-2016                              | Amount at the beginning of the year | Cash flow    | Items not affecting cash flow |          | Amount at year-end |
|--|-------------------------------------|--------------|-------------------------------|----------|--------------------|
|  |                                     |              | Currency                      | Other    |                    |
| Long-term liabilities to credit institutions       | 2,484                               | 5,543        | 160                           |          | 8,187              |
| Current liabilities to credit institutions         | 3,178                               | -1,275       |                               |          | 1,903              |
| Other interest-bearing liabilities, long-term      | 11                                  |              |                               | -4       | 7                  |
| Other interest-bearing liabilities, current        | 4                                   | -4           |                               | 4        | 4                  |
| <b>Total liabilities from financing activities</b> | <b>5,677</b>                        | <b>4,264</b> | <b>160</b>                    | <b>0</b> | <b>10,101</b>      |

The Parent Company's changes in liabilities attributable to financing activities constitute, in their entirety, items affecting cash flow.

## Note 11 Business combinations

### Acquisitions, 2016

On 1 June 2016, Boliden Mineral AB acquired all of the shares in Kevitsa Mining Oy and its subsidiary company, FinnEx Oy, from First Quantum. Kevitsa is a nickel-copper mine in Finland. The total consideration on a debt-free basis is USD 712 m together with adjustments for working capital and net debt at closing. The consideration transferred totals SEK 5,961 m after adjustments for working capital and net debt, and has been paid in cash. A final adjustment to the consideration was carried out in October 2016 and entailed a downwards adjustment of the consideration by USD 2 m (SEK 18 m).

The acquisition of Kevitsa is consistent with Boliden's growth strategy and offers the potential for expanding Boliden's operations in the form of a high quality mine that is a good fit for Boliden, both operationally and geographically. The Kevitsa acquisition also provides good synergies with Boliden's existing mining, concentrating, smelting, and regional exploration operations.

The acquisition includes property, plant and equipment comprising existing assets in the mining operations. The acquisition analysis has been confirmed and is final.

Kevitsa's operating profit (EBIT) and (EBITDA) for the period from the acquisition date of 1 June 2016 until 31 December 2016 totalled SEK 166 m and SEK 500 m, respectively. The consolidated EBIT and EBITDA 2016 would have been affected in the sums of SEK 16 m and SEK 408 m, respectively, if the acquisition had taken place on 1 January 2016.

The Group's cost of goods sold for 2016 includes acquisition costs totalling SEK 39 m.

| Purchase price analysis, SEK m                            |               |
|---|---------------|
| Property, plant and equipment                             | 5,577         |
| Financial assets  | 174           |
| Deferred tax assets                                       | 213           |
| Inventories   | 289           |
| Trade and other receivables and other current receivables | 127           |
| Cash and cash equivalents                                 | 37            |
| Other provisions  | -181          |
| Other current liabilities                                 | -273          |
| <b>Net identifiable assets and liabilities</b>            | <b>5,961</b>  |
| Consideration transferred                                 | -5,961        |
| Deducted:   |               |
| Cash and cash equivalents in the company acquired         | 37            |
| <b>Change in the Group's cash and cash equivalents</b>    | <b>-5,925</b> |



**Note 12** Intangible assets

|   | Capitalised<br>development<br>expenses | Patents,<br>licences, and<br>similar rights | Exploration<br>rights | Goodwill     | Total<br>intangible<br>assets |
|---|--|---|-----------------------|--------------|-------------------------------|
| <b>Historical costs</b>   |  |   |                       |              |                               |
| Opening balance 01-01-2016  | 140                                    | 202   | 223                   | 2,958        | 3,523                         |
| Investments   | 8                                      | 6   | –                     | –            | 14                            |
| Sales and retirements   | –                                      | –4  | –                     | –            | –4                            |
| Reclassifications   | 25                                     | 6   | –                     | –            | 30                            |
| Translation differences for the year                                | 4                                      | 10  | 11                    | 128          | 153                           |
| <b>Closing balance 31-12-2016</b>                                   | <b>177</b>                             | <b>219</b>                                  | <b>233</b>            | <b>3,087</b> | <b>3,718</b>                  |
| Opening balance 01-01-2017  | 177                                    | 219   | 233                   | 3,087        | 3,718                         |
| Investments   | 14                                     | 2   | –                     | –            | 20                            |
| Sales and retirements   | –                                      | –1  | –                     | –            | –1                            |
| Reclassifications   | –                                      | 3   | –                     | –            | 3                             |
| Translation differences for the year                                | 3                                      | 7   | 7                     | –1           | 15                            |
| <b>Closing balance 31-12-2017</b>                                   | <b>194</b>                             | <b>229</b>                                  | <b>240</b>            | <b>3,088</b> | <b>3,755</b>                  |
| <b>Amortisation</b>   |  |   |                       |              |                               |
| Opening balance 01-01-2016  | –41                                    | –117  | –                     | –            | –158                          |
| Amortisation for the year   | –34                                    | –14   | –                     | –            | –48                           |
| Sales and retirements   | –                                      | 4   | –                     | –            | 4                             |
| Translation differences for the year                                | –1                                     | –6  | –                     | –            | –7                            |
| <b>Closing balance 31-12-2016</b>                                   | <b>–76</b>                             | <b>–133</b>                                 | <b>–</b>              | <b>–</b>     | <b>–211</b>                   |
| Opening balance 01-01-2017  | –76                                    | –133  | –                     | –            | –211                          |
| Amortisation for the year   | –40                                    | –16   | –                     | –            | –56                           |
| Sales and retirements   | –                                      | 1   | –                     | –            | 1                             |
| Translation differences for the year                                | –2                                     | –4  | –                     | –            | –6                            |
| <b>Closing balance 31-12-2017</b>                                   | <b>–118</b>                            | <b>–152</b>                                 | <b>–</b>              | <b>–</b>     | <b>–272</b>                   |
| <b>Reported value as per Balance Sheet,<br/>31-12-2016</b>          | <b>101</b>                             | <b>86</b>                                   | <b>233</b>            | <b>3,087</b> | <b>3,508</b>                  |
| <b>Reported value as per Balance Sheet,<br/>31-12-2017</b>          | <b>76</b>                              | <b>77</b>                                   | <b>240</b>            | <b>3,088</b> | <b>3,482</b>                  |
| Amortisation according to plan,<br>included in the operating profit |  |   |                       |              |                               |
| 2016  | –34                                    | –14   | –                     | –            | –48                           |
| 2017  | –40                                    | –16   | –                     | –            | –56                           |

**Goodwill**

The Group's goodwill item arose primarily in conjunction with the acquisition of the operations from Outokumpu at the end of December 2003. Goodwill from the 2003 acquisition has principally been allocated to the Group's Smelters segment. Impairment tests have been carried out on the goodwill value in the manner described in Note 13 under Impairment tests – Intangible assets and Property, plant and equipment.

**Emission rights**

The Boliden Group had a surplus of emission rights in 2017 and there was consequently no impact on the Group's financial reports. Emission rights reporting is described in Note 1 Significant accounting and valuation principles.

**Exploration rights**

In 2014, Boliden acquired the exploration rights and mining operations of the Kylylahti copper mine in Finland. The acquisition yielded intangible assets totalling SEK 221 m in respect of exploration rights. No depreciation of these assets has been effected. Acquired exploration rights are adjudged to have an indefinite useful life and that there is no predictable limit on the time period during which the asset is expected to generate net payments to Boliden. Impairment testing in respect of exploration rights is carried out in accordance with IFRS 6 Exploration for and Evaluation of Mineral Resources, and impairment testing is, therefore, only carried out in the presence of an indication that the need to write down an asset exists.

**Note 13** Property, plant and equipment

|   | Buildings and land | Deferred mining costs | Machinery and other technical facilities | Equipment, tools, fixtures and fittings | Work in progress | Total Property, plant and equipment |
|---|--------------------|-----------------------|--|---|------------------|-------------------------------------|
| <b>Historical costs</b>   |                    |                       |  |   |                  |                                     |
| Opening balance 01-01-2016                                      | 8,784              | 11,428                | 36,302                                   | 1,380                                   | 1,684            | 59,577                              |
| Acquisitions  | 825                | 1,895                 | 2,761                                    | 0                                       | 96               | 5,577                               |
| Investments   | 301                | 1,369                 | 1,701                                    | 30                                      | 712              | 4,113                               |
| Capitalised reclamation costs                                   | 50                 | –                     | 537                                      | 7                                       | –                | 594                                 |
| Sales and retirements   | –22                | –                     | –835                                     | –17                                     | –                | –874                                |
| Reclassifications   | 102                | –                     | 248                                      | 23                                      | –404             | –30                                 |
| Translation differences for the year                            | 210                | 122                   | 719                                      | 131                                     | 33               | 1,215                               |
| <b>Closing balance 31-12-2016</b>                               | <b>10,250</b>      | <b>14,813</b>         | <b>41,432</b>                            | <b>1,556</b>                            | <b>2,120</b>     | <b>70,171</b>                       |
| Opening balance 01-01-2017                                      | 10,250             | 14,813                | 41,432                                   | 1,556                                   | 2,120            | 70,171                              |
| Investments   | 288                | 1,597                 | 1,588                                    | 53                                      | 2,043            | 5,569                               |
| Capitalised reclamation costs                                   | –9                 | –                     | 134                                      | 37                                      | –                | 163                                 |
| Sales and retirements   | –17                | –                     | –904                                     | –11                                     | –                | –933                                |
| Reclassifications   | 35                 | –                     | 168                                      | 18                                      | –221             | –                                   |
| Translation differences for the year                            | 60                 | 155                   | 284                                      | –72                                     | 28               | 456                                 |
| <b>Closing balance 31-12-2017</b>                               | <b>10,608</b>      | <b>16,565</b>         | <b>42,703</b>                            | <b>1,580</b>                            | <b>3,970</b>     | <b>75,426</b>                       |
| <b>Depreciation</b>   |                    |                       |  |   |                  |                                     |
| Opening balance 01-01-2016                                      | –4,245             | –5,430                | –20,379                                  | –1,151                                  | –                | –31,205                             |
| Depreciation for the year                                       | –386               | –1,412                | –2,310                                   | –43                                     | –                | –4,151                              |
| Sales and retirements   | 13                 | –                     | 776                                      | 9                                       | –                | 798                                 |
| Reclassifications   | –                  | –                     | –  | –                                       | –                | –                                   |
| Translation differences for the year                            | –127               | –58                   | –467                                     | –111                                    | –                | –763                                |
| <b>Closing balance 31-12-2016</b>                               | <b>–4,745</b>      | <b>–6,900</b>         | <b>–22,380</b>                           | <b>–1,296</b>                           | <b>–</b>         | <b>–35,322</b>                      |
| Opening balance 01-01-2017                                      | –4,745             | –6,900                | –22,380                                  | –1,296                                  | –                | –35,322                             |
| Depreciation for the year                                       | –445               | –1,694                | –2,356                                   | –51                                     | –                | –4,545                              |
| Sales and retirements   | 16                 | –                     | 902                                      | 11                                      | –                | 928                                 |
| Reclassifications   | –                  | –                     | –  | –3                                      | –                | –3                                  |
| Translation differences for the year                            | –23                | –65                   | –144                                     | 60                                      | –                | –172                                |
| <b>Closing balance 31-12-2017</b>                               | <b>–5,198</b>      | <b>–8,659</b>         | <b>–23,978</b>                           | <b>–1,279</b>                           | <b>–</b>         | <b>–39,113</b>                      |
| <b>Reported value, as per Balance Sheet, 31-12-2016</b>         | <b>5,505</b>       | <b>7,913</b>          | <b>19,052</b>                            | <b>260</b>                              | <b>2,120</b>     | <b>34,850</b>                       |
| <b>Reported value, as per Balance Sheet, 31-12-2017</b>         | <b>5,410</b>       | <b>7,907</b>          | <b>18,725</b>                            | <b>301</b>                              | <b>3,970</b>     | <b>36,313</b>                       |
| Depreciation according to plan included in the operating profit |                    |                       |  |   |                  |                                     |
| 2016  | –386               | –1,412                | –2,310                                   | –43                                     | –                | –4,151                              |
| 2017  | –445               | –1,694                | –2,356                                   | –51                                     | –                | –4,545                              |

Capitalised reclamation costs include expenses in relation to the dismantling and removal of assets and the restoration of the sites where the assets are located. Accumulated capitalised reclamation costs total SEK 1,821 m (1,659). Accumulated depreciation totals SEK –433 m (–335). The year's capitalised reclamation costs total SEK 163 m (594) and are attributable to new mining plans resulting from increased ore reserves, primarily at Garpenberg, and to the customary review of reclamation requirements. The change is reported in accordance with IFRIC 1, Changes in Existing Decommissioning, Restoration and Similar Liabilities. The year's reclamation costs are not included in the consolidated key ratios for the year's investments, and have no liquid effect on the Group's cash flow.

Investments in property, plant and equipment include financial leasing in the sum of SEK 0 m (0), see also Note 14 Leasing charges. The same principle applies to financial leasing as to the year's capitalised reclamation costs with regard to key ratios and cash flow.

At the end of the year, there were no material, contractual undertakings to acquire property, plant and equipment to report.

| Interest expenses carried forward included in the residual value according to plan | 31-12-2017            |                  | 31-12-2016            |                  |
|--|-----------------------|------------------|-----------------------|------------------|
|  | Reported value, SEK m | Interest rate, % | Reported value, SEK m | Interest rate, % |
| Rönnskär's expansion, completed 2000   | 28                    | 6.8              | 31                    | 6.8              |
| Odda's expansion, completed 2004   | 5                     | 4.0              | 6                     | 4.0              |
| Aitik's expansion, completed 2011  | 155                   | 2.5              | 168                   | 2.5              |
| Rönnskär, electronic scrap recycling, completed 2012                               | 10                    | 3.2              | 10                    | 3.2              |
| Garpenberg's expansion, completed 2014   | 86                    | 1.7              | 91                    | 1.7              |

### Impairment tests – Intangible assets and Property, plant and equipment

Impairment tests are carried out yearly, or throughout the year if an event occurs that may result in an impairment requirement, and are based on the Group's annual budget and strategic planning work. The planning horizon is the estimated lifespan of each mine – typically between 5 and 30 years – and 10 years for smelters. Boliden's operations are characterised by long-term production plans in which every mine has set production plans for the entire estimated lifespan of the mine in question, while a substantial part of the smelters' concentrate supply is regulated by means of long-term delivery agreements. This long-term production planning also enables the use of long-term cash flow forecasts. Additional growth assumptions are not included in extrapolated cash flow forecasts beyond the planning horizon, and smelters' cash flows from year eleven onwards are, therefore, extrapolated using year ten as a base, after which no growth is taken into account.

The value of discounted cash flows is highly sensitive to metal prices, treatment and refining charges (TC/RC), and exchange rates (see sensitivity table on page 56 of the Risk management section of the Directors' Report). The present value of estimated future cash flows is based on the budget and planning prices adopted by the Board of Directors. Planning prices for the first year comprise futures prices on metals and currency markets. The long-term planning prices used in year two and thereafter consist of an anticipated average price over a single business cycle, generally 10 years. The long-term planning prices are based on internal and external analyses, primarily with regard to anticipated demand for metals and margin costs for metal producers. The long-term planning prices are compared with average long-term prices from different market players, such as industry analysts and other mining and smelting companies. The Group does not believe that futures prices from base metals markets are good indicators of long-term price trends, in that they are heavily dependent on spot prices.

The long-term real planning prices are currently as listed in the table below.

|        | 2017             |                            |         |                |              | 2016             |                            |             |                |  |
|--------|------------------|----------------------------|---------|----------------|--------------|------------------|----------------------------|-------------|----------------|--|
|        | Metal prices     | Treatment/refining charges |         | Exchange rates |              | Metal prices     | Treatment/refining charges |             | Exchange rates |  |
| Copper | USD 6,200/t      | USD 80/t                   | USc 8.0 | Usc/lb.        | USD/SEK 7.50 | USD 6,200/t      | USD 80/t                   | USc 8.0/lb. | USD/SEK 7.50   |  |
| Zinc   | USD 2,200/t      |                            |         | USD 180        | USD/NOK 7.14 | USD 2,200/t      | USD 210 base               | USD 2,200   | USD/NOK 7.50   |  |
| Lead   | USD 2,100/t      |                            |         | USD 215        | EUR/USD 1.15 | USD 2,100/t      |                            | USD 215     | EUR/USD 1.15   |  |
| Nickel | USD 16,000/t     |                            |         |                |              | USD 16,000/t     |                            |             |                |  |
| Gold   | USD 1,200/tr.oz. |                            |         |                |              | USD 1,100/tr.oz. |                            |             |                |  |
| Silver | USD 18.0/tr.oz.  |                            |         |                |              | USD 18.0/tr.oz.  |                            |             |                |  |

Individual mines or mining areas with centralised concentrating facilities, copper smelters, zinc smelters, Boliden Bergsöe AB and Boliden Commercial AB are classified as cash-generating units. The discounted real cash flows before tax for the respective cash-generating units are compared with the book value of capital employed. The cash flows are discounted with a real discount rate before tax of 9% (9), which corresponds to the weighted capital cost. The Group's goodwill is allocated to Segment Smelters, rather than to cash-generating units, in accordance with monitoring of goodwill. The value in use of the Group's assets is held to exceed the reported values and no impairment requirement is consequently deemed to exist.

An increase in the discount rate of one percentage point would not give rise to any impairments. A lowering of all long-term planning

prices for metals by 10% would not result in any impairment requirements for Segment Smelters, while for Segment Mines, a corresponding lowering would result in the book value exceeding the discounted cash flows in respect of a cash-generating unit. Nor, if the long-term planning prices for metals remain unchanged, would a 10% weakening of the US dollar against all other currencies occasion an impairment requirement for Segment Mines or Smelters. The calculation does not include any compensatory movements in metal prices, TC/RC, or the prices of by-products or input goods, which has historically often been the case. A 10% fall in TC/RC for all metals would not result in any impairment requirement in Segment Smelters. For Segment Mines, the same fall would have a positive effect.

### Note 14 Leasing charges

#### Group

| Assets held via operational leasing agreements      | 2017 | 2016 |
|---|------|------|
| Leasing charges paid during the financial year      | 59   | 21   |
| Contracted future leasing charges                   |      |      |
| Maturity within one year                            | 76   | 17   |
| Maturity later than one year, but within five years | 23   | 19   |
| Maturity later than five years                      | 0    | 0    |

| Assets held via financial leasing agreements | 2017 | 2016 |
|--|------|------|
| Machinery and other equipment                |      |      |
| Historical cost                              | 39   | 45   |
| Accumulated depreciation                     | -30  | -30  |
| Closing value on 31 December                 | 10   | 15   |

The companies with financial leasing agreements are Boliden Kylylahti OY and Kokkolan Teollisuusvesi OY. Kylylahti's leasing agreements refer to mining machinery. Kokkolan has an agreement in respect of usufruct for active carbon filters for ionized water replacement systems and domestic water supply. See Note 26 for details of future leasing charges.

**Note 15** Participations in Group companies

Specification of the Parent Company's and the Group's holdings of participations in Group companies

| Subsidiary/Co. reg. no./Registered office  | 31-12-2017                |                          |              |                    |
|--|---------------------------|--------------------------|--------------|--------------------|
|  | Shares/<br>participations | Percent-<br>age<br>share | Book value   | Book value<br>2016 |
| Boliden Limited, 3977366, Toronto, Canada  | 85,811,638                | 100                      | –            | –                  |
| Boliden Power Ltd, 700245, Toronto, Canada                                       |                           |                          |              |                    |
| Ontario Inc, 1393512, Toronto, Canada  |                           |                          |              |                    |
| Boliden BV, 18048775, Drunen, Netherlands  |                           |                          |              |                    |
| Boliden Apirsa S.L under liquidation, ESB-41518028, Aznalcóllar (Seville), Spain |                           |                          |              |                    |
| Boliden Mineral AB, 556231-6850, Skellefteå                                      | 1,650,000                 | 100                      | 3,911        | 3,911              |
| Boliden Harjavalta Oy, 1591739-9, Harjavalta, Finland                            |                           |                          |              |                    |
| Boliden Kokkola Oy, 0772004-3, Kokkola, Finland                                  |                           |                          |              |                    |
| Kokkolan Teollisuusvesi OY, 2558533-2, Kokkola, Finland                          |                           |                          |              |                    |
| Boliden Commercial AB, 556158-2205, Stockholm                                    |                           |                          |              |                    |
| Boliden Commercial UK Ltd, 5723781, Warwickshire, UK                             |                           |                          |              |                    |
| Boliden Commercial Deutschland GmbH, 165903, Neuss, Germany                      |                           |                          |              |                    |
| Tara Mines Holding DAC, 60135, Navan, Ireland                                    |                           |                          |              |                    |
| Boliden Tara Mines DAC, 33148, Navan, Ireland                                    |                           |                          |              |                    |
| APC Properties DAC, 361022, Navan, Ireland                                       |                           |                          |              |                    |
| Irish Mine Development Ltd, 174811, Navan, Ireland                               |                           |                          |              |                    |
| Tara Prospecting Ltd, 34434, Navan, Ireland                                      |                           |                          |              |                    |
| Tara Exploration and Development Company Ltd, E1292, Navan, Ireland              |                           |                          |              |                    |
| Dowth Investment Holdings Ltd, 338698, Toronto, Canada                           |                           |                          |              |                    |
| Boliden Odda AS, 911177870, Odda, Norway   |                           |                          |              |                    |
| Boliden Bergsøe AB, 556041-8823, Landskrona                                      |                           |                          |              |                    |
| Boliden Bergsøe AS, 20862149, Glostrup, Denmark                                  |                           |                          |              |                    |
| Kuhmo Nickel Ltd, 05311516, London, UK   |                           |                          |              |                    |
| Boliden Kylylahti Oy, 1925412-3, Polvijärvi, Finland                             |                           |                          |              |                    |
| Vulcan Exploration BV, 821652345, Amsterdam Zuidoost, Netherlands                |                           |                          |              |                    |
| Kuhmo Metals Oy, 1925450-2, Polvijärvi, Finland                                  |                           |                          |              |                    |
| Boliden Kevitsa Mining Oy, 2345699-1, Sodankylä, Finland                         |                           |                          |              |                    |
| Boliden FinnEx Oy, 2345662-5, Sodankylä, Finland                                 |                           |                          |              |                    |
| Other subsidiaries, dormant or of lesser significance                            |                           |                          |              |                    |
|  |                           |                          | <b>3,911</b> | <b>3,911</b>       |

The Parent Company, Boliden AB, has received a dividend totalling SEK 3,000 m (0) from Boliden Mineral AB during the year.  
On 1 June 2016, Boliden Mineral AB acquired 100% of the shares in Boliden Kevitsa Mining Oy and its subsidiary company Boliden FinnEx Oy.  
For additional information, see Note 11.

**Note 16** Participations in associated companies

|   | 31-12-2017 |           | 31-12-2016 |           |
|---|------------|-----------|------------|-----------|
| Book value at beginning of year                     |            | 25        |            | 22        |
| Exchange rate differences                           |            | –2        |            | 0         |
| Share in associated companies' profits for the year |            | 6         |            | 3         |
| <b>Book value at year-end</b>                       |            | <b>29</b> |            | <b>25</b> |

|                            | Co. reg. no. | Registered office | Number of<br>participations | Percentage<br>share | Value of equity<br>share in the Group |
|----------------------------|--------------|-------------------|-----------------------------|---------------------|---------------------------------------|
| Indirectly owned           |              |                   |                             |                     |                                       |
| KIP Service OY             | 2240650-3    | Kokkola           | 3,280                       | 46                  | 8                                     |
| Aitik EcoBallast AB        | 556726-2299  | Gällivare         | 500                         | 50                  | 16                                    |
| KB Aitik EcoBallast        | 969731-9748  | Gällivare         | 1,000                       | 50                  | –                                     |
| Industrikraft i Sverige AB | 556761-5371  | Stockholm         | 20,000                      | 20                  | 5                                     |
|                            |              |                   |                             |                     | <b>29</b>                             |



**Note 17 Tax**

| <b>Current tax expenses</b>   | <b>2017</b>   | <b>2016</b>   |
|---|---------------|---------------|
| Tax expenses for the period   | -1,769        | -953          |
| Adjustment of tax attributable to previous years  | 19            | -5            |
|   | <b>-1,750</b> | <b>-958</b>   |
| <b>Deferred tax expenses (-) /tax income (+)</b>  |               |               |
| Deferred tax income/tax expenses in respect of temporary differences  | -3            | -275          |
| Deferred tax income in fiscal value capitalised during the year in loss carry forward deductions                            | 21            | 98            |
| Deferred tax expense resulting from the utilisation of previously capitalised fiscal value in loss carry forward deductions | -149          | -             |
|   | <b>-131</b>   | <b>-177</b>   |
| <b>Total reported tax expenses (-) /tax income (+)</b>  | <b>-1,881</b> | <b>-1,135</b> |
| <b>Reconciliation of effective tax</b>  |               |               |
| Reported profit before tax  | 8,737         | 5,375         |
| Tax according to current taxation rate  | -1,907        | -1,184        |
| Fiscal effect of non-deductible expenses  | -18           | -52           |
| Fiscal effect of non-taxable income   | 2             | 8             |
| Market valuation of deferred tax assets   | 2             | 0             |
| Capitalised fiscal value in loss carry forward deductions   | 21            | 98            |
| Adjustment of tax attributable to previous years  | 19            | -5            |
| <b>Total reported tax expenses</b>  | <b>-1,881</b> | <b>-1,135</b> |

Tax expenses comprise 21.5% (21.1) of the Group's pre-tax profit. The anticipated tax expense for 2017 of 21.8% (22.0) has been calculated given the current Group structure and applicable taxation rates in the respective countries.

**Deferred tax assets/tax liability**

The tax assets reported in the Balance Sheet and the provision for deferred tax relates to the following assets and liabilities.

| <b>Group</b>                                   | <b>31-12-2017</b>          |                               |               | <b>31-12-2016</b>          |                               |               |
|--|----------------------------|-------------------------------|---------------|----------------------------|-------------------------------|---------------|
|  | <b>Deferred tax assets</b> | <b>Deferred tax liability</b> | <b>Net</b>    | <b>Deferred tax assets</b> | <b>Deferred tax liability</b> | <b>Net</b>    |
| Intangible assets                              | 5                          | -1                            | 4             | 1                          | -1                            | -             |
| Buildings and land                             | 133                        | -105                          | 28            | 103                        | -143                          | -40           |
| Machinery and fixtures and fittings            | 1                          | -2,892                        | -2,891        | 1                          | -2,766                        | -2,765        |
| Deferred mining costs                          | -                          | -412                          | -103          | -                          | -227                          | -227          |
| Other property, plant and equipment            | 39                         | -5                            | 19            | 1                          | -101                          | -100          |
| Inventories                                    | 52                         | -329                          | -277          | 20                         | -356                          | -336          |
| Long-term liabilities                          | 228                        | -40                           | 188           | 387                        | -1                            | 386           |
| Current liabilities                            | 2                          | -1                            | 1             | 21                         | -1                            | 20            |
| Tax losses carried forward                     | -                          | -                             | -             | 152                        | -                             | 152           |
| <b>Total</b>                                   | <b>484</b>                 | <b>-3,515</b>                 | <b>-3,031</b> | <b>686</b>                 | <b>-3,596</b>                 | <b>-2,910</b> |
| Offset within companies                        | -426                       | 426                           | -             | -534                       | 534                           | -             |
| <b>Total deferred tax assets/tax liability</b> | <b>58</b>                  | <b>-3,089</b>                 | <b>-3,031</b> | <b>152</b>                 | <b>-3,062</b>                 | <b>-2,910</b> |

**Change in deferred tax in respect of temporary differences and tax losses carried forward**

| <b>Group 2017</b>                   | <b>Amount at the beginning of the year</b> | <b>Reported in the Income Statement</b> | <b>Reported in the Other comprehensive income</b> | <b>Translation difference</b> | <b>Amount at year-end</b> |
|-------------------------------------|--|---|---|-------------------------------|---------------------------|
| Intangible assets                   | -  | 4                                       | -   | -                             | 4                         |
| Buildings and land                  | -40  | 74                                      | -   | -6                            | 28                        |
| Machinery and fixtures and fittings | -2,765                                     | -129                                    | -2  | 5                             | -2,891                    |
| Deferred mining costs               | -227                                       | 128                                     | -   | -4                            | -103                      |
| Other property, plant and equipment | -100                                       | 119                                     | -   | -                             | 19                        |
| Inventories                         | -336                                       | 59                                      | -   | -                             | -277                      |
| Long-term liabilities               | 386  | -214                                    | 23  | -7                            | 188                       |
| Current liabilities                 | 20   | -19                                     | -   | -                             | 1                         |
| Tax losses carried forward          | 152  | -153                                    | -   | 1                             | -                         |
| <b>Total</b>                        | <b>-2,910</b>                              | <b>-131</b>                             | <b>21</b>   | <b>-11</b>                    | <b>-3,031</b>             |

**Change in deferred tax in respect of temporary differences and tax losses carried forward**

| Group 2016                          | Amount at the beginning of the year | Acquisitions | Reported in the Income Statement | Reported in the Other comprehensive income | Translation difference | Amount at year-end |
|-------------------------------------|-------------------------------------|--------------|----------------------------------|--|------------------------|--------------------|
| Intangible assets                   | –                                   | –            | –                                | –  | –                      | –                  |
| Buildings and land                  | 9                                   | –            | –58                              | –  | 9                      | –40                |
| Machinery and fixtures and fittings | –2,714                              | –            | –21                              | –1   | –29                    | –2,765             |
| Deferred mining costs               | –189                                | –73          | 45                               | –  | –10                    | –227               |
| Other property, plant and equipment | –3                                  | 21           | –116                             | –  | –2                     | –100               |
| Inventories                         | –279                                | –            | –57                              | –  | –                      | –336               |
| Long-term liabilities               | 252                                 | 35           | –14                              | 112  | 1                      | 386                |
| Current liabilities                 | –18                                 | –            | 20                               | 18   | –                      | 20                 |
| Tax losses carried forward          | –                                   | 123          | 24                               | –  | 5                      | 152                |
| <b>Total</b>                        | <b>–2,942</b>                       | <b>106</b>   | <b>–177</b>                      | <b>129</b>                                 | <b>–26</b>             | <b>–2,910</b>      |

**Tax losses carried forward**

Unutilised tax losses carried forward for which deferred tax assets have not been reported totalled SEK 107 m (135) in Canada on 31 December 2017, of which SEK 2 m matures in 2027, and the remaining SEK 105 m between 2028 and 2037.

**Tax paid by country**

|         | 2017         | 2016       |
|---------|--------------|------------|
| Sweden  | 788          | 339        |
| Finland | 305          | 317        |
| Ireland | 287          | –23        |
| Norway  | 74           | 75         |
| Other   | 3            | 1          |
|         | <b>1,457</b> | <b>709</b> |

**Note 18 Inventories**

|                                   | 31-12-2017   | 31-12-2016    |
|-----------------------------------|--------------|---------------|
| Raw materials and consumables     | 5,079        | 5,496         |
| Goods under manufacture           | 2,710        | 2,843         |
| Finished goods and tradable goods | 1,712        | 1,737         |
|                                   | <b>9,500</b> | <b>10,077</b> |

**Note 19 Trade and other receivables**

On 31 December 2017, trade and other receivables falling due for payment in more than 30 days totalled SEK 18 m (13), corresponding to 1.0% (1.0) of the total trade and other receivables. The maturity structure is shown in the following table:

|                                      | 31-12-2017   | 31-12-2016   |
|--------------------------------------|--------------|--------------|
| Trade and other receivables, not due | 2,031        | 1,796        |
| Due: 0–30 days                       | 275          | 206          |
| Due: 31–60 days                      | 13           | 12           |
| Due: 61–90 days                      | 4            | 1            |
| Due: >90 days                        | 1            | 0            |
|                                      | <b>2,324</b> | <b>2,017</b> |

The majority of the Group's trade and other receivables relate to European customers. Trade and other receivables in foreign currencies have been valued at the closing day rate. Note 2, Information per business segment and geographical market shows the breakdown of revenues by geographical area. Trade and other receivables are only written down to a minor extent and doubtful receivables total only small amounts. Confirmed bad debt losses are insignificant. For information on the management of credit risks, see the section entitled Credit risks in trade and other receivables on page 59 that forms part of the Risk management section of the Directors' Report.

**Note 20 Other current receivables**

|   | 31-12-2017   | 31-12-2016   |
|---|--------------|--------------|
| Energy taxes                              | 245          | 167          |
| Other prepaid expenses and accrued income | 164          | 134          |
| VAT recoverable                           | 673          | 604          |
| Other current receivables                 | 206          | 192          |
|   | <b>1,288</b> | <b>1,097</b> |

**Note 21 Related Party Disclosures****Relationships**

The Parent Company's directly owned subsidiaries are reported in Note 15, Participations in Group companies, while its participations in associated companies are reported in Note 16, Participations in Associated companies. Information regarding the Members of the Board and Group management, and the remuneration paid to the same, is presented in Note 3, Employees and personnel costs and in the Corporate Governance Report on pages 66–67.

**Transactions**

No Member of the Board or senior executive in the Group participates or has participated, directly or indirectly, in any business transactions during the current or previous financial year between them-

selves and the Group which are or were unusual in nature with regard to their terms. Nor has the Group granted loans, issued guarantees or provided sureties to any of the Members of the Board or senior executives of the Company.

The Parent Company, Boliden AB, has received a dividend totalling SEK 3,000 m (O) from Boliden Mineral AB during the year.

## Note 22 Equity

| Share capital   | 31-12-2017         | 31-12-2016         |
|---|--------------------|--------------------|
| Opening number of shares  | 273,511,169        | 273,511,169        |
| Change during the year  | –                  | –                  |
| <b>Closing number of shares</b>   | <b>273,511,169</b> | <b>273,511,169</b> |
| Nominal value, SEK  | 578,914,338        | 578,914,338        |
| Nominal value per share   | 2.12               | 2.12               |
| Equity, SEK m   | 31-12-2017         | 31-12-2016         |
| Share capital   | 579                | 579                |
| Total equity  | 35,053             | 29,394             |
| Equity attributable to the owners of the Parent Company                         | 35,044             | 29,386             |
| Equity per share, SEK   | 128.13             | 107.44             |
| Earnings per share  | 2017               | 2016               |
| Net profit for the year attributable to the owners of the Parent Company, SEK m | 6,854              | 4,237              |
| Average number of shares, basic and diluted                                     | 273,511,169        | 273,511,169        |
| Number of own shares held   | –                  | –                  |
| <b>Earnings per share, SEK</b>  | <b>25.06</b>       | <b>15.49</b>       |

### Equity

The Articles of Association for Boliden AB state that the share capital shall comprise a minimum of SEK 150 m and a maximum of SEK 600 m. The share capital comprises a single class of share.

There are no potential shares and hence no dilution effect.

The Annual General Meeting of the Company's shareholders held on 25 April 2017 resolved to pay a dividend of SEK 5.25 per share, equivalent to a total payment of SEK 1,435,933,637.

Boliden's Board of Directors will propose to the Annual General Meeting that a dividend of SEK 8.25 (5.25) per share be paid, equivalent to a total of SEK 2,256,467,144. Boliden's dividend policy stipulates that approximately one third of the net profit after tax shall be disbursed in the form of dividends.

The Board of Directors of Boliden also proposes that the Annual General Meeting approve an automatic share redemption procedure whereby every share is divided into one ordinary share and one redemption share. The redemption share will then automatically be redeemed for SEK 5.75 per share, corresponding to a total of SEK 1,573 m.

This, in combination with the proposed ordinary dividend, will, subject to the approval of the AGM, mean that shareholders receive SEK 14.00 per share, corresponding to a total of SEK 3,829 m.

### Earnings per share

Earnings per share are calculated by dividing the profit for the period attributable to the owners of the Parent Company by the average number of shares.

### Asset management

Boliden's managed assets comprise equity. Consolidated equity is presented on page 73, along with a description of the content of the various capital categories. There are no other external capital requirements than those mandated in the Swedish Companies Act.

Boliden monitors its capital structure with the aid of the net debt/equity ratio, amongst other things. The net debt/equity ratio is calculated as the net of interest-bearing provisions and liabilities minus financial assets including cash and cash equivalents divided by equity.

See page 10 for details of Boliden's dividend policy and net debt target.

## Note 23 Provisions for pensions and similar undertakings

Boliden has established pension plans in the countries in which the company operates. The pension plans include both defined benefit and defined contribution plans. The defined benefit plans provide the employee with a fixed amount of their final salary in conjunction with retirement. Boliden's defined benefit plans are mainly operated in Sweden and Ireland, with a very small number also operated in Norway and Finland. The defined contribution plans comply with local regulations in the respective countries. Boliden has defined contribution plans in Sweden, Ireland, Finland and Norway.

### Sweden

Boliden's pension undertakings in Sweden are not invested in funds. The pension undertakings are secured through the Swedish PRI/FPG system and through insurance companies. The majority of the pension undertakings for salaried employees are secured through insurances with Alecta and are lifelong retirement pensions. The benefits offered by the lifelong pensions are determined using different percentages for different salary intervals. Alecta has not provided sufficient information for 2017 for the ITP plan (supplementary pensions for salaried employees) to be reported as a defined benefit plan, and it is consequently reported in accordance with UFR 10 as a defined contribution plan. A surplus in Alecta can be allocated to the policyholders and/or those insured. At the end of the year, Alecta's collective consolidation level was 154% (149). The collective consolidation level comprises the market value of Alecta's assets as a percentage of the insurance undertakings calculated in accordance with Alecta's actuarial calculation assumptions, which do not correspond with those of IAS 19. Boliden's pension undertakings account for only a very small percentage of Alecta's insurance undertakings. There are, in addition to the ITP plan, a few previously earned temporary retirement pensions within Boliden.

"Gruvplanen" (GP) is a pension agreement for underground workers. The plan grants underground workers entitlement to receive a pension between the ages of 60 and 65 and between 65 and 70 under certain preconditions based on an average income. The "Gruvplanen" plan was closed to new earners in 2011 and replaced by a defined contribution pension plan (GLP). The commitments change from vesting to non-vesting in conjunction with retirement.

### Ireland

The pension undertaking is secured by the transfer of funds to four defined benefit plans and one defined contribution plan. The defined benefit plans are closed to new employees. The pension plans are controlled by the Irish Pensions Board and Irish Pensions Legislation. All defined benefit plans are invested in funds. The largest defined benefit plan and the defined contribution pension plan have Board Members from both the company and the members. Boliden has appointed the Irish Pension Trust to manage the other defined benefit plans.

The financial position of the pension plans is reviewed every three years by an actuary in order to determine the requisite financing level. When a pension plan is deemed to be in deficit, which is currently the case for the four defined benefit plans, a financing proposal must be submitted to the Irish Pension Board in order to demonstrate how the deficit will be cleared. The actuary also ensures that Boliden receives annual reports on the financial position in accordance with accounting requirements. Payments are made to all five plans through a combination of contributions from both Boliden and employees in accordance with employment contracts. No other deposits are made.

It was decided, in 2016, that the largest defined benefit pension plan would be converted to a defined contribution plan. The conversion of the pension plan resulted in a net effect on the result of SEK 224 m in 2016. The amounts are reported gross under the Settlements/curtailments in pension plans and Cost of defined contribution pension plans items.

The Board of the pension plans is responsible for investments in plan assets. The majority of the shares are invested in companies operating in the health care, financial services and raw materials sectors that are based in North America (56%) and Europe (33%), and which are measured against sector indices and other benchmarks. Some of the assets are invested in index funds. A significant share of the assets, 55%, is invested in European government bonds in order

to reduce the risk. Cash and cash equivalents are held in order to facilitate pension disbursements.

#### Norway

The pension undertaking is primarily secured by means of defined contribution pension plans in that Boliden wound up the majority of the defined benefit plans in 2012. The defined benefit plan only comprises the operations manager. Other employees in Norway are covered by a defined contribution plan that covers all employees and a contractual early retirement pension (AFP) with supplementary benefits from the ages of 62 to 67.

#### Events during the year

The current value of Boliden's pension undertaking is slightly higher than last year's level (recalculated), largely due to the effect of amended assumptions. The market value of the plan assets increased when the effect of the settlement in Ireland last year was felt.

The Group's reported pension liability totals SEK 943 m (925), which includes endowment insurance and similar undertakings totalling SEK 104 m (94) in respect of defined contribution pension plans in Sweden.

#### Actuarial assumptions during the year

Costs, undertakings and other factors in pension plans are calculated by means of the Projected Unit Credit Method, using the assumptions shown in the table below.

The discount rate is established for every geographical market with reference to the market return on company bonds on the closing day. In Sweden, where there is no functioning market for such bonds, the market return on housing bonds has been used and a premium for a longer term added, based on the duration of the pension undertakings.

The financing cost of the net pension liability is calculated using the discount rate and is reported under Boliden's net financial item.

| Actuarial assumptions (weighted averages) | Sweden |      | Ireland |      | Other   |         |
|---|--------|------|---------|------|---------|---------|
|   | 2017   | 2016 | 2017    | 2016 | 2017    | 2016    |
| Discount rate, %                          | 2.60   | 2.50 | 1.70    | 1.50 | 1.3–2.6 | 1.3–2.7 |
| Future pay increases, %                   | 2.50   | 2.50 | 1.75    | 1.50 | 2.3–2.5 | 2.3–2.5 |
| Future pension increases, %               | 1.75   | 1.50 | 1.75    | 1.50 | 1.50    | 1.50    |
| <b>Life expectancy</b>                    |        |      |         |      |         |         |
| Women                                     | 89     | 89   | 90      | 90   | 90      | 90      |
| Men                                       | 87     | 87   | 88      | 88   | 86      | 86      |

| Specification of provisions for pensions                       | Sweden     |            | Ireland   |            | Other     |           | Total      |            |
|--|------------|------------|-----------|------------|-----------|-----------|------------|------------|
|  | 2017       | 2016       | 2017      | 2016       | 2017      | 2016      | 2017       | 2016       |
| <b>Pension undertaking at the beginning of the year</b>        | <b>766</b> | <b>737</b> | <b>51</b> | <b>237</b> | <b>14</b> | <b>11</b> | <b>831</b> | <b>985</b> |
| Reclassifications  | –          | –          | –         | –          | –         | 6         | –          | 6          |
| Defined benefit plan costs                                     | 52         | 56         | 5         | –400       | 9         | 4         | 66         | –340       |
| Revaluations recognised in Other comprehensive income          | 20         | 11         | –8        | 262        | –         | –         | 12         | 274        |
| Payments and disbursements                                     | –40        | –38        | –18       | –57        | –7        | –6        | –66        | –101       |
| Translation differences  | –          | –          | 1         | 9          | –2        | –1        | –2         | 8          |
| <b>Pension undertaking at the end of the year<sup>1)</sup></b> | <b>797</b> | <b>766</b> | <b>30</b> | <b>51</b>  | <b>13</b> | <b>14</b> | <b>840</b> | <b>831</b> |
| Endowment insurance and similar undertakings                   | 104        | 94         | –         | –          | –         | –         | 104        | 94         |
| <b>Net debt, as per Balance Sheet<sup>2)</sup></b>             | <b>901</b> | <b>860</b> | <b>30</b> | <b>51</b>  | <b>13</b> | <b>14</b> | <b>943</b> | <b>925</b> |

#### Specification of provisions for pensions, as per 31 December

|  |            |            |           |           |           |           |            |            |
|--|------------|------------|-----------|-----------|-----------|-----------|------------|------------|
| Pension undertakings, funded                 | –          | –          | 272       | 283       | 23        | 21        | 294        | 304        |
| Pension undertakings, unfunded               | 797        | 766        | –         | –         | 8         | 9         | 805        | 775        |
| Fair value of plan assets                    | –          | –          | –243      | –232      | –17       | –16       | –260       | –248       |
| <b>Pension undertakings</b>                  | <b>797</b> | <b>766</b> | <b>30</b> | <b>51</b> | <b>13</b> | <b>14</b> | <b>839</b> | <b>831</b> |
| Endowment insurance and similar undertakings | 104        | 94         | –         | –         | –         | –         | 104        | 94         |
| <b>Net debt, as per Balance Sheet</b>        | <b>901</b> | <b>860</b> | <b>30</b> | <b>51</b> | <b>13</b> | <b>14</b> | <b>943</b> | <b>925</b> |

#### Specification of costs

|  |            |            |           |             |            |            |            |             |
|--|------------|------------|-----------|-------------|------------|------------|------------|-------------|
| <b>Cost of defined benefit plans</b>       |            |            |           |             |            |            |            |             |
| Current service cost                       | 35         | 35         | 2         | 25          | 9          | 4          | 46         | 64          |
| Past service cost                          | –          | –          | –         | –           | –          | –          | –          | –           |
| Interest expense on undertaking            | 17         | 20         | 4         | 27          | –          | 0          | 22         | 47          |
| Interest income from plan assets           | –          | –          | –3        | –23         | –          | –          | –3         | –23         |
| Special payroll tax and other tax          | 0          | 1          | –         | –           | –          | –          | 0          | 1           |
| Administrative costs and premiums paid     | –          | –          | 2         | 3           | –          | 0          | 2          | 3           |
| Settlements/curtailments of pension plans  | –          | –          | –         | –432        | –          | –          | –          | –432        |
| <b>Total cost of defined benefit plans</b> | <b>52</b>  | <b>56</b>  | <b>5</b>  | <b>–400</b> | <b>9</b>   | <b>4</b>   | <b>66</b>  | <b>–340</b> |
| Cost of defined contribution plans         | 53         | 50         | 68        | 230         | 165        | 156        | 286        | 436         |
| <b>Total pension costs</b>                 | <b>105</b> | <b>106</b> | <b>73</b> | <b>–170</b> | <b>174</b> | <b>160</b> | <b>352</b> | <b>96</b>   |

<sup>1)</sup> Undertakings in Sweden include undertakings in accordance with PRI/FGI totalling SEK 501 m (449), undertakings for underground workers totalling SEK 212 m (236), and other undertakings totalling SEK 1 m (1).

<sup>2)</sup> The pension liability reported in the Balance Sheet includes not only the defined benefit pension undertaking and endowment insurance but also special payroll tax in Sweden.



|   | Sweden      |             | Ireland     |             | Other       |             | Total        |              |
|---|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|
| <b>Reconciliation of pension undertaking</b>  | <b>2017</b> | <b>2016</b> | <b>2017</b> | <b>2016</b> | <b>2017</b> | <b>2016</b> | <b>2017</b>  | <b>2016</b>  |
| Present value of undertakings at the beginning of the year  | 766         | 737         | 283         | 2,197       | 30          | 11          | 1,079        | 2,945        |
| Reclassifications   | –           | –           | –           | –           | –           | 20          | –            | 20           |
| Current service cost  | 35          | 35          | 2           | 25          | 9           | 5           | 46           | 65           |
| Past service cost   | –           | –           | –           | –           | –           | –           | –            | –            |
| Interest expense on undertaking   | 17          | 20          | 4           | 27          | –           | 0           | 22           | 47           |
| Special payroll tax   | 0           | 1           | –           | –           | –           | –           | 0            | 1            |
| Fees from plan participants   | –           | –           | 0           | 7           | –           | –           | –            | 7            |
| Revaluation of defined benefit pension liability recognised in Other comprehensive income                       | 20          | 11          | –2          | 274         | –           | –           | 18           | 285          |
| <i>of which profit/loss as a result of financial assumptions</i>  | 8           | 22          | –4          | 223         | –           | –           | 4            | 245          |
| <i>of which profit/loss as a result of experience-based assumptions</i>   | 12          | –11         | 2           | 52          | –           | –           | 14           | 40           |
| Disbursements made  | –40         | –38         | –18         | –35         | –7          | –7          | –66          | –80          |
| <b>Disbursements in conjunction with terminations</b>   |             |             |             |             |             |             |              |              |
| Curtailments and settlements  | –           | –           | –           | –2,298      | –           | –           | –            | –2,298       |
| Translation differences   | –           | –           | 4           | 85          | –2          | 1           | 1            | 85           |
| <b>Present value of undertakings at the end of the year</b>   | <b>797</b>  | <b>766</b>  | <b>272</b>  | <b>283</b>  | <b>30</b>   | <b>30</b>   | <b>1,099</b> | <b>1,079</b> |
| <b>Endowment insurance and similar undertakings</b>   | <b>104</b>  | <b>94</b>   | <b>–</b>    | <b>–</b>    | <b>–</b>    | <b>–</b>    | <b>104</b>   | <b>94</b>    |
| <i>of which amounts attributable to active employees</i>  | 487         | 376         | 35          | 32          | 21          | 17          | 543          | 425          |
| <i>of which amounts attributable to holders of paid up policies</i>   | 175         | 142         | 10          | 18          | –           | –           | 184          | 160          |
| <i>of which amounts attributable to retired employees</i>   | 235         | 168         | 227         | 232         | 9           | 13          | 471          | 413          |
| <b>Reconciliation of plan assets</b>  |             |             |             |             |             |             |              |              |
| Fair value of plan assets at the beginning of the year  | –           | –           | 232         | 1,960       | 16          | 0           | 248          | 1,960        |
| Reclassifications   | –           | –           | –           | –           | –           | 14          | –            | 14           |
| Interest income on plan assets  | –           | –           | 3           | 23          | –           | 0           | 3            | 24           |
| Return on plan assets excluding amounts included in net interest items recognised in Other comprehensive income | –           | –           | 6           | 13          | –           | –           | 6            | 13           |
| Fees from the employer excluding disbursements in conjunction with terminations                                 | –           | –           | 18          | 57          | –           | –1          | 18           | 56           |
| Fees from plan participants   | –           | –           | 0           | 7           | –           | –           | 0            | 7            |
| Disbursements made  | –           | –           | –18         | –35         | –           | –           | –18          | –35          |
| Administrative costs, tax and premiums paid   | –           | –           | –2          | –4          | –           | 1           | –2           | –4           |
| Curtailments and settlements  | –           | –           | –           | –1,866      | –           | –           | –            | –1,866       |
| Translation differences   | –           | –           | 5           | 77          | 1           | 2           | 6            | 79           |
| <b>Fair value of plan assets at the end of the year</b>   | <b>–</b>    | <b>–</b>    | <b>243</b>  | <b>232</b>  | <b>17</b>   | <b>16</b>   | <b>260</b>   | <b>248</b>   |
| <b>Net debt, as per Balance Sheet<sup>1)</sup></b>  |             |             |             |             |             |             | <b>943</b>   | <b>925</b>   |

<sup>1)</sup> Including endowment insurance and similar undertakings totalling SEK 104 m (94).

#### Specification of plan assets

|                                  |          |          |            |            |           |           |            |            |
|----------------------------------|----------|----------|------------|------------|-----------|-----------|------------|------------|
| Listed shares and participations | –        | –        | 105        | 97         | –         | –         | 105        | 97         |
| Interest-bearing securities      | –        | –        | 133        | 125        | –         | –         | 133        | 125        |
| Cash and cash equivalents        | –        | –        | 1          | 5          | –         | –         | 1          | 5          |
| Other                            | –        | –        | 3          | 5          | 17        | 16        | 20         | 5          |
|                                  | <b>–</b> | <b>–</b> | <b>243</b> | <b>232</b> | <b>17</b> | <b>16</b> | <b>260</b> | <b>248</b> |

| Sensitivity analysis of the effect on the defined benefit pension liability (+increase/–decrease in pension liability) |       |      | Sweden | Ireland | Total |
|--|-------|------|--------|---------|-------|
| Significant actuarial assumptions  |       |      | 2017   | 2017    | 2017  |
| Discount rate, %   |       | +0,5 | –52    | –14     | –66   |
|  |       | –0,5 | 60     | 16      | 76    |
| Pay increases, %   |       | +0,5 | 48     | 4       | 52    |
|  |       | –0,5 | –41    | –4      | –45   |
| Increased life expectancy, years   | Men   | +1   | 18     | 10      | 28    |
|  | Women | +1   | –19    | 0       | –19   |

The sensitivity analysis has been conducted on the basis of the above mentioned actuarial changes as Boliden is of the opinion that they can have a substantial impact on the pension liability. It is also likely that changes to these assumptions will be made. The calculations have been performed by means of the analysis of each change individ-

ually and the calculations have not taken into account any interdependence between the assumptions. No sensitivity analyses have been conducted for Norway and Finland as the amounts in question are insignificant. Other countries do not have any defined benefit pension liabilities.

| Defined benefit pension liability terms                   | Sweden | Ireland | Other | Total |
|---|--------|---------|-------|-------|
| Benefits scheduled for disbursement within 12 months      | 45     | 14      | 3     | 62    |
| Benefits scheduled for disbursement within 1–5 years      | 179    | 58      | 8     | 244   |
| Benefits scheduled for disbursement after 5 years or more | 674    | 220     | 28    | 922   |

The maturity of plan assets in Ireland have reduced anticipated payments after 5 years or more. The weighted average duration of the defined benefit pension liability is 16 years for Sweden and 11 years for Ireland.

## Note 24 Other provisions

|                   | 31-12-2017   | 31-12-2016   |
|-------------------|--------------|--------------|
| Reclamation costs | 3,123        | 2,873        |
| Other             | 14           | 18           |
|                   | <b>3,137</b> | <b>2,891</b> |
| <b>Of which:</b>  |              |              |
| Long-term         | 2,911        | 2,655        |
| Short-term        | 226          | 236          |
|                   | <b>3,137</b> | <b>2,891</b> |

### Reclamation costs

Provisions for reclamation costs are made on the basis of an assessment of future costs based on current technology and other conditions. Provision has been made for the current value of estimated undertakings in accordance with IAS 37 and IFRIC 1. Gradual reclamation is preferable, although most of the reclamation work is carried out after a decision to decommission. In historical terms, Boliden has succeeded in extending the useful life of its mining assets compared with the original plans. Reclamation provisions are reviewed on an ongoing basis. Additions to existing provisions are primarily attributable to new mining plans resulting from increased ore reserves, primarily at Garpenberg, and to the customary review of reclamation requirements.

| Group                                     | 2017              |           |              | 2016              |           |              |
|---|-------------------|-----------|--------------|-------------------|-----------|--------------|
|   | Reclamation costs | Other     | Total        | Reclamation costs | Other     | Total        |
| Book value at the beginning of the year   | 2,873             | 18        | 2,891        | 1,943             | 38        | 1,981        |
| Additions to existing provisions          | 280               | 8         | 289          | 831               | 4         | 834          |
| Acquisitions                              | –                 | –         | –            | 181               | 1         | 182          |
| Reversal of existing provisions           | –34               | –8        | –42          | –9                | –22       | –30          |
| Payments                                  | –74               | –5        | –79          | –170              | –4        | –174         |
| Discount effect for the period            | 56                | 0         | 56           | 56                | 0         | 56           |
| Translation difference                    | 22                | 0         | 22           | 41                | 1         | 42           |
| <b>Book value at year-end</b>             | <b>3,123</b>      | <b>14</b> | <b>3,137</b> | <b>2,873</b>      | <b>18</b> | <b>2,891</b> |
| Anticipated date of outflow of resources: |                   |           |              |                   |           |              |
| Within one year                           | 226               | 9         | 235          | 235               | 1         | 236          |
| Between one and two years                 | 164               | 0         | 164          | 195               | 11        | 206          |
| Between three and five years              | 261               | 1         | 262          | 89                | 1         | 90           |
| More than five years                      | 2,472             | 5         | 2,477        | 2,354             | 4         | 2,358        |
|   | <b>3,123</b>      | <b>14</b> | <b>3,137</b> | <b>2,873</b>      | <b>18</b> | <b>2,891</b> |

## Note 25 Risk information

See the section entitled “Risk management” in the Directors’ Report on pages 56–59 for a description of Boliden’s financial risks. The amounts reported refer to the Group.

**Note 26** Financial liabilities and maturity structure

| 31-12-2017,<br>SEK m            | Financial liabilities |                            |                 | Maturity structure <sup>2)</sup> |            |              |            |           |       |
|---------------------------------|-----------------------|----------------------------|-----------------|----------------------------------|------------|--------------|------------|-----------|-------|
|                                 | Currency              | Interest <sup>1)</sup> , % | Reported amount | 2018                             | 2019       | 2020         | 2021       | 2022      | 2023+ |
| Bilateral loans                 | EUR                   | 1.43                       | 1,338           | 812                              | 211        | 153          | 95         | 94        |       |
| Bilateral loans                 | SEK                   | 1.79                       | 561             | 22                               | 10         | 10           | 553        |           |       |
| Bond <sup>3)</sup>              | SEK                   | 1.90                       | 500             | 10                               | 10         | 503          |            |           |       |
| Term loan                       | EUR/SEK               | 1.20                       | 2,417           | 29                               | 29         | 2,429        |            |           |       |
| Commercial papers <sup>3)</sup> | SEK                   | 0.41                       | 519             | 522                              |            |              |            |           |       |
| Leasing, other                  |                       |                            | 8               | 5                                | 3          |              |            |           |       |
| Trade and other payables        |                       |                            | 4,426           | 4,426                            |            |              |            |           |       |
| Derivative instruments          |                       |                            | 92              | 92                               |            |              |            |           |       |
| <b>Total</b>                    |                       |                            | <b>9,861</b>    | <b>5,917</b>                     | <b>263</b> | <b>3,094</b> | <b>648</b> | <b>94</b> |       |

| 31-12-2016,<br>SEK m            | Financial liabilities |                            |                 | Maturity structure <sup>2)</sup> |            |            |              |            |           |
|---------------------------------|-----------------------|----------------------------|-----------------|----------------------------------|------------|------------|--------------|------------|-----------|
|                                 | Currency              | Interest <sup>1)</sup> , % | Reported amount | 2017                             | 2018       | 2019       | 2020         | 2021       | 2022+     |
| Bilateral loans                 | EUR                   | 1.43                       | 1,499           | 221                              | 795        | 221        | 157          | 98         | 98        |
| Bilateral loans                 | SEK                   | 1.70                       | 545             | 10                               | 10         | 10         | 10           | 549        |           |
| Bond <sup>3)</sup>              | SEK                   | 1.90                       | 500             | 10                               | 10         | 10         | 503          |            |           |
| Term loan                       | EUR/SEK               | 1.30                       | 5,858           | 76                               | 76         | 76         | 5,890        |            |           |
| Commercial papers <sup>3)</sup> | SEK                   | 0.60                       | 1,687           | 1,697                            |            |            |              |            |           |
| Leasing, other                  |                       |                            | 11              | 4                                | 5          | 2          |              |            |           |
| Trade and other payables        |                       |                            | 4,239           | 4,239                            |            |            |              |            |           |
| Derivative instruments          |                       |                            | 46              | 46                               |            |            |              |            |           |
| <b>Total</b>                    |                       |                            | <b>14,386</b>   | <b>6,304</b>                     | <b>896</b> | <b>319</b> | <b>6,559</b> | <b>647</b> | <b>98</b> |

<sup>1)</sup> Weighted interest including interest swaps.

<sup>2)</sup> The duration analysis includes gross flows of loans and interest, including flows from interest swaps.

<sup>3)</sup> Outstanding commercial papers and bonds are officially reported under the Group's Parent Company, Boliden AB.

**Loan portfolio**

Boliden has a number of utilised long-term loans from Swedish, Nordic and European institutions which, on 31 December 2017, totalled SEK 1,899 m (2,044) and which mature between 2018 and 2022. A term loan for EUR 620 m that matures in 2020 was raised last year in conjunction with the acquisition of Kevitsa. Amortisation began during the year. Boliden also has syndicated credit facilities totalling EUR 362 m and EUR 408 m that mature in 2019 and 2021, respectively. The utilised component of the syndicated credit facilities totalled SEK 0 m (0) on 31 December 2017. A bond for SEK 500 m was issued in the Swedish capital market in 2014 and matures in 2020. SEK 519 m (1,687) of Boliden's commercial papers programme, with a framework of SEK 4,000 m, remained outstanding

on 31 December 2017. The average term of the loan facilities on 31 December 2017 was 2.4 years (3.3) and the debt portfolio's average interest rate was 1.31% (1.26). The fixed interest term of outstanding loans, including interest swaps entered into, totalled 0.5 years (0.2) on 31 December 2017. The above maturity analysis includes interest flows from interest swaps. Boliden's current liquidity in the form of cash and cash equivalents and unutilised credit facilities with a term in excess of one year totalled SEK 8,768m (6,968) on 31 December 2017. The above maturity structure for the financial liabilities, including interest payments and accrued interest on derivatives, includes the undiscounted cash flows that derive from the Group's liabilities, based on the contracted remaining durations. Loan maturity has been calculated at the applicable exchange rate in conjunction with the year-end accounts. Interest maturity, including interest swaps, has been calculated on the basis of the applicable closing interest rates.

**Note 27 Financial derivative instruments**

Boliden uses financial derivative instruments to manage currency rate risks, raw material price risks, and interest rate risks arising within its operations.

| Outstanding financial derivative instruments,<br>SEK m           | 31-12-2017        |               | 31-12-2016        |               |
|--|-------------------|---------------|-------------------|---------------|
|  | Nominal<br>amount | Fair<br>value | Nominal<br>amount | Fair<br>value |
| <b>Transaction exposure (binding undertakings)<sup>1)</sup></b>  |                   |               |                   |               |
| Currency futures   | -4,583            | 7             | -5,499            | 85            |
| Raw material derivatives   | -28               | 44            | -167              | 195           |
| <b>Transaction exposure (forecasted cash flows)<sup>1)</sup></b> |                   |               |                   |               |
| Currency futures   | 163               | -2            | -25               | -26           |
| Raw material derivatives   | -                 | -             | -310              | 3             |
| Interest derivatives   | -1,661            | 1             | -1,070            | -5            |
| <b>Total</b>   |                   | <b>49</b>     |                   | <b>252</b>    |

<sup>1)</sup> Find out more about the Group's transaction exposure und Risk management on page 56.

| Hedge accounting, SEK m  | 2017     | 2016     |
|--|----------|----------|
| <b>Hedging of fair value</b>   |          |          |
| - Changes in value of hedging instruments in respect of binding undertakings | -789     | -109     |
| - Change in value of hedged item   | 789      | 109      |
| Ineffectiveness of fair value hedging  | -        | -        |
| Ineffectiveness of cash flow hedging   | -        | -        |
| Ineffectiveness of hedging net investments in overseas operations            | -        | -        |
| <b>Total ineffectiveness</b>   | <b>0</b> | <b>0</b> |

The effect of effective cash flow hedging with regard to Transaction exposure on the result for 2017 totals SEK -31 m (-49), of which SEK -22 m (-34) refers to exchange rate and metal price hedging and SEK -9 m (-14) to interest swaps.

**Currency derivatives in respect of forecasted exposure – Cash flow hedging**

Hedging related to forecasted exposure between 2016 and 2017 matured but was extended in 2015. The effect on the profit of premature maturity of hedging related to 2017 was reported in equity but has been recognised through the Income Statement on a rolling basis in 2017. SEK -75 m (-112) was recognised in the Income Statement in 2017. Boliden's other currency risks in respect of forecast exposure are, in every significant respect, unhedged. On 31 December 2017, Boliden had no outstanding currency derivatives attributable to raw material derivatives. For further information about the Group's transaction exposure, see Risk management on page 56.

**Raw materials derivatives in respect of forecasted exposure – Cash flow hedging**

Hedging related to forecasted exposure between 2016 and 2017 matured but was extended in 2015. The effect on the profit of premature maturity of hedging related to 2017 was reported in equity but has been recognised through the Income Statement on a rolling basis in 2017. SEK 79 m (110) was recognised in the Income Statement in 2017. Boliden's other metal price risks in respect of forecast exposure are, in every significant respect, unhedged. On 31 December 2017, Boliden had no outstanding raw materials derivatives in respect of forecast exposure. For further information about the Group's transaction exposure, see Risk management on page 56.

**Offsetting of financial assets and liabilities**

|  | 31-12-2017 | 31-12-2016 |
|--|------------|------------|
| Gross amount for financial assets                                  | 235        | 403        |
| Amount offset in Balance Sheet                                     | -93        | -105       |
| Net asset reported in Balance Sheet                                | 141        | 298        |
| Amount comprised by offsetting in conjunction with insolvency etc. | -30        | -30        |
| <b>Net asset</b>   | <b>111</b> | <b>268</b> |

|   | 31-12-2017 | 31-12-2016 |
|---|------------|------------|
| Gross amount for financial liabilities                              | 185        | 152        |
| Amount offset in Balance Sheet                                      | -93        | -105       |
| Net liability reported in Balance Sheet                             | 92         | 46         |
| Amount comprised by offsetting in conjunction with insolvency, etc. | -30        | -30        |
| <b>Net liability</b>  | <b>62</b>  | <b>16</b>  |

**Note 28 Other current liabilities**

|   | 31-12-2017   | 31-12-2016   |
|---|--------------|--------------|
| Accrued salaries and social security expenses | 591          | 871          |
| Accrued interest expenses                     | 6            | 14           |
| Other accrued costs and prepaid income        | 1,546        | 1,072        |
| Other operating liabilities                   | 490          | 425          |
|   | <b>2,633</b> | <b>2,382</b> |



**Note 29** Financial assets and liabilities by valuation category

|                                    | Valuation hierarchy | Held at fair value <sup>1)</sup> | Loan receivables and Trade and other receivables | Financial assets available for sale | Derivatives used in hedge accounting | Financial liabilities valued at amortised cost | Total reported value | Total fair value |
|------------------------------------|---------------------|----------------------------------|--|-------------------------------------|--------------------------------------|--|----------------------|------------------|
| <b>31-12-2017</b>                  |                     |                                  |  |                                     |                                      |  |                      |                  |
| <b>ASSETS</b>                      |                     |                                  |  |                                     |                                      |  |                      |                  |
| <b>Financial assets</b>            |                     |                                  |  |                                     |                                      |  |                      |                  |
| Other shares and participations    | 3                   |                                  |  | 30                                  |                                      |  | 30                   | 30               |
| <b>Current assets</b>              |                     |                                  |  |                                     |                                      |  |                      |                  |
| <b>Current receivables</b>         |                     |                                  |  |                                     |                                      |  |                      |                  |
| Trade and other receivables        |                     |                                  | 2,324  |                                     |                                      |  | 2,324                | 2,324            |
| Interest-bearing receivables       |                     |                                  | 2  |                                     |                                      |  | 2                    | 2                |
| Derivative instruments             | 2                   | 26                               |  |                                     | 115                                  |  | 141                  | 141              |
| Cash and cash equivalents          |                     |                                  | 2,510  |                                     |                                      |  | 2,510                | 2,510            |
| <b>Total financial assets</b>      |                     | <b>26</b>                        | <b>4,835</b>                                     | <b>30</b>                           | <b>115</b>                           |  | <b>5,007</b>         | <b>5,007</b>     |
| <b>LIABILITIES</b>                 |                     |                                  |  |                                     |                                      |  |                      |                  |
| <b>Long-term liabilities</b>       |                     |                                  |  |                                     |                                      |  |                      |                  |
| Liabilities to credit institutions | 2                   |                                  |  |                                     |                                      | 4,004  | 4,004                | 4,017            |
| <b>Current liabilities</b>         |                     |                                  |  |                                     |                                      |  |                      |                  |
| Liabilities to credit institutions | 2                   |                                  |  |                                     |                                      | 1,331  | 1,331                | 1,331            |
| Trade and other payables           |                     |                                  |  |                                     |                                      | 4,426  | 4,426                | 4,426            |
| Derivative instruments             | 2                   | 22                               |  |                                     | 71                                   |  | 92                   | 92               |
| <b>Total financial liabilities</b> |                     | <b>22</b>                        |  |                                     | <b>71</b>                            | <b>9,761</b>                                   | <b>9,853</b>         | <b>9,866</b>     |

<sup>1)</sup> Refers to the subcategory, held for trading.

Boliden's financial instruments, which are reported at fair value in the Balance Sheet, are classified as level two in the Fair value hierarchy (see Accounting principles), with the exception of a small amount in other shares and participations that are classified as level three. The fair value of liabilities to credit institutions is calculated as discounted contractually agreed amortisations and interest payments at estimated market interest rates. The interest covenants of existing loan

agreements were, on 31 December 2017, adjudged to be on a par with credit market interest rates, and the fair value therefore corresponds, in every significant respect, to the reported value.

The reported value of trade and other receivables and trade and other payables is held to be the same as the fair value due to the short term to maturity, to the fact that provision has been made for bad debts, and to the fact that any penalty interest will be debited.

|                                    | Valuation hierarchy | Held at fair value <sup>1)</sup> | Loan receivables and Trade and other receivables | Financial assets available for sale | Derivatives used in hedge accounting | Financial liabilities valued at amortised cost | Total reported value | Total fair value |
|------------------------------------|---------------------|----------------------------------|--|-------------------------------------|--------------------------------------|--|----------------------|------------------|
| <b>31-12-2016</b>                  |                     |                                  |  |                                     |                                      |  |                      |                  |
| <b>ASSETS</b>                      |                     |                                  |  |                                     |                                      |  |                      |                  |
| <b>Financial assets</b>            |                     |                                  |  |                                     |                                      |  |                      |                  |
| Other shares and participations    | 3                   |                                  |  | 31                                  |                                      |  | 31                   | 31               |
| <b>Current assets</b>              |                     |                                  |  |                                     |                                      |  |                      |                  |
| <b>Current receivables</b>         |                     |                                  |  |                                     |                                      |  |                      |                  |
| Trade and other receivables        |                     |                                  | 2,017  |                                     |                                      |  | 2,017                | 2,017            |
| Interest-bearing receivables       |                     |                                  | 2  |                                     |                                      |  | 2                    | 2                |
| Derivative instruments             | 2                   | 97                               |  |                                     | 201                                  |  | 298                  | 298              |
| Cash and cash equivalents          |                     |                                  | 1,503  |                                     |                                      |  | 1,503                | 1,503            |
| <b>Total financial assets</b>      |                     | <b>97</b>                        | <b>3,522</b>                                     | <b>31</b>                           | <b>201</b>                           |  | <b>3,851</b>         | <b>3,851</b>     |
| <b>LIABILITIES</b>                 |                     |                                  |  |                                     |                                      |  |                      |                  |
| <b>Long-term liabilities</b>       |                     |                                  |  |                                     |                                      |  |                      |                  |
| Liabilities to credit institutions | 2                   |                                  |  |                                     |                                      | 8,187  | 8,187                | 8,217            |
| <b>Current liabilities</b>         |                     |                                  |  |                                     |                                      |  |                      |                  |
| Liabilities to credit institutions | 2                   |                                  |  |                                     |                                      | 1,903  | 1,903                | 1,903            |
| Trade and other payables           |                     |                                  |  |                                     |                                      | 4,239  | 4,239                | 4,239            |
| Derivative instruments             | 2                   | 44                               |  |                                     | 2                                    |  | 46                   | 46               |
| <b>Total financial liabilities</b> |                     | <b>44</b>                        |  |                                     | <b>2</b>                             | <b>14,329</b>                                  | <b>14,375</b>        | <b>14,405</b>    |

<sup>1)</sup> Refers to the subcategory, held for trading.

**Note 30** Pledged assets and contingent liabilities

|   | Group        |              | Parent Company |               |
|---|--------------|--------------|----------------|---------------|
|   | 2017         | 2016         | 2017           | 2016          |
| <b>Pledged assets</b>                                 |              |              |                |               |
| For own liabilities and provisions                    | None         | None         | None           | None          |
| <b>Contingent liabilities</b>                         |              |              |                |               |
| Parent Company sureties                               | –            | –            | 5,368          | 10,141        |
| Other sureties and guarantees                         | 3,673        | 3,562        | 1              | 133           |
| Pension liabilities                                   | 6            | 5            |                | –             |
| Agreed residual values according to leasing contracts | 9            | 10           |                | –             |
|   | <b>3,688</b> | <b>3,576</b> | <b>5,369</b>   | <b>10,274</b> |

The Parent Company sureties refer to guarantees issued for subsidiary companies. SEK 5,368 m (10,141) refers to Parent Company sureties for external financial borrowing. Parent Company sureties in the above table have been booked in the utilised amounts. Guarantees in respect of unutilised credits total SEK 7,584 m (7,367).

Other surety undertakings and guarantees refer primarily to counter undertakings issued by Boliden to banks or other lenders. These have, in turn, with regard to states or authorities, guaranteed Boliden's proper completion of reclamation undertakings.

The possibility exists, in addition to the above specifications under the heading of contingent liabilities and the items included in the financial information, that the Group may incur environmentally-related contingent liabilities or contingent liabilities attributable to legal proceedings and claims which cannot be currently calculated but which may, in future, entail costs or investments.

**Legal proceedings**  
**Overview**

Boliden conducts extensive domestic and international operations and is occasionally involved in disputes and legal proceedings arising in the course of these operations. These disputes and legal proceedings are not expected, either individually or collectively, to have any significant negative impact on Boliden's operating profits, profitability or financial position, over and above that detailed below.

**Disputes****Disputes arising from the dam breach accident in Spain**

In April 1998, a dam breach occurred in a tailings pond at the Los Frailes mine in Spain, which was then owned by Boliden's subsidiary, Boliden Apirsa S.L. ("Apirsa"). Following the dam breach, preliminary investigations in a criminal case were initiated against Apirsa and its representatives. In December 2000, the investigations were closed. The criminal proceedings determined that the accident was caused by design and construction errors in the dam, not by Apirsa's operations at the mine. The outcome of the criminal proceedings notwithstanding, the Spanish Ministry of the Environment declared Apirsa liable to pay an amount corresponding to approximately EUR 45 m in clean-up costs, damages and fines. This resulted, in January 2005, in Apirsa initiating insolvency proceedings in order to ensure a coordinated and orderly closure of the company. The receivers in bankruptcy have, within the framework of the insolvency proceedings, requested that Apirsa's parent company, Boliden BV, together with Boliden Mineral AB and Boliden AB, be held liable for Apirsa's shortfall in an amount which, according to the receivers in bankruptcy, totals approximately EUR 141 m, including a yet untested claim of just over EUR 89 m which the local government (Junta de Andalucía) believes it is owed, as described in greater detail below.

As a result of the dam breach, the local government sued Apirsa in its capacity as the owner and operator of the mine at the time of accident, and Boliden BV and Boliden AB in their capacity as the direct and indirect owners of Apirsa demanding joint and several liability for damages to cover expenses totalling just over EUR 89 m. The suit was dismissed on formal legal grounds and the dismissal conformed by a higher court. Since the dismissal of the suit in the civil court, the local government in Andalucía has initiated administrative proceedings in respect of the same claim. This also resulted in the local government's ruling and claim against the Boliden companies in question being

deemed invalid on formal grounds. The Supreme Administrative Court decided that, in the light of the fact that the local government's claims have hence been ruled inadmissible in both civil and administrative courts, the civil court was the correct court in which to hear the matter. The local government consequently brought suit against the above-mentioned companies in the Seville District Court in 2015. The suit is the same as that brought back in 2002 and the local government is demanding compensation for the costs that it claims to have incurred in conjunction with the clean-up after the dam breach accident. All three defendants have contested the plaintiff's suit.

The companies that were responsible for the design and construction of the dams and against which Apirsa had previously brought suit and lost have now submitted claims against Apirsa, seeking compensation for their legal costs. It is currently not possible to assess with any reasonable degree of certainty whether the legal cost claims can be brought against any Boliden company other than Apirsa.

Based on the legal advice and opinions given by the company's Spanish legal counsel, Boliden's overall view is that the company will not suffer any substantial financial loss as a result of the legal proceedings described. The company has made no provision, pending a final ruling.

**Summons arising due to exports to Chile in the 1980s**

In October 2013, suit was brought against Boliden claiming damages for the export of smelter sludge from the Rönnskär smelter between 1984 and 1985 for processing by a Chilean company. The suit was brought by a Swedish limited partnership, Arica Victims KB. The claim comprises approximately 800 people and is for a combined total of just over SEK 100 m plus interest.

Boliden has contested the claim. Boliden is of the opinion, overall, that the company will not suffer any substantial financial loss as a result of the legal process described. The principal hearing was conducted in December 2017 and a ruling will be issued on 8 March 2018. The company has made no provision, pending a final ruling.

**Note 31** Events after 31 December 2017**New President & CEO**

Mikael Staffas has been appointed as the new President and CEO of Boliden. He will take up the position on 1 June 2018. Recruitment of a new President Business Area Mines has begun.

**Fire at Bergsöe**

A fire occurred at the Bergsöe smelter on 19 January 2018. The fire did not result in any injuries and the effect on production was marginal, in that it occurred in a separate building. An investigation has been launched to determine the extent of the damage and the cause of the fire. The fire-damaged part of Bergsöe contained a facility for separating and recovering plastic from automotive batteries. The facility was still under construction and was scheduled to become operational during the first quarter of 2018. The book value of the facility is SEK 80 m.

**New long-term loans**

In January 2018, Boliden took out two new long-term loans, namely a 7-year loan for SEK 600 m with AB Svensk Exportkredit, and an 8-year loan for EUR 110 m with Nordiska Investeringsbanken, which fall due for payment between 2023 and 2026. The latter loan replaces an existing loan from Nordiska Investeringsbanken for EUR 60 m which fell due for repayment in 2018 and which has been repaid in advance. The new average term of the debt portfolio is approximately 2.9 years.

**Expansion investments at Kevitsa and Harjavalta**

On 13 February 2018, Boliden has decided to invest EUR 80 m in increasing production at Kevitsa from 7.5 to 9.5 Mtonnes/year from 2021. The investment includes a new autogenous mill as well as a new mill house.

At the same time, Boliden has also decided to invest EUR 45 m in Harjavalta and Pori in order to increase copper cathode production from 135,000 tonnes to 170,000 tonnes per year. The investment programme includes investments addressing bottlenecks at the Harjavalta smelter as well as an expansion of the Pori copper refinery.

# Proposed allocation of profits

## The Board's proposed allocation of profits for 2017 and statement in accordance with the Swedish Companies Act, 18:4

Boliden has a dividend policy whereby approximately one third of the profit after tax is to be distributed. The Board of Directors proposes that the Annual General Meeting approve payment of a dividend of SEK 8.25 (5.25) per share or a total of SEK 2,256 m (1,436), corresponding to 32.9% of the profit after tax for 2017. The Parent Company's non-restricted equity totals SEK 6,484 m and the Group's total equity is SEK 35,044 m. The non-restricted equity in the Parent Company and the Group will total SEK 4,228 m and SEK 32,788 m, respectively, after payment of the proposed dividend to the shareholders. The Board has taken the cyclic nature of the industry and the risks associated with the operations into account in its dividend proposal.

Boliden has generated substantial cash flows over the past year and the financial position is strong. The net debt/equity ratio at the year-end was 11%, which is lower than Boliden's target figure of 20% during an economic upturn. The Board of Directors' proposal, which will jeopardise neither Boliden's ability to handle any deterioration in market terms nor to finance additional growth, asks the AGM to approve an automatic share redemption procedure whereby each share is

divided into one ordinary share and one redemption share. The redemption share will then automatically be redeemed for SEK 5.75 per share, corresponding to a total of SEK 1,573 m. This, in combination with the proposed ordinary dividend, will, subject to the approval of the AGM, mean that shareholders receive SEK 14.00 per share, corresponding to a total of SEK 3,829 m. The non-restricted equity in the Parent Company after the ordinary dividend and the automatic share redemption procedure will total SEK 2,655 m and the Group's equity will total SEK 31,215 m. The remaining non-restricted equity in the Parent Company will be carried forward.

The Annual Accounts have been prepared in accordance with generally accepted accounting principles in Sweden and the Consolidated Accounts have been prepared in accordance with EU-approved International Financial Reporting Standards, IFRS.

The Annual Accounts and the Consolidated Accounts give a true and fair view of the Parent Company's and the Group's financial position and results of operations.

The Directors' Report for the Group and the Parent Company give a true and fair overview of the Group's and the Parent Company's operations, position and results and describes the material risks and uncertainties faced by the Parent Company and the companies that make up the Group.

Stockholm, 14 February 2018

Anders Ullberg  
*Chairman*

Marie Berglund  
*Member of the Board*

Tom Erixon  
*Member of the Board*

Lennart Evrell  
*Member of the Board  
President & CEO*

Michael G:son Löw  
*Member of the Board*

Elisabeth Nilsson  
*Member of the Board*

Pia Rudengren  
*Member of the Board*

Pekka Vauramo  
*Member of the Board*

Peter Baltzari  
*Employee Representative*

Marie Holmberg  
*Employee Representative*

Kenneth Ståhl  
*Employee Representative*

Our Audit Report was submitted on 14 February 2018  
Deloitte AB

Jan Berntsson  
*Authorised Public Accountant*

# Auditor's report

To the general meeting of the shareholders of Boliden AB (publ)  
corporate identity number 556051-4142

## REPORT ON THE ANNUAL ACCOUNTS AND CONSOLIDATED ACCOUNTS

### Opinions

We have audited the annual accounts and consolidated accounts of Boliden AB (publ) for the financial year January 1 to December 31, 2017 except for the corporate governance statement on pages 60–69 and the statutory sustainability report on pages 10–13 and 40–53. The annual accounts and consolidated accounts of the company are included on pages 10–13, 24–53 and 56–101 in this document.

In our opinion, the annual accounts have been prepared in accordance with the Annual Accounts Act and present fairly, in all material respects, the financial position of parent company as of December 31, 2017 and its financial performance and cash flow for the year then ended in accordance with the Annual Accounts Act. The consolidated accounts have been prepared in accordance with the Annual Accounts Act and present fairly, in all material respects, the financial position of the group as of December 31, 2017 and its financial performance and cash flow for the year then ended in accordance with International Financial Reporting Standards (IFRS), as adopted by the EU, and the Annual Accounts Act. Our opinions do not cover the corporate governance statement on pages 60–69 and the statutory sustainability report on pages 10–13 and 40–53. The statutory administration report is consistent with the other parts of the annual accounts and consolidated accounts.

We therefore recommend that the general meeting of shareholders adopts the income statement and balance sheet for the parent company and the group.

Our opinions in this report on the the annual accounts and consolidated accounts are consistent with the content of the additional report that has been submitted to the parent company's audit committee in accordance with the Audit Regulation (537/2014) Article 11.

### Basis for Opinions

We conducted our audit in accordance with International Standards on Auditing (ISA) and generally accepted auditing standards in Sweden. Our responsibilities under those standards are further described in the Auditor's Responsibilities section. We are independent of the parent company and the group in accordance with professional ethics for accountants in Sweden and have otherwise fulfilled our ethical responsibilities in accordance with these requirements. This includes that, based on the best of our knowledge and belief, no prohibited services referred to in the Audit Regulation (537/2014) Article 5.1 have been provided to the audited company or, where applicable, its parent company or its controlled companies within the EU.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinions.

### Key Audit Matters

Key audit matters of the audit are those matters that, in our professional judgment, were of most significance in our audit

of the annual accounts and consolidated accounts of the current period. These matters were addressed in the context of our audit of, and in forming our opinion thereon, the annual accounts and consolidated accounts as a whole, but we do not provide a separate opinion on these matters.

### *Recognition of revenues from sales of metals at the appropriate price and in the correct period*

The group's sales of metals are to a large extent priced in US dollars and sales are often made to predetermined price terms. Individual sales transactions may represent significant amounts. Contractual prices are hedged for variations in metal prices and exchange rates. Taken together, this requires good practices to ensure that revenues are recognized at agreed prices adjusted for the effects from hedging and that revenues are recognized in the correct period.

For the group's accounting principles for revenue recognition please refer to note 1, and for the group's revenues by geographical area and revenues disaggregated on metal, concentrate and other please refer to note 2.

### *Our audit procedures*

Our audit procedures included, but were not limited to:

- review of the group's accounting policy for revenue recognition for compliance with IFRS,
- evaluating the group's controls for recognizing revenues at appropriate prices and in the correct accounting period,
- analysis of revenues by metal based on sales volumes, metal prices and exchange rates, and
- on a sample basis testing of sales transactions against sales contracts, invoices and shipping documents to assess that revenues have been recognized at appropriate prices and in the correct accounting period.

### *Valuation of inventory*

The group's inventory consists primarily of metal concentrate, materials tied up in the production process of the smelters and finished metal. The group's accounting and valuation of inventory is complex and requires judgment about stock levels, metal content, metal prices, exchange rates and internal profits.

For the group's accounting principles for valuation of inventory please refer to note 1, and please refer to 18 for a breakdown of the group's inventory.

### *Our audit procedures*

Our audit procedures included, but were not limited to:

- review of the group's valuation policy for inventory and its compliance with IFRS,
- assessing the group's controls for inventory valuation,
- observations of physical inventory counts,
- on a sample basis testing that the inventory has been valued to current metal prices and exchange rates,
- review of the process inventory revaluation and eliminations for intragroup profits in inventory.



### **Accounting and valuation of financial instruments**

The group is exposed to changes in metal prices, exchange rates and interest rates. To reduce its exposure in larger investment projects and in contracted purchase and sales commitments the group uses various types of financial instruments, including derivatives. The group also manages its exposure to changes in interest rates by reducing or extending the interest duration period via interest rate swaps. The accounting for financial instruments is complex and may have significant impact on the group's earnings and financial position.

For the group's financial risks and management of these risks please refer to page 57–59, refer to note 1 for the group's principles for the valuation of financial instruments and note 27 for the group's financial derivatives.

#### *Our audit procedures*

Our audit procedures included, but were not limited to:

- review of the group's financial policy and hedging strategies,
- review of hedging activities to ensure that these have been properly authorized and accounted for in accordance with IFRS, and
- review of the relevance of market data and methodologies used to determine fair value of derivative contracts.

### **Capitalization and depreciation of deferred mining costs**

In conjunction with excavation of waste rock and production of ore in open pit mines, the costs of waste rock removal, which improves access to the ore body are capitalized. Deferred mining costs are depreciated per push-back and the depreciation is based on the metal content in relation to estimated metal content for the entire push-back. Both the initial capitalization and the depreciation rate are dependent on planned production and estimated mineral reserves and, as a consequence among other things, expected future metal prices. Hence, the carrying value and depreciation of deferred mining costs are dependent on a number of complex assumptions and estimates.

For the group's accounting principles related to deferred mining costs please refer to note 1 and note 13 for the group's investments and depreciation of deferred mining costs.

#### *Our audit procedures*

Our audit procedures included, but were not limited to:

- review of accounting policy for deferred mining costs for compliance with IFRS,
- review of model used for capitalization and depreciation of deferred mining costs against production costs and production volumes, and
- analytical review of capitalization and depreciation in relation to production costs and production volumes.

### **Provisions for reclamation costs**

The group has commitments for reclamation of closed mines and for reclamation costs that are expected to arise for mines when the mine operations are decommissioned. The provision for these commitments is judgmental and dependent on several factors including cost estimates for different reclamation measures, life of mine, regulatory decisions, future inflation and discount rates. Any changes in these estimates and assumptions may have a significant impact on the group's earnings and financial position.

For the group's accounting principles for reclamation provisions please refer to note 1 and note 13 for this year's change in capitalized reclamation costs, and note 24 for the group's reclamation provisions.

#### *Our audit procedures*

Our audit procedures included, but were not limited to:

- review of accounting policy for reclamation provisions for compliance with IFRS,
- evaluating the group's controls to account for reclamation provisions,
- review of external and internal opinions on expected reclamation measures and the costs for these, and
- review of assumptions used to estimate the reclamation provisions for consistency with approved production plans, life of mines expectancies, and current financial conditions (inflation and interest rates).

### **Valuation of intangible and tangible assets**

The group's intangible and tangible assets represent significant amounts. Impairment testing of these assets is based on production plans, which in turn are based on assumptions about future metal prices, treatment and refining charges, and exchange rates. Changes in market prices for metals, treatment and refining charges, and exchange rates have a significant impact on the group's future cash flows and thus the estimated recoverable value of intangible and tangible assets and any impairment needs.

For the group's principles to prepare impairment tests for intangible and tangible assets please refer to note 1 and for significant assumptions applied in the impairment tests, please refer to note 13.

#### *Our audit procedures*

Our audit procedures included, but were not limited to:

- review of the group's process and principles for preparing impairment tests for compliance with IFRS,
- evaluation of key assumptions such as estimated life of mines, production plans, metal prices, treatment and refining charges, and exchange rates and the sensitivity in these assumptions to any changes, and
- review of the model used to discount future cash flows for arithmetical correctness.

### **Other information than the annual accounts and consolidated accounts**

This document also contains other information than the annual accounts and consolidated accounts and is found on pages 1–9, 14–23, 54–55 and 106–121. The Board of Directors and the Managing Director are responsible for this other information.

Our opinion on the annual accounts and consolidated accounts does not cover this other information and we do not express any form of assurance conclusion regarding this other information.

In connection with our audit of the annual accounts and consolidated accounts, our responsibility is to read the information identified above and consider whether the information is materially inconsistent with the annual accounts and consolidated accounts. In this procedure we also take into account our knowledge otherwise obtained in the audit and assess whether the information otherwise appears to be materially misstated.

If we, based on the work performed concerning this information, conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

### Responsibilities of the Board of Directors and the Managing Director

The Board of Directors and the Managing Director are responsible for the preparation of the annual accounts and consolidated accounts and that they give a fair presentation in accordance with the Annual Accounts Act and, concerning the consolidated accounts, in accordance with IFRS as adopted by the EU. The Board of Directors and the Managing Director are also responsible for such internal control as they determine is necessary to enable the preparation of annual accounts and consolidated accounts that are free from material misstatement, whether due to fraud or error.

In preparing the annual accounts and consolidated accounts, The Board of Directors and the Managing Director are responsible for the assessment of the company's and the group's ability to continue as a going concern. They disclose, as applicable, matters related to going concern and using the going concern basis of accounting. The going concern basis of accounting is however not applied if the Board of Directors and the Managing Director intends to liquidate the company, to cease operations, or has no realistic alternative but to do so.

The Audit Committee shall, without prejudice to the Board of Director's responsibilities and tasks in general, among other things oversee the company's financial reporting process.

### Auditor's responsibility

Our objectives are to obtain reasonable assurance about whether the annual accounts and consolidated accounts as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinions. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs and generally accepted auditing standards in Sweden will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these annual accounts and consolidated accounts.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the annual accounts and consolidated accounts, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of the company's internal control relevant to our audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Board of Directors and the Managing Director.
- Conclude on the appropriateness of the Board of Directors' and the Managing Director's use of the going concern basis of accounting in preparing the annual accounts and consolidated accounts. We also draw a conclusion, based

on the audit evidence obtained, as to whether any material uncertainty exists related to events or conditions that may cast significant doubt on the company's and the group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the annual accounts and consolidated accounts or, if such disclosures are inadequate, to modify our opinion about the annual accounts and consolidated accounts. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause a company and a group to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the annual accounts and consolidated accounts, including the disclosures, and whether the annual accounts and consolidated accounts represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient and appropriate audit evidence regarding the financial information of the entities or business activities within the group to express an opinion on the consolidated accounts. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our opinions.

We must inform the Board of Directors of, among other matters, the planned scope and timing of the audit. We must also inform of significant audit findings during our audit, including any significant deficiencies in internal control that we identified.

We must also provide the Board of Directors with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with the Board of Directors, we determine those matters that were of most significance in the audit of the annual accounts and consolidated accounts, including the most important assessed risks for material misstatement, and are therefore the key audit matters. We describe these matters in the auditor's report unless law or regulation precludes disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in the auditor's report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

### REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

#### Opinions

In addition to our audit of the annual accounts and consolidated accounts, we have also audited the administration of the Board of Directors and the Managing Director of Boliden AB (publ) for the financial year January 1 to December 31, 2017 and the proposed appropriations of the company's profit or loss.

We recommend to the general meeting of shareholders that the profit to be appropriated in accordance with the proposal in the statutory administration report and that the members of the Board of Directors and the Managing Director be discharged from liability for the financial year.

## Basis for Opinions

We conducted the audit in accordance with generally accepted auditing standards in Sweden. Our responsibilities under those standards are further described in the Auditor's Responsibilities section. We are independent of the parent company and the group in accordance with professional ethics for accountants in Sweden and have otherwise fulfilled our ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinions.

## Responsibilities of the Board of Directors and the Managing Director

The Board of Directors is responsible for the proposal for appropriations of the company's profit or loss. At the proposal of a dividend, this includes an assessment of whether the dividend is justifiable considering the requirements which the company's and the group's type of operations, size and risks place on the size of the parent company's and the group's equity, consolidation requirements, liquidity and position in general.

The Board of Directors is responsible for the company's organization and the administration of the company's affairs. This includes among other things continuous assessment of the company's and the group's financial situation and ensuring that the company's organization is designed so that the accounting, management of assets and the company's financial affairs otherwise are controlled in a reassuring manner. The Managing Director shall manage the ongoing administration according to the Board of Directors' guidelines and instructions and among other matters take measures that are necessary to fulfill the company's accounting in accordance with law and handle the management of assets in a reassuring manner.

## Auditor's responsibility

Our objective concerning the audit of the administration, and thereby our opinion about discharge from liability, is to obtain audit evidence to assess with a reasonable degree of assurance whether any member of the Board of Directors or the Managing Director in any material respect:

- has undertaken any action or been guilty of any omission which can give rise to liability to the company, or
- in any other way has acted in contravention of the Companies Act, the Annual Accounts Act or the Articles of Association.

Our objective concerning the audit of the proposed appropriations of the company's profit or loss, and thereby our opinion about this, is to assess with reasonable degree of assurance whether the proposal is in accordance with the Companies Act.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with generally accepted auditing standards in Sweden will always detect actions or omissions that can give rise to liability to the company, or that the proposed appropriations of the company's profit or loss are not in accordance with the Companies Act.

As part of an audit in accordance with generally accepted auditing standards in Sweden, we exercise professional judgment and maintain professional scepticism throughout the audit. The examination of the administration and the proposed appropriations of the company's profit or loss is based primarily on the audit of the accounts. Additional audit procedures performed are based on our professional judgment with starting point in risk and materiality. This means that we focus the

examination on such actions, areas and relationships that are material for the operations and where deviations and violations would have particular importance for the company's situation. We examine and test decisions undertaken, support for decisions, actions taken and other circumstances that are relevant to our opinion concerning discharge from liability. As a basis for our opinion on the Board of Directors' proposed appropriations of the company's profit or loss we examined the Board of Directors' reasoned statement and a selection of supporting evidence in order to be able to assess whether the proposal is in accordance with the Companies Act.

## The auditor's examination of the corporate governance statement

The Board of Directors is responsible for that the corporate governance statement on pages 60–69 has been prepared in accordance with the Annual Accounts Act.

Our examination of the corporate governance statement is conducted in accordance with FAR's auditing standard RevU 16 The auditor's examination of the corporate governance statement. This means that our examination of the corporate governance statement is different and substantially less in scope than an audit conducted in accordance with International Standards on Auditing and generally accepted auditing standards in Sweden. We believe that the examination has provided us with sufficient basis for our opinions.

A corporate governance statement has been prepared. Disclosures in accordance with chapter 6 section 6 the second paragraph points 2–6 of the Annual Accounts Act and chapter 7 section 31 the second paragraph the same law are consistent with the other parts of the annual accounts and consolidated accounts and are in accordance with the Annual Accounts Act.

## Auditor's report on the statutory sustainability report

It is the board of directors who is responsible for the statutory sustainability report for the year 2017 on pages 10–13 and 40–53 and that it has been prepared in accordance with the Annual Accounts Act.

### *The scope of the audit*

Our examination has been conducted in accordance with FAR's auditing standard RevR 12 The auditor's opinion regarding the statutory sustainability report. This means that our examination of the statutory sustainability report is substantially different and less in scope than an audit conducted in accordance with International Standards on Auditing and generally accepted auditing standards in Sweden. We believe that the examination has provided us with sufficient basis for our opinion.

A statutory sustainability report has been prepared.

Deloitte AB, was appointed auditor of Boliden AB by the general meeting of the shareholders on the April 25, 2017 and has been the company's auditor since May 5, 2015.

Stockholm, February 14, 2018  
Deloitte AB  
Signature on Swedish original

Jan Berntsson  
Authorized Public Accountant

# Mineral Resources and Mineral Reserves

Mineral Reserves and Mineral Resources are the basis for the future viability of a mining company's operations. They form the basis for the mines' long-term mining plans and are the underlying data for many of the company's major investments. Mineral Reserves are reduced every year through mining activities and new additions to the Resources and Reserves are, therefore, vital to the viability of the operations.

Tara's exploration work continued to be successful in 2017 and substantial quantities were, furthermore, upgraded to Mineral Reserves. Garpenberg, Aitik and Kevitsa already have Mineral Resources and Reserves sufficient to secure production for many years to come. The situation in the Boliden Area's 4 operational mines is more complex and Kankberg is the only mine with Mineral Reserves for more than 10 years' production. Kylylahti has the shortest planned lifespan, but the situation has improved somewhat thanks to technological successes and improved financial conditions.

Boliden shall work to ensure optimal resource and materials handling at every stage of the value chain and the responsible conversion of assets in the form of Mineral Resources and Reserves is an important component of this work. We consequently follow up on our Mineral Resources and Reserves carefully and produce an annual summary. The estimations of Mineral Resources and Reserves are always associated with a degree of uncertainty as to the geological basis and due to sensitivity to the pricing and cost conditions used.

## Mineral Resources and Reserves, 2017

Boliden's estimations and compilations are carried out in accordance with the recommendations of the Swedish Association of Mines, Minerals and Metal Producers (SveMin).

### Aitik

No extensive exploration work is currently being carried out at the Aitik mine. Work is, however, continuing on preparing the Liikavaara deposit, approximately 3 km north west of Aitik, for mining. Exploration and evaluation work is also being carried out on the Nautanen deposit, approximately 15 km north of Aitik. The total Mineral Reserve declined by slightly less than the amount extracted during the year. Molybdenum has previously been included in the calculation of Aitik's Mineral Resources. It is now felt, however, that an expansion of the molybdenum concentration operations would not be profitable and the mineral is consequently no longer included in the calculations. This, coupled with certain new geological information, has resulted in a decrease in Aitik's Mineral Resources.

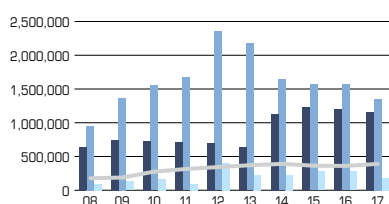
### The Boliden Area

Substantial tonnage has been converted from Mineral Resources to Mineral Reserves at Kankberg, and the mine's exploration work has, furthermore, yielded quantities almost equivalent to those extracted during the year. The Mauriliden open pit mine will be mined out in 2018 but the possibility of extracting small amounts of tonnage underground is being investigated. Mineral Resources and Reserves have fallen slightly overall in the Boliden Area. Exploration work is continuing towards a new lens 2.5 km to the west of Kristineberg in the old Rävliiden area, and the drill cores will be evaluated in 2018. Work is also continuing on cutting drifts in the direction of the deposit to enable investigations of the deposit from below ground.

### Garpenberg

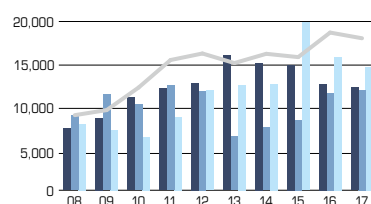
New Mineral Resources have been added through exploration in an amount more or less equivalent to the amount extracted this year. The amount of Resources converted to Reserves slightly exceeds the amount extracted, so overall, the increase in

#### Aitik



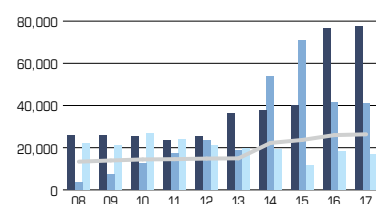
Reduction in Mineral Resources and slight reduction in Reserves.

#### The Boliden Area



Small changes overall, but Mineral Resources have been upgraded to Reserves.

#### Garpenberg



The upgrading of Mineral Resources to Reserves has meant an increase in Reserves and a reduction in Resources, although new Resources have been added.

● Proven/probable Mineral Reserve ● Measured/indicated Mineral Resource ● Inferred Mineral Resource — Production x 10 All values are shown in ktonnes.



Garpenberg's Mineral Reserves is more or less equivalent to the decrease in the mine's Mineral Resources.

#### **Kevitsa**

Boliden acquired the Kevitsa mine in 2016 and production has continued to develop well, with a new production record set in 2017. The design of the final open pit has been revised for geotechnical reasons and tonnage has been transferred from Mineral Reserves to Mineral Resources. Changes have also been made due to the current price of nickel being lower than the anticipated long-term price, while the price conditions for gold, palladium and cobalt have improved. Overall, this has resulted in a 5 Mtonne reduction in the Mineral Reserve, over and above the amount extracted in 2017.

#### **Kylylahti**

770 ktonnes of ore has been mined at Kylylahti in 2017. The Mineral Reserve is small, indicating that the mine is reaching the end of life. Almost 500 ktonnes has, however, been added to the Reserve this year due, in part, to improvements in room design but due primarily to improvements in the concentration of nickel and cobalt and to improvements in the pricing terms and conditions from the smelters. Mineral Resources have increased, mainly due to the improved economic conditions and there is very real potential for at least some parts of the Mineral Resources to be technically and economically viable for extraction in 2018.

#### **Tara**

Tara presented the 10 Mtonne Tara Deep mineralisation last year. Drilling has continued from ground level towards Tara Deep and the tonnage of the inferred Mineral Resource has now been increased

to 13 Mtonnes. Drifts are being cut towards the deposit to enable the deposit to be investigated from below ground. A very comprehensive programme of improvements to the geological models of the ore and the design of the mining rooms has been carried out at the mine during the year. Overall, this work has resulted in Tara's Mineral Reserve now being larger than for many years, but the tonnage added to the mine's Reserves is primarily relatively low grade tonnage, and the average grades have, therefore, fallen.

#### **Other deposits**

Boliden also has Mineral Resources at Rockliden in Ångermanland and Laver in southern Norrbotten. Small scale studies only have been carried out on these resources in 2017 and have not affected the Mineral Resource calculations. Boliden's application for a Mining concession for Laver was rejected by the Mining Inspector. Boliden has appealed the ruling to the Government and the matter is now under review.

#### **About the classification**

Mineral Resources and Mineral Reserves are estimated separately and broken down into different categories. Boliden's Mineral Reserves are not subsidiary amounts of the Mineral Resources, and when a Mineral Resource is upgraded to a Mineral Reserve, the quantity is eliminated from the Mineral Resource. Mineral Resources and Reserves are a concentration of minerals in the bedrock in a form, quality and quantity that there are reasonable prospects for eventual economic extraction. To be classified as a Mineral Reserve, appropriate valuations and studies must have been carried out, showing that extraction and refining can be carried out in accordance with the company's profitability requirements and

that take into account such factors as waste rock dilution, ore losses, pillar offset, and process recovery rates.

#### **Inferred Mineral Resource**

An inferred Mineral Resource is a Mineral Resource for which tonnage, shape, grades and mineral content can be estimated with only a low degree of certainty. It is indicated by geology, sampling and anticipated but unverified geological and/or grade continuity. It is based on information obtained through exploration, sampling and testing carried out using appropriate techniques. The information is limited or of uncertain quality and reliability.

#### **Indicated Mineral Resource**

An indicated Mineral Resource is a Mineral Resource for which tonnage, shape, grades and mineral content can be estimated with reasonable certainty. It is based on information obtained through exploration, sampling and testing carried out using appropriate techniques. The information points are, however, too sparse or inappropriately distributed to ensure the deposit's geological and/or grade continuity.

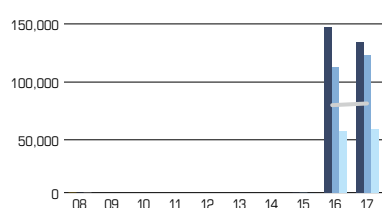
#### **Measured Mineral Resource**

A measured Mineral Resource is a Mineral Resource for which tonnage, shape, grades and mineral content can be estimated with a high degree of certainty. It is based on information obtained through detailed and reliable exploration, sampling and testing carried out using appropriate techniques. The information points are sufficiently dense to demonstrate the deposit's geological and/or grade continuity.

#### **Probable Mineral Reserve**

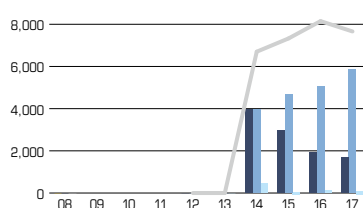
A probable Mineral Reserve meets the requirements for an indicated or, under

#### **Kevitsa**



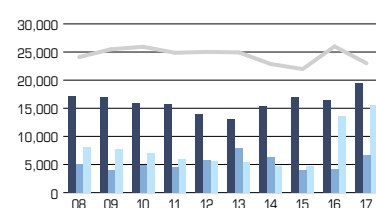
Reduction in Mineral Reserves and a corresponding increase in Mineral Resources.

#### **Kylylahti**



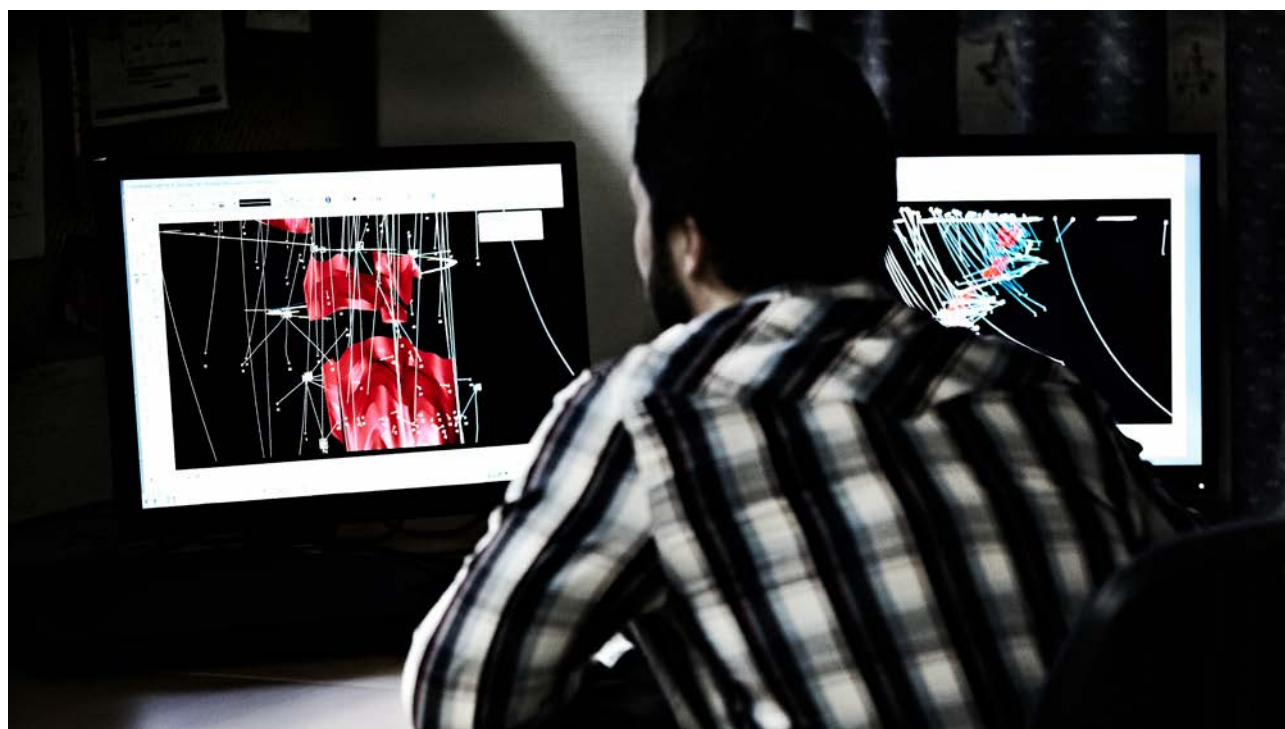
Small reduction in Mineral Reserves but an increase in Mineral Resources.

#### **Tara**



Increase in both Mineral Resources and Mineral Reserves.

● Proven/probable Mineral Reserve ● Measured/indicated Mineral Resource ● Inferred Mineral Resource — Production × 10 All values are shown in ktonnes.



certain circumstances, measured Mineral Resource where mining-engineering and profitability studies show that it is technically and economically feasible to mine and process the deposit in line with the company's profitability requirements.

#### **Proven Mineral Reserve**

A proven Mineral Reserve meets the requirements for a measured Mineral Resource where mining-engineering and profitability studies show that it is technically and economically feasible to mine and process the deposit in line with the company's profitability requirements.

#### **Basis for the estimations**

Boliden has valid exploration concessions and environmental permits for all of the mines currently in operation. The environmental permits have limited durations and are, therefore, subject to an ongoing process of renewal. The Mineral Resources are protected by exploration concessions or exploration permits. The estimations are based on the following underlying factors:

#### **Metal prices**

Mineral Resources and Mineral Reserves are the basis for the company's long-term planning and will be mined for many years to come. Planning prices, which are an expression of the anticipated average prices for metals and currencies over the next 10-year period, are, therefore, primarily

utilised in the estimations. Boliden's current planning prices are shown in the following table:

#### **Density**

Formulas based on component head grades are utilised for massive sulphide ores, which make up the majority of Boliden's Mineral Resources and Mineral Reserves. The formulas have been verified using density measurements. In other cases, measurements are carried out for the different ores or rock types that affect the density.

#### **Waste rock dilution**

Mining usually incurs some waste rock dilution that varies, depending on the

mining method used, the ore's geometry, and other geological factors. Boliden systematically monitors the waste rock dilution of the ore extracted and the experience gained thereby enables waste rock dilution to be included in all Mineral Reserve estimations.

#### **Ore losses**

Some ore may have to be left unextracted, e.g. in the form of pillar offset, depending on the mining method used, the ore's geometry, and other technical factors. The Mineral Reserve estimations take these factors into account, based on assumptions regarding mining methods and the information available when the estimations were made.

#### **Minimum ore width**

The minimum horizontal ore width is based on assumptions regarding mining method and equipment. Ore zones that are narrower than the minimum ore width are re-estimated using the average for the full width.

#### **Regulations, codes and recommendations**

Boliden's Mineral Resources and Mineral Reserves have been estimated and compiled in accordance with recommendations for application in their respective countries by the Swedish, Finnish and Norwegian industry organisations for

| Planning prices | Long-term prices 2017 | Change since 2016 |
|-----------------|-----------------------|-------------------|
| Copper          | USD 6,200/tonne       |                   |
| Zinc            | USD 2,200/tonne       |                   |
| Lead            | USD 2,100/tonne       |                   |
| Gold            | USD 1,200/tr.oz       | +100              |
| Silver          | USD 18/tr.oz          |                   |
| Molybdenum      | USD 8/lb              |                   |
| Nickel          | USD 16,000/tonne      |                   |
| Palladium       | USD 750/tr.oz         | +50               |
| Platinum        | USD 1,150/tr.oz       | -150              |
| Cobalt          | USD 14/lb             | +2                |
| Tellurium       | USD 30/kg             |                   |
| USD/SEK         | 7.5                   |                   |
| EUR/SEK         | 8.63                  |                   |
| EUR/USD         | 1.15                  |                   |

## Mineral Reserves, 31 December 2017

|                          |          | Quantity, ktonnes |         | 2017      |           |         |         |         |                       |         |           |           |           |
|--------------------------|----------|-------------------|---------|-----------|-----------|---------|---------|---------|-----------------------|---------|-----------|-----------|-----------|
|                          |          | 2017              | 2016    | Au<br>g/t | Ag<br>g/t | Cu<br>% | Zn<br>% | Pb<br>% | Ni <sup>1)</sup><br>% | Co<br>% | Pt<br>g/t | Pd<br>g/t | Te<br>g/t |
| Aitik                    | Proven   | 801,000           | 823,000 | 0.15      | 1.3       | 0.22    |         |         |                       |         |           |           |           |
|                          | Probable | 360,000           | 371,000 | 0.14      | 1.2       | 0.23    |         |         |                       |         |           |           |           |
| The Boliden Area         |          |                   |         |           |           |         |         |         |                       |         |           |           |           |
| Sulphide mineralisations |          |                   |         |           |           |         |         |         |                       |         |           |           |           |
| Kristineberg             | Proven   | 20                | 50      | 0.9       | 48        | 2.4     | 1.9     | 0.1     |                       |         |           |           |           |
|                          | Probable | 4,880             | 4,900   | 0.5       | 34        | 0.5     | 5.6     | 0.3     |                       |         |           |           |           |
| Renström                 | Proven   | 190               | 200     | 2.4       | 133       | 0.4     | 6.2     | 1.2     |                       |         |           |           |           |
|                          | Probable | 2,380             | 3,220   | 1.9       | 102       | 0.6     | 4.5     | 0.8     |                       |         |           |           |           |
| Mauriliden               | Proven   | 170               | 500     | 1.5       | 49        | 0.4     | 4.2     | 0.3     |                       |         |           |           |           |
|                          | Probable |                   |         |           |           |         |         |         |                       |         |           |           |           |
| Total                    | Proven   | 380               | 760     | 1.9       | 91        | 0.5     | 5.1     | 0.7     |                       |         |           |           |           |
|                          | Probable | 7,300             | 8,150   | 0.9       | 56        | 0.5     | 5.2     | 0.5     |                       |         |           |           |           |
| Gold mineralisations     |          |                   |         |           |           |         |         |         |                       |         |           |           |           |
| Kankberg                 | Proven   | 2,400             | 2,400   | 3.8       | 11        |         |         |         |                       |         |           |           | 181       |
|                          | Probable | 2,100             | 1,200   | 3.5       | 10        |         |         |         |                       |         |           |           | 168       |
| Garpenberg               | Proven   | 21,900            | 19,700  | 0.24      | 109       | 0.04    | 3.6     | 1.4     |                       |         |           |           |           |
|                          | Probable | 55,800            | 56,700  | 0.34      | 96        | 0.05    | 2.9     | 1.4     |                       |         |           |           |           |
| Kevitsa                  | Proven   | 71,400            | 79,100  | 0.10      |           | 0.34    |         |         | 0.21                  | 0.010   | 0.19      | 0.12      |           |
|                          | Probable | 62,400            | 67,700  | 0.10      |           | 0.34    |         |         | 0.24                  | 0.010   | 0.21      | 0.14      |           |
| Kylälahti                | Proven   | 1,000             | 800     | 0.9       |           | 1.2     | 0.6     |         | 0.21                  | 0.24    |           |           |           |
|                          | Probable | 700               | 1,100   | 1.5       |           | 0.5     | 0.2     |         | 0.29                  | 0.15    |           |           |           |
| Tara                     | Proven   | 2,900             | 4,200   |           |           |         | 6.7     | 1.6     |                       |         |           |           |           |
|                          | Probable | 16,600            | 12,300  |           |           |         | 5.7     | 1.4     |                       |         |           |           |           |

1) Kevitsa reports sulphur-bound Ni and Co. Figures may be rounded up or down.

mining and metal companies – SveMin, FinnMin and Norsk Bergindustri, respectively – known as the FRB standard. This is an independent set of regulations but based on “The International Template for the public reporting of exploration results, Mineral Resources and Mineral Reserves”, produced by the Committee for Mineral Reserves International Reporting Standards (CRIRSCO) in a bid to achieve a harmonised international practice. The FRB standard is no longer being updated and SveMin intends to recommend that its members report in accordance with the Pan-European Standard for Reporting of Exploration Results, Mineral Resources

and Reserves (PERC). PERC complies with and is accepted by CRIRSCO.

The Mineral Resources and Mineral Reserves that have been compiled and presented in this report have been reviewed and approved by Gunnar Agmalm, Boliden’s Mineral Reserves and Project Evaluation Manager, who is registered as a “Qualified Person” by SveMin and as a “Competent Person” in accordance with JORC.

February 2018

Gunnar Agmalm  
Qualified Person SveMin

## Mineral Resources, 31 December 2017

|                          |           | Quantity, ktonnes |           | 2017      |           |         |         |         |                       |         |           |           |                         |           |
|--------------------------|-----------|-------------------|-----------|-----------|-----------|---------|---------|---------|-----------------------|---------|-----------|-----------|-------------------------|-----------|
|                          |           | 2017              | 2016      | Au<br>g/t | Ag<br>g/t | Cu<br>% | Zn<br>% | Pb<br>% | Ni <sup>1)</sup><br>% | Co<br>% | Pt<br>g/t | Pd<br>g/t | Te <sup>2)</sup><br>g/t | Mo<br>g/t |
| The Aitik area           |           |                   |           |           |           |         |         |         |                       |         |           |           |                         |           |
| Aitik                    | Measured  | 240,000           | 252,000   | 0.09      | 0.8       | 0.15    |         |         |                       |         |           |           |                         |           |
|                          | Indicated | 1,116,000         | 1,313,000 | 0.09      | 0.8       | 0.17    |         |         |                       |         |           |           |                         |           |
|                          | Inferred  | 180,000           | 281,000   | 0.11      | 0.6       | 0.14    |         |         |                       |         |           |           |                         |           |
| Nautanen                 | Measured  |                   |           |           |           |         |         |         |                       |         |           |           |                         |           |
|                          | Indicated | 8,200             | 9,600     | 0.9       | 5.0       | 1.7     |         |         |                       |         |           |           |                         | 86        |
|                          | Inferred  | 7,500             | 6,400     | 0.6       | 7.0       | 1.5     |         |         |                       |         |           |           |                         | 81        |
| The Boliden Area         |           |                   |           |           |           |         |         |         |                       |         |           |           |                         |           |
| Sulphide mineralisations |           |                   |           |           |           |         |         |         |                       |         |           |           |                         |           |
| Kristineberg             | Measured  | 50                | 50        | 0.7       | 45        | 1.3     | 4.2     | 0.2     |                       |         |           |           |                         |           |
|                          | Indicated | 5,040             | 4,630     | 0.4       | 61        | 0.9     | 4.6     | 0.5     |                       |         |           |           |                         |           |
|                          | Inferred  | 7,400             | 7,990     | 0.4       | 55        | 0.8     | 2.8     | 0.4     |                       |         |           |           |                         |           |
| Petiknäs N               | Measured  | 310               | 310       | 8.1       | 73        | 1.8     | 3.1     | 0.3     |                       |         |           |           |                         |           |
|                          | Indicated | 1,200             | 1,200     | 2.7       | 52        | 0.6     | 1.8     | 0.3     |                       |         |           |           |                         |           |
|                          | Inferred  | 720               | 720       | 3.3       | 33        | 0.5     | 1.2     | 0.2     |                       |         |           |           |                         |           |
| Renström                 | Measured  |                   |           |           |           |         |         |         |                       |         |           |           |                         |           |
|                          | Indicated | 2,850             | 2,000     | 2.4       | 146       | 0.3     | 8.1     | 1.5     |                       |         |           |           |                         |           |
|                          | Inferred  | 1,570             | 1,990     | 2.4       | 173       | 0.3     | 9.9     | 1.8     |                       |         |           |           |                         |           |
| Maurliden                | Measured  | 620               | 670       | 1.1       | 41        | 0.6     | 2.8     | 0.2     |                       |         |           |           |                         |           |
|                          | Indicated | 220               | 260       | 0.7       | 20        | 0.4     | 1.5     | 0.1     |                       |         |           |           |                         |           |
|                          | Inferred  |                   |           |           |           |         |         |         |                       |         |           |           |                         |           |
| Total                    | Measured  | 1,000             | 1,000     | 3.3       | 51        | 1.0     | 2.9     | 0.2     |                       |         |           |           |                         |           |
| Sulphide mineralisations | Indicated | 9,300             | 8,300     | 1.3       | 85        | 0.7     | 5.3     | 0.7     |                       |         |           |           |                         |           |
|                          | Inferred  | 9,700             | 10,700    | 0.9       | 73        | 0.7     | 3.8     | 0.6     |                       |         |           |           |                         |           |
| Gold mineralisations     |           |                   |           |           |           |         |         |         |                       |         |           |           |                         |           |
| Kankberg                 | Measured  | 190               | 290       | 3.8       | 8         |         |         |         |                       |         |           |           | 130                     |           |
|                          | Indicated | 310               | 850       | 4.7       | 8         |         |         |         |                       |         |           |           | 117                     |           |
|                          | Inferred  | 1,360             | 1,580     | 5.5       | 8         |         |         |         |                       |         |           |           | 168                     |           |
| Älgträsk                 | Measured  |                   |           |           |           |         |         |         |                       |         |           |           |                         |           |
|                          | Indicated | 1,070             | 1,070     | 2.8       | 5         |         |         |         |                       |         |           |           |                         |           |
|                          | Inferred  | 3,520             | 3,520     | 2.0       | 4         |         |         |         |                       |         |           |           |                         |           |
| Total                    | Measured  | 190               | 290       | 3.8       | 8         |         |         |         |                       |         |           |           |                         |           |
| Gold mineralisations     | Indicated | 1,400             | 1,900     | 3.2       | 5         |         |         |         |                       |         |           |           |                         |           |
|                          | Inferred  | 4,900             | 5,100     | 3.0       | 5         |         |         |         |                       |         |           |           |                         |           |
|                          |           |                   |           |           |           |         |         |         |                       |         |           |           |                         |           |
| Garpenberg               | Measured  | 5,700             | 6,600     | 0.29      | 99        | 0.06    | 3.7     | 1.7     |                       |         |           |           |                         |           |
|                          | Indicated | 35,500            | 34,900    | 0.33      | 86        | 0.05    | 2.7     | 1.3     |                       |         |           |           |                         |           |
|                          | Inferred  | 17,000            | 18,100    | 0.53      | 58        | 0.08    | 2.7     | 1.7     |                       |         |           |           |                         |           |
| Kevitsa                  | Measured  | 19,100            | 17,900    | 0.08      |           | 0.33    |         |         | 0.21                  | 0.010   | 0.16      | 0.11      |                         |           |
|                          | Indicated | 102,800           | 93,900    | 0.07      |           | 0.36    |         |         | 0.23                  | 0.011   | 0.13      | 0.08      |                         |           |
|                          | Inferred  | 56,100            | 54,400    | 0.06      |           | 0.32    |         |         | 0.20                  | 0.010   | 0.12      | 0.07      |                         |           |
| Kylylahti                | Measured  | 1,900             | 1,900     | 0.3       |           | 0.66    | 0.3     |         | 0.23                  | 0.14    |           |           |                         |           |
|                          | Indicated | 3,900             | 3,200     | 0.4       |           | 0.34    | 0.2     |         | 0.27                  | 0.12    |           |           |                         |           |
|                          | Inferred  | 150               | 100       | 0.0       |           | 0.28    | 0.1     |         | 0.27                  | 0.08    |           |           |                         |           |
| Tara                     | Measured  | 400               | 400       |           |           |         | 5.6     | 2.3     |                       |         |           |           |                         |           |
|                          | Indicated | 6,200             | 3,800     |           |           |         | 6.2     | 1.9     |                       |         |           |           |                         |           |
|                          | Inferred  | 15,500            | 13,600    |           |           |         | 7.5     | 1.9     |                       |         |           |           |                         |           |
| Laver                    | Measured  | 1,100             | 1,100     | 0.11      | 4.4       | 0.20    |         |         |                       |         |           |           |                         | 18        |
|                          | Indicated | 512,400           | 512,400   | 0.13      | 3.1       | 0.22    |         |         |                       |         |           |           |                         | 36        |
|                          | Inferred  | 550,600           | 550,600   | 0.10      | 3.1       | 0.21    |         |         |                       |         |           |           |                         | 33        |
| Rockliden                | Measured  |                   |           |           |           |         |         |         |                       |         |           |           |                         |           |
|                          | Indicated | 800               | 800       | 0.08      | 102       | 2.1     | 4.4     | 0.90    |                       |         |           |           |                         |           |
|                          | Inferred  | 9,200             | 9,200     | 0.06      | 47        | 1.7     | 3.9     | 0.40    |                       |         |           |           |                         |           |

1) Kevitsa reports sulphur-bound Ni and Co.

2) Te at Kankberg only.

Figures may be rounded up or down.



# Ten-year overviews

## The Group

|   | 2008   | 2009   | 2010   | 2011   | 2012 <sup>1)</sup> | 2013   | 2014   | 2015   | 2016   | 2017   |
|---|--------|--------|--------|--------|--------------------|--------|--------|--------|--------|--------|
| <b>Result, SEK m</b>  |        |        |        |        |                    |        |        |        |        |        |
| Revenues  | 30,987 | 27,635 | 36,716 | 40,323 | 40,001             | 34,409 | 36,891 | 40,242 | 40,316 | 49,531 |
| Operating profit before depreciation                                | 2,426  | 5,186  | 7,445  | 6,674  | 6,731              | 4,632  | 6,035  | 7,112  | 9,881  | 13,617 |
| Operating profit excluding revaluation of process inventory         | 1,793  | 2,350  | 4,830  | 5,008  | 4,042              | 2,271  | 2,605  | 4,010  | 5,094  | 8,913  |
| Operating profit  | 1,004  | 3,623  | 5,643  | 4,748  | 4,171              | 1,803  | 2,759  | 3,590  | 5,682  | 9,015  |
| Profit after financial items  | 723    | 3,377  | 5,331  | 4,560  | 3,992              | 1,581  | 2,471  | 3,356  | 5,375  | 8,737  |
| Tax   | 212    | -876   | -1,375 | -1,171 | -651               | -288   | -572   | -715   | -1,135 | -1,881 |
| Net profit for the year   | 935    | 2,501  | 3,957  | 3,389  | 3,341              | 1,294  | 1,899  | 2,641  | 4,239  | 6,856  |
| <b>Cash flow, SEK m</b>   |        |        |        |        |                    |        |        |        |        |        |
| Cash flow from operating activities                                 | 5,470  | 3,974  | 6,197  | 4,021  | 5,518              | 3,505  | 5,789  | 6,235  | 6,995  | 12,737 |
| Cash flow from investment activities                                | -4,633 | -4,922 | -2,995 | -4,024 | -4,129             | -4,971 | -4,206 | -3,670 | -9,795 | -5,428 |
| Free cash flow  | 837    | -948   | 3,202  | -3     | 1,389              | -1,466 | 1,583  | 2,565  | -2,801 | 7,309  |
| Cash flow from financing activities                                 | -514   | 571    | -3,199 | -464   | -730               | 1,060  | -1,355 | -2,503 | 3,376  | -6,304 |
| Cash flow for the year  | 323    | -377   | 3      | -467   | 659                | -406   | 228    | 63     | 575    | 1,005  |
| <b>Capital structure and return, SEK m</b>                          |        |        |        |        |                    |        |        |        |        |        |
| Balance Sheet total   | 30,252 | 33,258 | 35,128 | 37,615 | 40,080             | 41,841 | 43,865 | 43,022 | 53,877 | 55,882 |
| Capital employed  | 24,733 | 26,229 | 27,151 | 30,473 | 31,236             | 34,451 | 35,087 | 35,131 | 42,457 | 42,931 |
| Return on capital employed, %                                       | 5      | 14     | 21     | 17     | 14                 | 5      | 8      | 10     | 15     | 21     |
| Equity  | 16,131 | 16,257 | 18,846 | 21,032 | 22,354             | 23,075 | 23,974 | 25,807 | 29,394 | 35,053 |
| Return on equity, %   | 7      | 16     | 23     | 17     | 16                 | 6      | 8      | 11     | 16     | 22     |
| Equity/assets ratio, %  | 53     | 49     | 54     | 56     | 56                 | 55     | 55     | 60     | 55     | 63     |
| Net debt  | 6,305  | 7,402  | 4,584  | 6,063  | 6,276              | 8,673  | 8,283  | 5,827  | 9,339  | 3,752  |
| Net debt/equity ratio, %  | 39     | 46     | 24     | 29     | 28                 | 38     | 35     | 23     | 32     | 11     |
| <b>Data per share, SEK</b>  |        |        |        |        |                    |        |        |        |        |        |
| Earnings for the period   |        |        |        |        |                    |        |        |        |        |        |
| Basic   | 3.42   | 9.14   | 14.47  | 12.39  | 12.21              | 4.72   | 6.94   | 9.65   | 15.49  | 25.06  |
| Diluted   | 3.42   | 9.14   | 14.47  | 12.39  | 12.21              | 4.72   | 6.94   | 9.65   | 15.49  | 25.06  |
| Cash flow from operating activities                                 |        |        |        |        |                    |        |        |        |        |        |
| Basic   | 20.00  | 14.53  | 22.66  | 14.70  | 20.17              | 12.82  | 21.17  | 22.80  | 25.57  | 46.57  |
| Diluted   | 20.00  | 14.53  | 22.66  | 14.70  | 20.17              | 12.82  | 21.17  | 22.80  | 25.57  | 46.57  |
| Equity  |        |        |        |        |                    |        |        |        |        |        |
| Basic   | 58.98  | 59.44  | 68.90  | 76.90  | 81.68              | 84.31  | 87.63  | 94.33  | 107.44 | 128.13 |
| Diluted   | 58.98  | 59.44  | 68.90  | 76.90  | 81.68              | 84.31  | 87.63  | 94.33  | 107.44 | 128.13 |
| Ordinary dividend   | 1.00   | 3.00   | 5.00   | 4.00   | 4.00               | 1.75   | 2.25   | 3.25   | 5.25   | 8.25   |
| Redemption  | -      | -      | -      | -      | -                  | -      | -      | -      | -      | 5.75   |
| Share price, 31/12  | 17.80  | 92.1   | 136.7  | 100.5  | 122.1              | 98.45  | 125.5  | 142.9  | 237.9  | 280.6  |
| Highest price paid  | 86.00  | 95.3   | 137.7  | 143.5  | 125.6              | 126.7  | 129.9  | 201.1  | 258.2  | 307.9  |
| Lowest price paid   | 14.60  | 16.1   | 79.5   | 65.35  | 87.8               | 80.2   | 90.7   | 112.1  | 100    | 222.7  |
| P/E ratio   | 5.20   | 10.07  | 9.45   | 8.11   | 10.0               | 20.9   | 18.09  | 14.8   | 15.4   | 11.4   |
| Change in share price during the year, %                            | -78    | 417    | 48     | -26    | 21                 | -19    | 27     | 14     | 66     | 18     |
| Dividend yield, %   | 5.6    | 3.3    | 3.7    | 4.0    | 3.3                | 1.8    | 1.8    | 2.3    | 2.2    | 2.9    |
| Total yield, %  | -73    | 423    | 52     | -23    | 25                 | -16    | 30     | 15     | 70     | 20     |
| <b>Number of shares, million</b>                                    |        |        |        |        |                    |        |        |        |        |        |
| Number of shares, 31/12   | 274    | 274    | 274    | 274    | 274                | 274    | 274    | 274    | 274    | 274    |
| Average number of shares  | 274    | 274    | 274    | 274    | 274                | 274    | 274    | 274    | 274    | 274    |
| No. own shares held, 31/12  | -      | -      | -      | -      | -                  | -      | -      | -      | -      | -      |
| <b>Employees</b>  |        |        |        |        |                    |        |        |        |        |        |
| Number of Group employees, total                                    | 4,608  | 4,379  | 4,412  | 4,597  | 4,795              | 4,815  | 4,881  | 4,878  | 5,477  | 5,684  |
| Number of female employees  | 650    | 598    | 669    | 736    | 813                | 824    | 852    | 867    | 976    | 1,001  |
| Percentage of women on the Board/in Group management, %             | 25/29  | 27/17  | 27/0   | 27/0   | 27/17              | 27/20  | 27/20  | 36/20  | 36/20  | 36/20  |
| Accidents per one million hours worked, own personnel, frequency    | 9.1    | 5.5    | 8.2    | 4.9    | 6.6                | 7.0    | 5.8    | 6.6    | 6.7    | 5.0    |
| Accidents per one million hours worked incl. contractors, frequency |        |        |        |        | 9.1                | 8.9    | 7.9    | 8.9    | 7.9    | 6.3    |
| Fatalities, own personnel   | 1      | 0      | 0      | 0      | 0                  | 0      | 0      | 0      | 0      | 0      |
| Fatalities, contractors   |        |        |        |        | 0                  | 0      | 0      | 0      | 1      | 0      |
| Sick leave rate, %  | 4.7    | 4.2    | 4.0    | 3.7    | 3.7                | 3.9    | 4.3    | 4.6    | 4.4    | 4.5    |

| Ten-year overview – The Group, cont.   | 2008   | 2009   | 2010   | 2011   | 2012 <sup>1)</sup> | 2013   | 2014   | 2015   | 2016              | 2017   |
|--|--------|--------|--------|--------|--------------------|--------|--------|--------|-------------------|--------|
| <b>Energy consumption</b>  |        |        |        |        |                    |        |        |        |                   |        |
| Total energy consumption, TJ   | 15,257 | 14,664 | 16,147 | 15,579 | 16,140             | 16,415 | 17,231 | 16,813 | 19,061            | 19,788 |
| Water withdrawal, total, km <sup>3</sup>                                     | 0.134  | 0.135  | 0.140  | 0.153  | 0.160              | 0.155  | 0.173  | 0.150  | 0.140             | 0.145  |
| <b>Emissions &amp; Discharges</b>  |        |        |        |        |                    |        |        |        |                   |        |
| Direct emissions of greenhouse gases, ktonnes                                | 450    | 486    | 510    | 499    | 574                | 578    | 554    | 559    | 594               | 605    |
| Indirect emissions of greenhouse gases, electricity purchased, ktonnes       | 357    | 356    | 398    | 408    | 416                | 402    | 425    | 313    | 436 <sup>3)</sup> | 387    |
| Indirect emissions of greenhouse gases, heating and steam purchased, ktonnes | 0      | 5      | 6      | 17     | 18                 | 20     | 22     | 17     | 23                | 31     |
| Carbon dioxide emissions, total, ktonnes                                     | 807    | 848    | 913    | 924    | 1,008              | 1,000  | 1,001  | 889    | 1,052             | 1,018  |
| Emissions of metals to air, tonnes <sup>2)</sup>                             | 23     | 21     | 23     | 23     | 92                 | 75     | 126    | 88     | 100               | 109    |
| Sulphur dioxide emissions to air, tonnes                                     | 8,260  | 6,930  | 6,850  | 7,410  | 8,240              | 6,410  | 7,320  | 7,210  | 7,060             | 7,360  |
| Discharges of metals to water, tonnes <sup>2)</sup>                          | 29     | 14     | 18     | 14     | 21                 | 23     | 21     | 18     | 13                | 9      |
| Discharges of nitrogen to water, tonnes                                      | 283    | 225    | 199    | 205    | 253                | 219    | 225    | 261    | 300               | 236    |

1) The 2012 comparison year has been restated due to the changes to the IFRIC 20 and IAS 19 accounting principles in 2013.

2) Refers to metal equivalents (tonnes), as of 2012. The period from 2008–2011 refers to the metal's mass (tonnes).

3) Last year's emissions have been corrected from 381 to 436 due to incorrect input data in the original calculations.

## Mines

|  | 2008    | 2009    | 2010    | 2011    | 2012 <sup>1)</sup>  | 2013    | 2014    | 2015    | 2016    | 2017    |
|--|---------|---------|---------|---------|---------------------|---------|---------|---------|---------|---------|
| <b>Production of metal in concentrate</b>                |         |         |         |         |                     |         |         |         |         |         |
| Zinc, ktonnes  | 297     | 307     | 294     | 283     | 271                 | 272     | 294     | 299     | 329     | 305     |
| Copper, ktonnes  | 57      | 55      | 76      | 81      | 79                  | 79      | 78      | 85      | 103     | 143     |
| Lead, ktonnes  | 53      | 57      | 50      | 49      | 49                  | 48      | 61      | 62      | 63      | 60      |
| Gold, kg   | 2,603   | 3,130   | 3,727   | 3,681   | 3,644               | 3,849   | 4,379   | 4,922   | 5,766   | 7,237   |
| Gold, troy oz.   | 83,672  | 100,623 | 119,839 | 118,332 | 117,150             | 123,759 | 140,789 | 158,228 | 185,386 | 232,666 |
| Silver, kg   | 211,683 | 214,120 | 230,756 | 231,388 | 229,791             | 261,804 | 323,325 | 418,489 | 446,826 | 413,238 |
| Silver, '000 troy oz.                                    | 6,806   | 6,884   | 7,419   | 7,439   | 7,388               | 8,417   | 10,395  | 13,454  | 14,365  | 13,286  |
| Tellurium, kg <sup>2)</sup>                              | –       | –       | –       | –       | 6,791               | 24,457  | 30,917  | 33,000  | 38,680  | 34,979  |
| <b>Financial data, SEK m</b>                             |         |         |         |         |                     |         |         |         |         |         |
| Revenues   | 5,178   | 6,509   | 9,580   | 10,279  | 9,509               | 8,303   | 9,318   | 9,808   | 12,659  | 18,195  |
| Operating expenses                                       | 3,716   | 3,652   | 4,535   | 5,189   | 5,008               | 4,924   | 5,417   | 5,842   | 6,833   | 7,947   |
| Depreciation   | 618     | 673     | 954     | 1,110   | 1,669               | 1,917   | 2,264   | 2,520   | 3,172   | 3,487   |
| Operating profit   | 734     | 2,159   | 4,113   | 3,913   | 2,974               | 1,598   | 1,299   | 1,429   | 2,804   | 6,681   |
| Investments  | 3,886   | 4,435   | 2,189   | 2,338   | 3,570               | 3,763   | 2,732   | 2,394   | 2,755   | 3,722   |
| Operational acquisitions <sup>3)</sup>                   | –       | –       | –       | –       | –                   | –       | 718     | –       | 5,961   | –       |
| Capital employed   | 8,292   | 12,476  | 13,501  | 14,272  | 16,125              | 18,288  | 19,615  | 19,275  | 24,972  | 25,502  |
| <b>AITIK</b>   |         |         |         |         |                     |         |         |         |         |         |
| Milled ore, ktonnes                                      | 17,813  | 18,791  | 27,596  | 31,541  | 34,321              | 37,070  | 39,090  | 36,361  | 36,051  | 39,045  |
| <b>Head grades</b>                                       |         |         |         |         |                     |         |         |         |         |         |
| Cu, %  | 0.30    | 0.27    | 0.27    | 0.24    | 0.22                | 0.21    | 0.20    | 0.21    | 0.22    | 0.28    |
| Au, g/tonne  | 0.14    | 0.13    | 0.16    | 0.14    | 0.11                | 0.10    | 0.09    | 0.11    | 0.11    | 0.13    |
| Ag, g/tonne  | 2.81    | 1.99    | 2.07    | 2.15    | 2.50                | 2.28    | 2.14    | 2.45    | 2.11    | 1.98    |
| <b>Concentrate production</b>                            |         |         |         |         |                     |         |         |         |         |         |
| Cu, ktonnes  | 174     | 171     | 263     | 267     | 270                 | 292     | 277     | 307     | 320     | 394     |
| <b>Concentrate grade</b>                                 |         |         |         |         |                     |         |         |         |         |         |
| Cu, %  | 27.20   | 26.94   | 25.58   | 25.00   | 24.85               | 24.29   | 24.48   | 21.93   | 22.12   | 24.76   |
| <b>Production of metal in concentrate</b>                |         |         |         |         |                     |         |         |         |         |         |
| Cu, ktonnes  | 47      | 46      | 67      | 67      | 67                  | 71      | 68      | 67      | 71      | 98      |
| Au, kg   | 1,218   | 1,348   | 2,208   | 2,447   | 1,959               | 1,765   | 1,767   | 2,042   | 2,119   | 2,899   |
| Au, troy oz.   | 39,172  | 43,338  | 70,987  | 78,657  | 62,996              | 56,731  | 56,823  | 65,666  | 68,127  | 93,197  |
| Ag, kg   | 32,087  | 24,701  | 36,468  | 45,040  | 51,698              | 53,612  | 54,854  | 61,452  | 56,602  | 61,862  |
| Ag, '000 troy oz.  | 1,032   | 794     | 1,172   | 1,448   | 1,662               | 1,724   | 1,764   | 1,976   | 1,820   | 1,989   |
| <b>Financial data, SEK m</b>                             |         |         |         |         |                     |         |         |         |         |         |
| Revenues   | 1,949   | 1,997   | 3,996   | 4,549   | 4,170               | 3,593   | 3,427   | 3,292   | 3,273   | 5,487   |
| Operating profit before depreciation                     | 1,049   | 1,134   | 2,442   | 2,583   | 2,651               | 1,902   | 1,669   | 1,413   | 1,548   | 3,513   |
| Operating profit   | 876     | 949     | 2,008   | 2,046   | 1,732               | 882     | 558     | 183     | 222     | 2,073   |
| Investments  | 2,994   | 3,674   | 1,210   | 1,178   | 1,207 <sup>1)</sup> | 1,143   | 1,181   | 1,207   | 1,174   | 1,534   |
| Cash cost US\$/lb. Cu C1, Normal                         | 124     | 86      | 105     | 120     | 83                  | 131     | 138     | 105     | 102     | 82      |
| <b>Proven and probable Mineral Reserves<sup>4)</sup></b> |         |         |         |         |                     |         |         |         |         |         |
| Mtonnes  | 633     | 747     | 733     | 710     | 702                 | 1,085   | 1,126   | 1,227   | 1,194   | 1,161   |
| Cu, %  | 0.27    | 0.25    | 0.25    | 0.25    | 0.25                | 0.22    | 0.22    | 0.23    | 0.23    | 0.23    |
| Au, g/tonne  | 0.20    | 0.10    | 0.10    | 0.10    | 0.10                | 0.14    | 0.14    | 0.14    | 0.14    | 0.14    |

| Ten-year overview – Mines, cont.            | 2008   | 2009   | 2010   | 2011   | 2012 <sup>1)</sup> | 2013   | 2014   | 2015   | 2016   | 2017   |
|---|--------|--------|--------|--------|--------------------|--------|--------|--------|--------|--------|
| <b>THE BOLIDEN AREA</b>                     |        |        |        |        |                    |        |        |        |        |        |
| Milled ore, ktonnes                         | 1,355  | 1,192  | 1,375  | 1,677  | 1,862              | 1,809  | 1,862  | 1,879  | 2,138  | 2,065  |
| of which, slag                              | 293    | 242    | 157    | 134    | 241                | 301    | 245    | 301    | 300    | 264    |
| <b>Head grades</b>                          |        |        |        |        |                    |        |        |        |        |        |
| Zn, %                                       | 4.01   | 3.69   | 3.69   | 2.87   | 2.15               | 2.61   | 3.00   | 3.82   | 4.16   | 3.99   |
| Cu, %                                       | 1.00   | 0.95   | 0.79   | 1.03   | 0.84               | 0.61   | 0.60   | 0.41   | 0.40   | 0.38   |
| Pb, %                                       | 0.43   | 0.46   | 0.37   | 0.27   | 0.23               | 0.28   | 0.30   | 0.44   | 0.44   | 0.42   |
| Te, g/tonne <sup>2)</sup>                   | –      | –      | –      | –      | 8.94               | 28.78  | 33.8   | 37.6   | 36.9   | 34.9   |
| Au, g/tonne                                 | 1.5    | 2.0    | 1.6    | 1.2    | 1.3                | 1.6    | 1.8    | 1.7    | 1.7    | 1.9    |
| Ag, g/tonne                                 | 61     | 65     | 55     | 41     | 35                 | 42     | 42.6   | 59.6   | 59.2   | 57.7   |
| <b>Concentrate production</b>               |        |        |        |        |                    |        |        |        |        |        |
| Zn, ktonnes                                 | 70     | 58     | 74     | 69     | 56                 | 63     | 82     | 103    | 129    | 123    |
| Cu, ktonnes                                 | 32     | 28     | 31     | 60     | 47                 | 31     | 32     | 20     | 23     | 20     |
| Pb, ktonnes                                 | 5      | 4      | 4      | 3      | 3                  | 3      | 5      | 9      | 12     | 13     |
| <b>Concentrate grade</b>                    |        |        |        |        |                    |        |        |        |        |        |
| Zn, %                                       | 54.7   | 54.7   | 54.7   | 55.7   | 54.6               | 55.9   | 54.9   | 54.2   | 54.5   | 53.2   |
| Cu, %                                       | 29.0   | 28.4   | 26.4   | 23.3   | 25.5               | 25.4   | 24.5   | 25.7   | 24.8   | 25.3   |
| Pb, %                                       | 41.7   | 42.7   | 41.5   | 41.7   | 44.5               | 45.26  | 32.9   | 34.0   | 31.3   | 25.7   |
| <b>Production of metal in concentrate</b>   |        |        |        |        |                    |        |        |        |        |        |
| Zn, ktonnes                                 | 38     | 31     | 40     | 38     | 30                 | 35     | 45     | 56     | 70     | 66     |
| Cu, ktonnes                                 | 9      | 8      | 8      | 14     | 12                 | 8      | 8      | 5      | 6      | 5      |
| Pb, ktonnes                                 | 2      | 2      | 2      | 1      | 1                  | 1      | 2      | 3      | 4      | 3      |
| Te, kg <sup>2)</sup>                        | –      | –      | –      | –      | 6,791              | 24,457 | 30,917 | 33,000 | 38,680 | 34,979 |
| Au, kg                                      | 1,141  | 1,568  | 1,285  | 989    | 1,434              | 1,808  | 2,062  | 1,899  | 2,261  | 2,476  |
| Au, troy oz.                                | 36,679 | 50,414 | 41,318 | 31,781 | 46,102             | 58,117 | 66,293 | 61,058 | 72,693 | 79,615 |
| Ag, kg                                      | 47,671 | 48,186 | 52,806 | 45,318 | 41,405             | 45,212 | 47,421 | 64,846 | 84,911 | 80,781 |
| Ag, '000 troy oz.                           | 1,533  | 1,549  | 1,698  | 1,457  | 1,331              | 1,454  | 1,525  | 2,085  | 2,730  | 2,597  |
| <b>Financial data, SEK m</b>                |        |        |        |        |                    |        |        |        |        |        |
| Revenues                                    | 1,013  | 1,109  | 1,448  | 1,587  | 1,552              | 1,317  | 1,712  | 1,602  | 2,025  | 2,612  |
| Operating profit before depreciation        | 222    | 405    | 588    | 659    | 554                | 250    | 474    | 437    | 924    | 1,267  |
| Operating profit                            | 115    | 303    | 481    | 530    | 369                | 19     | 188    | 108    | 548    | 868    |
| Investments                                 | 237    | 264    | 298    | 565    | 623                | 364    | 261    | 413    | 365    | 440    |
| Cash cost US\$/lb. Zn C1, Pro-rata          |        |        |        |        |                    | 72     | 78     | 68     | 64     | 79     |
| Cash cost US\$/lb. Cu C1, Pro-rata          |        |        |        |        |                    | 264    | 216    | 167    | 112    | 143    |
| Cash cost USD/tr.oz. Au C1, Pro-rata        |        |        |        |        |                    | 1,098  | 921    | 818    | 710    | 686    |
| <b>Proven and probable Mineral Reserves</b> |        |        |        |        |                    |        |        |        |        |        |
| Sulphide ores, ktonnes                      | 7,350  | 6,950  | 8,220  | 8,980  | 9,110              | 12,680 | 11,580 | 10,550 | 8,910  | 7,680  |
| Zn, %                                       | 4.3    | 4.3    | 5.3    | 5.2    | 5.4                | 6.0    | 5.5    | 5.7    | 5.5    | 5.2    |
| Cu, %                                       | 0.8    | 0.8    | 0.6    | 0.6    | 0.6                | 0.6    | 0.5    | 0.6    | 0.5    | 0.5    |
| Gold ores, ktonnes                          | 0      | 1,610  | 2,780  | 3,100  | 3,584              | 3,274  | 3,500  | 4,300  | 3,680  | 4,500  |
| Au, g/tonne                                 | 0      | 4.9    | 4.1    | 3.6    | 3.8                | 3.8    | 3.5    | 3.3    | 3.6    | 3.7    |
| Te, g/tonne                                 | 0      | 0      | 186    | 165    | 177                | 181    | 200    | 187    | 189    | 175    |
| <b>KYLYLAHTI<sup>5)</sup></b>               |        |        |        |        |                    |        |        |        |        |        |
| Milled ore, ktonnes                         | –      | –      | –      | –      | –                  | –      | 172    | 733    | 797    | 809    |
| <b>Head grades</b>                          |        |        |        |        |                    |        |        |        |        |        |
| Cu, %                                       | –      | –      | –      | –      | –                  | –      | 1.58   | 1.72   | 1.62   | 1.30   |
| Zn, %                                       | –      | –      | –      | –      | –                  | –      | 0.50   | 0.70   | 0.64   | 0.53   |
| Au, g/tonne                                 | –      | –      | –      | –      | –                  | –      | 0.67   | 0.75   | 0.81   | 1.08   |
| <b>Concentrate production</b>               |        |        |        |        |                    |        |        |        |        |        |
| Cu, tonnes                                  | –      | –      | –      | –      | –                  | –      | 13,275 | 62,144 | 61,155 | 51,440 |
| Zn, tonnes                                  | –      | –      | –      | –      | –                  | –      | 756    | 5,177  | 5,283  | 3,799  |
| <b>Concentrate grade</b>                    |        |        |        |        |                    |        |        |        |        |        |
| Cu, %                                       | –      | –      | –      | –      | –                  | –      | 19.2   | 19.0   | 19.8   | 18.8   |
| Zn, %                                       | –      | –      | –      | –      | –                  | –      | 44.3   | 42.3   | 46.9   | 44.3   |
| <b>Production of metal in concentrate</b>   |        |        |        |        |                    |        |        |        |        |        |
| Cu, tonnes                                  | –      | –      | –      | –      | –                  | –      | 2,546  | 11,835 | 12,123 | 9,686  |
| Zn, tonnes                                  | –      | –      | –      | –      | –                  | –      | 335    | 2,189  | 2,477  | 1,682  |
| Au, kg                                      | –      | –      | –      | –      | –                  | –      | 82     | 421    | 477    | 674    |
| Au, troy oz.                                | –      | –      | –      | –      | –                  | –      | 2,624  | 13,542 | 15,347 | 21,657 |
| <b>Financial data, SEK m</b>                |        |        |        |        |                    |        |        |        |        |        |
| Revenues                                    | –      | –      | –      | –      | –                  | –      | 117    | 560    | 573    | 708    |
| Operating profit before depreciation        | –      | –      | –      | –      | –                  | –      | 31     | 192    | 164    | 267    |
| Operating profit                            | –      | –      | –      | –      | –                  | –      | 7      | 74     | –28    | 34     |
| Investments                                 | –      | –      | –      | –      | –                  | –      | 36     | 137    | 97     | 24     |
| Cash cost US\$/lb. Cu C1, Normal            | –      | –      | –      | –      | –                  | –      | 190    | 150    | 143    | 153    |
| <b>Proven and probable Mineral Reserves</b> |        |        |        |        |                    |        |        |        |        |        |
| ktonnes                                     | –      | –      | –      | –      | –                  | –      | 3,900  | 2,900  | 1,900  | 1,700  |
| Cu, %                                       | –      | –      | –      | –      | –                  | –      | 1.6    | 1.4    | 1.2    | 1.2    |
| Zn, %                                       | –      | –      | –      | –      | –                  | –      | 0.6    | 0.6    | 0.5    | 0.4    |
| Au, g/tonne                                 | –      | –      | –      | –      | –                  | –      | 0.9    | 1.0    | 1.1    | 0.9    |

| Ten-year overview – Mines, cont.            | 2008   | 2009   | 2010   | 2011   | 2012 <sup>1)</sup> | 2013   | 2014   | 2015   | 2016   | 2017   |
|---|--------|--------|--------|--------|--------------------|--------|--------|--------|--------|--------|
| <b>GARPENBERG</b>                           |        |        |        |        |                    |        |        |        |        |        |
| Milled ore, ktonnes                         | 1,365  | 1,394  | 1,443  | 1,456  | 1,484              | 1,495  | 2,224  | 2,367  | 2,622  | 2,634  |
| <b>Head grades</b>                          |        |        |        |        |                    |        |        |        |        |        |
| Zn, %                                       | 6.9    | 7.3    | 6.6    | 6.2    | 5.6                | 5.2    | 5.1    | 5.0    | 4.4    | 4.3    |
| Cu, %                                       | 0.1    | 0.1    | 0.1    | 0.1    | 0.1                | 0.1    | 0.1    | 0.1    | 0.1    | 0.1    |
| Pb, %                                       | 2.6    | 2.8    | 2.5    | 2.4    | 2.1                | 2.1    | 2.1    | 2.1    | 1.8    | 1.8    |
| Au, g/tonne                                 | 0.3    | 0.2    | 0.3    | 0.3    | 0.3                | 0.3    | 0.3    | 0.3    | 0.3    | 0.3    |
| Ag, g/tonne                                 | 130    | 139    | 133    | 133    | 129                | 153    | 136    | 156    | 150    | 113    |
| <b>Concentrate production</b>               |        |        |        |        |                    |        |        |        |        |        |
| Zn, ktonnes                                 | 158    | 167    | 160    | 148    | 136                | 127    | 182    | 196    | 200    | 201    |
| Cu, ktonnes                                 | 3      | 3      | 3      | 2      | 2                  | 3      | 3      | 5      | 5      | 5      |
| Pb, ktonnes                                 | 41     | 44     | 41     | 39     | 35                 | 36     | 58     | 60     | 54     | 55     |
| <b>Concentrate grade</b>                    |        |        |        |        |                    |        |        |        |        |        |
| Zn, %                                       | 53.1   | 53.8   | 53.7   | 55.0   | 54.8               | 55.4   | 54.6   | 55.0   | 54.3   | 53.5   |
| Cu, %                                       | 20.4   | 18.3   | 18.3   | 19.1   | 17.7               | 18.0   | 14.8   | 16.3   | 15.2   | 16.3   |
| Pb, %                                       | 69.0   | 71.3   | 72.0   | 72.4   | 70.7               | 70.3   | 63.1   | 70.7   | 72.7   | 70.9   |
| <b>Production of metal in concentrate</b>   |        |        |        |        |                    |        |        |        |        |        |
| Zn, ktonnes                                 | 84     | 90     | 86     | 81     | 75                 | 70     | 99     | 108    | 109    | 107    |
| Cu, ktonnes                                 | 0.6    | 0.5    | 0.5    | 0.4    | 0.4                | 0.5    | 0.4    | 0.8    | 0.7    | 0.8    |
| Pb, ktonnes                                 | 29     | 31     | 29     | 28     | 25                 | 25     | 37     | 42     | 39     | 39     |
| Au, kg                                      | 243    | 214    | 234    | 246    | 250                | 277    | 468    | 559    | 580    | 541    |
| Au, troy oz.                                | 7,821  | 6,870  | 7,534  | 7,895  | 8,051              | 8,911  | 15,049 | 17,962 | 18,661 | 17,406 |
| Ag, ton                                     | 130    | 139    | 140    | 140    | 135                | 162    | 218    | 288    | 302    | 268    |
| Ag, '000 troy oz.                           | 4,189  | 4,473  | 4,505  | 4,505  | 4,341              | 5,201  | 7,014  | 9,270  | 9,705  | 8,602  |
| <b>Financial data, SEK m</b>                |        |        |        |        |                    |        |        |        |        |        |
| Revenues                                    | 1,163  | 1,490  | 1,902  | 2,155  | 1,876              | 1,675  | 2,318  | 2,862  | 3,491  | 4,019  |
| Operating profit before depreciation        | 598    | 945    | 1,293  | 1,506  | 1,262              | 1,025  | 1,319  | 1,896  | 2,509  | 3,049  |
| Operating profit                            | 466    | 793    | 1,124  | 1,314  | 1,033              | 776    | 919    | 1,452  | 2,063  | 2,606  |
| Investments                                 | 344    | 157    | 281    | 660    | 1,459              | 2,045  | 916    | 336    | 317    | 377    |
| Cash cost US\$/lb. Zn C1, Pro-rata          |        |        |        |        |                    | 46     | 56     | 45     | 43     | 46     |
| <b>Proven and probable Mineral Reserves</b> |        |        |        |        |                    |        |        |        |        |        |
| ktonnes                                     | 26,000 | 25,800 | 25,100 | 23,600 | 25,600             | 36,300 | 37,600 | 39,800 | 76,400 | 77,700 |
| Zn, %                                       | 5.1    | 5.4    | 5.3    | 5.1    | 5.1                | 4.6    | 4.3    | 3.9    | 3.2    | 3.1    |
| Ag, g/tonnes                                | 134    | 142    | 145    | 144    | 131                | 132    | 120    | 113    | 97     | 100    |
| <b>TARA</b>                                 |        |        |        |        |                    |        |        |        |        |        |
| Milled ore, ktonnes                         | 2,411  | 2,508  | 2,593  | 2,486  | 2,502              | 2,493  | 2,287  | 2,197  | 2,603  | 2,311  |
| <b>Head grades</b>                          |        |        |        |        |                    |        |        |        |        |        |
| Zn, %                                       | 7.8    | 7.9    | 7.0    | 7.0    | 7.0                | 7.1    | 6.9    | 6.4    | 6.0    | 5.9    |
| Pb, %                                       | 1.5    | 1.5    | 1.4    | 1.4    | 1.4                | 1.5    | 1.6    | 1.3    | 1.2    | 1.1    |
| <b>Concentrate production</b>               |        |        |        |        |                    |        |        |        |        |        |
| Zn, ktonnes                                 | 320    | 344    | 316    | 307    | 305                | 298    | 267    | 243    | 268    | 239    |
| Pb, ktonnes                                 | 40     | 41     | 34     | 34     | 41                 | 39     | 42     | 34     | 37     | 31     |
| <b>Concentrate grade</b>                    |        |        |        |        |                    |        |        |        |        |        |
| Zn, %                                       | 54.7   | 53.9   | 53.0   | 53.3   | 54.4               | 55.9   | 56.0   | 54.8   | 55.2   | 54.6   |
| Pb, %                                       | 56.7   | 57.5   | 53.7   | 58.8   | 55.2               | 56.1   | 53.1   | 49.9   | 52.8   | 54.7   |
| <b>Production of metal in concentrate</b>   |        |        |        |        |                    |        |        |        |        |        |
| Zn, ktonnes                                 | 175    | 186    | 167    | 164    | 166                | 166    | 150    | 133    | 148    | 131    |
| Pb, ktonnes                                 | 23     | 24     | 19     | 20     | 23                 | 22     | 22     | 17     | 20     | 17     |
| Ag, kg                                      | 1,638  | 2,092  | 1,344  | 909    | 1,673              | 1,197  | 2,433  | 1,273  | 1,076  | 1,344  |
| Ag, '000 troy oz.                           | 53     | 67     | 43     | 29     | 54                 | 38     | 78     | 41     | 35     | 43     |
| <b>Financial data, SEK m</b>                |        |        |        |        |                    |        |        |        |        |        |
| Revenues                                    | 1,357  | 1,671  | 1,831  | 1,757  | 1,727              | 1,542  | 1,743  | 1,492  | 2,085  | 2,691  |
| Operating profit before depreciation        | 154    | 303    | 619    | 503    | 421                | 595    | 479    | 470    | 947    | 1,275  |
| Operating profit                            | -40    | 76     | 383    | 268    | 100                | 195    | 56     | 95     | 476    | 942    |
| Investments                                 | 305    | 338    | 285    | 372    | 268                | 201    | 313    | 274    | 299    | 379    |
| Cash cost US\$/lb. Zn C1, Normal            | 79     | 64     | 69     | 72     | 69                 | 68     | 75     | 76     | 69     | 70     |
| <b>Proven and probable Mineral Reserves</b> |        |        |        |        |                    |        |        |        |        |        |
| ktonnes                                     | 17,100 | 17,000 | 16,000 | 15,700 | 14,000             | 13,100 | 15,300 | 17,000 | 16,500 | 19,500 |
| Zn, %                                       | 7.4    | 7.2    | 7.1    | 7.1    | 7.1                | 7.0    | 6.6    | 6.3    | 6.3    | 5.8    |
| Pb, %                                       | 1.8    | 1.8    | 1.8    | 1.8    | 1.7                | 1.6    | 1.5    | 1.5    | 1.6    | 1.4    |



| Ten-year overview – Mines, cont.            | 2008 | 2009 | 2010 | 2011 | 2012 <sup>1)</sup> | 2013 | 2014 | 2015 | 2016    | 2017    |
|---|------|------|------|------|--------------------|------|------|------|---------|---------|
| <b>KEVITSA<sup>6)</sup></b>                 |      |      |      |      |                    |      |      |      |         |         |
| Milled ore, ktonnes                         | –    | –    | –    | –    | –                  | –    | –    | –    | 4,518   | 7,911   |
| <b>Head grades</b>                          |      |      |      |      |                    |      |      |      |         |         |
| Cu, %                                       | –    | –    | –    | –    | –                  | –    | –    | –    | 0.35    | 0.42    |
| Ni, %                                       | –    | –    | –    | –    | –                  | –    | –    | –    | 0.24    | 0.25    |
| Co, %                                       | –    | –    | –    | –    | –                  | –    | –    | –    | 0.01    | 0.01    |
| Au, g/tonne                                 | –    | –    | –    | –    | –                  | –    | –    | –    | 0.14    | 0.16    |
| Pd, g/tonne                                 | –    | –    | –    | –    | –                  | –    | –    | –    | 0.19    | 0.20    |
| Pt, g/tonne                                 | –    | –    | –    | –    | –                  | –    | –    | –    | 0.29    | 0.32    |
| <b>Concentrate production</b>               |      |      |      |      |                    |      |      |      |         |         |
| Cu, ktonnes                                 | –    | –    | –    | –    | –                  | –    | –    | –    | 55      | 112     |
| Ni, ktonnes                                 | –    | –    | –    | –    | –                  | –    | –    | –    | 80      | 139     |
| <b>Concentrate grade</b>                    |      |      |      |      |                    |      |      |      |         |         |
| Cu, %                                       | –    | –    | –    | –    | –                  | –    | –    | –    | 25.8    | 26.8    |
| Ni, %                                       | –    | –    | –    | –    | –                  | –    | –    | –    | 9.3     | 9.9     |
| <b>Production of metal in concentrate</b>   |      |      |      |      |                    |      |      |      |         |         |
| Cu, tonnes                                  | –    | –    | –    | –    | –                  | –    | –    | –    | 14,217  | 29,957  |
| Ni, tonnes                                  | –    | –    | –    | –    | –                  | –    | –    | –    | 7,442   | 13,777  |
| Co, tonnes                                  | –    | –    | –    | –    | –                  | –    | –    | –    | 322     | 587     |
| Au, kg                                      | –    | –    | –    | –    | –                  | –    | –    | –    | 328     | 647     |
| Au, troy oz.                                | –    | –    | –    | –    | –                  | –    | –    | –    | 10,558  | 20,790  |
| Pd, kg                                      | –    | –    | –    | –    | –                  | –    | –    | –    | 559     | 1,021   |
| Pd, troy oz.                                | –    | –    | –    | –    | –                  | –    | –    | –    | 17,965  | 32,838  |
| Pt, kg                                      | –    | –    | –    | –    | –                  | –    | –    | –    | 750     | 1,418   |
| Pt, troy oz.                                | –    | –    | –    | –    | –                  | –    | –    | –    | 24,118  | 45,573  |
| <b>Financial data, SEK m</b>                |      |      |      |      |                    |      |      |      |         |         |
| Revenues                                    | –    | –    | –    | –    | –                  | –    | –    | –    | 1,210   | 2,680   |
| Operating profit before depreciation        | –    | –    | –    | –    | –                  | –    | –    | –    | 500     | 1,502   |
| Operating profit                            | –    | –    | –    | –    | –                  | –    | –    | –    | 166     | 893     |
| Investments                                 | –    | –    | –    | –    | –                  | –    | –    | –    | 473     | 939     |
| Cash cost US\$/lb. Ni C1, Normal            | –    | –    | –    | –    | –                  | –    | –    | –    | 150     | –150    |
| Cash cost US\$/lb. Ni C1, Pro-rata          | –    | –    | –    | –    | –                  | –    | –    | –    | 340     | 278     |
| Cash cost US\$/lb. Cu C1, Pro-rata          | –    | –    | –    | –    | –                  | –    | –    | –    | 155     | 139     |
| <b>Proven and probable Mineral Reserves</b> |      |      |      |      |                    |      |      |      |         |         |
| ktonnes                                     | –    | –    | –    | –    | –                  | –    | –    | –    | 146,800 | 133,800 |
| Cu, %                                       | –    | –    | –    | –    | –                  | –    | –    | –    | 0.34    | 0.34    |
| Ni, %                                       | –    | –    | –    | –    | –                  | –    | –    | –    | 0.22    | 0.22    |

1) Comparison figures for 2012 have been restated due to changes in accounting regulations. Investments at Aitik increased by SEK 383 m.

2) Tellurium production started in 2012.

3) Operational acquisitions: Kylylahti in 2014 (SEK 718 m), and Kevitsa in 2016 (SEK 5,961 m).

4) Aitik's figures for 2013 are updated in accordance with the press release published on 6 May 2014.

5) The acquisition of Kylylahti was completed in October 2014.

6) The acquisition of Kevitsa was completed in June 2016.

## Smelters

|   | 2008    | 2009    | 2010    | 2011    | 2012    | 2013    | 2014    | 2015    | 2016    | 2017    |
|---|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| <b>Metal production</b>   |         |         |         |         |         |         |         |         |         |         |
| Zinc, ktonnes   | 443     | 434     | 456     | 461     | 467     | 455     | 468     | 469     | 461     | 457     |
| Copper, ktonnes   | 350     | 302     | 303     | 336     | 339     | 325     | 347     | 332     | 336     | 353     |
| Lead, ktonnes   | 14      | 13      | 17      | 11      | 19      | 24      | 25      | 26      | 28      | 28      |
| Lead alloys, ktonnes (Bergsöe)  | 43      | 39      | 42      | 41      | 43      | 45      | 44      | 45      | 46      | 50      |
| Nickel in matte, ktonnes <sup>1)</sup>                                |         |         |         |         |         |         |         | 17      | 31      | 25      |
| Gold, kg  | 15,489  | 15,028  | 14,220  | 12,848  | 16,175  | 16,177  | 17,368  | 17,608  | 17,638  | 17,776  |
| Gold, troy oz.  | 497,972 | 483,157 | 457,168 | 413,052 | 520,011 | 520,094 | 558,382 | 566,102 | 567,077 | 571,501 |
| Silver, kg <sup>2)</sup>  | 488,285 | 539,564 | 450,280 | 488,147 | 575,959 | 537,941 | 626,767 | 680,600 | 626,331 | 569,474 |
| Silver, '000 troy oz. <sup>2)</sup>                                   | 15,699  | 17,346  | 14,476  | 15,964  | 18,517  | 17,294  | 20,151  | 21,881  | 20,137  | 18,309  |
| Aluminium fluoride, ktonnes <sup>3)</sup>                             | 35      | 33      | 22      | 35      | 36      | 34      | 35      | 31      | 32      | 0       |
| Sulphuric acid, ktonnes   | 1,329   | 1,123   | 1,372   | 1,597   | 1,634   | 1,564   | 1,659   | 1,665   | 1,642   | 1,613   |
| <b>Financial data, SEK m</b>  |         |         |         |         |         |         |         |         |         |         |
| Revenues  | 31,256  | 26,765  | 34,390  | 38,471  | 38,753  | 33,410  | 35,894  | 38,948  | 38,516  | 47,691  |
| Gross profit excl. revaluation of process inventory <sup>4)</sup>     | 6,942   | 6,560   | 7,158   | 7,160   | 7,288   | 6,908   | 7,869   | 9,167   | 9,376   | 9,776   |
| Operating expenses  | 5,076   | 5,281   | 5,247   | 5,358   | 5,330   | 5,346   | 5,370   | 5,536   | 5,696   | 6,004   |
| Depreciation  | 807     | 888     | 848     | 823     | 891     | 913     | 1,012   | 1,002   | 1,026   | 1,114   |
| Operating profit excl. revaluation of process inventory <sup>4)</sup> | 1,161   | 451     | 1,134   | 1,051   | 1,095   | 679     | 1,518   | 2,692   | 2,759   | 2,732   |
| Operating profit  | 372     | 1,724   | 1,946   | 790     | 1,224   | 210     | 1,672   | 2,272   | 3,347   | 2,834   |
| Investments   | 737     | 473     | 804     | 1,627   | 993     | 1,200   | 768     | 1,248   | 1,372   | 1,862   |
| Capital employed  | 13,656  | 13,712  | 14,225  | 16,213  | 15,569  | 15,791  | 15,592  | 15,878  | 17,838  | 18,018  |
| <b>RÖNNSKÅR</b>   |         |         |         |         |         |         |         |         |         |         |
| <b>Smelting material</b>  |         |         |         |         |         |         |         |         |         |         |
| <b>Copper, ktonnes</b>  |         |         |         |         |         |         |         |         |         |         |
| Copper concentrate  | 611     | 565     | 544     | 651     | 624     | 605     | 661     | 642     | 626     | 631     |
| Secondary raw materials   | 173     | 154     | 155     | 175     | 221     | 209     | 184     | 172     | 171     | 180     |
| of which, electronics <sup>5)</sup>                                   |         |         | 37      | 64      | 108     | 109     | 82      | 86      | 82      | 77      |
| Copper, total   | 784     | 719     | 699     | 826     | 844     | 814     | 845     | 814     | 798     | 811     |
| <b>Lead, ktonnes</b>  |         |         |         |         |         |         |         |         |         |         |
| Lead concentrate  | 18      | 14      | 16      | 11      | 27      | 38      | 40      | 38      | 41      | 39      |
| Secondary raw materials   | 5       | 7       | 6       | 5       | 2       | 1       | 1       | 1       | 1       | 2       |
| Lead, total   | 22      | 21      | 23      | 17      | 29      | 39      | 41      | 39      | 42      | 41      |
| <b>Production</b>   |         |         |         |         |         |         |         |         |         |         |
| Cathode copper, ktonnes   | 228     | 206     | 190     | 219     | 214     | 206     | 217     | 206     | 207     | 219     |
| Lead, ktonnes   | 14      | 13      | 17      | 11      | 19      | 24      | 25      | 26      | 28      | 28      |
| Zinc clinker, ktonnes   | 41      | 39      | 37      | 36      | 36      | 36      | 39      | 36      | 33      | 34      |
| Gold, tonnes  | 13      | 13      | 12      | 11      | 13      | 12      | 13      | 13      | 14      | 13      |
| Gold, '000 troy oz.   | 432     | 427     | 400     | 341     | 403     | 402     | 419     | 425     | 443     | 421     |
| Silver, tonnes  | 430     | 481     | 386     | 415     | 448     | 437     | 479     | 539     | 508     | 485     |
| Silver, '000 troy oz.   | 13,813  | 15,472  | 12,340  | 13,344  | 14,395  | 14,051  | 15,392  | 17,322  | 16,337  | 15,590  |
| Sulphuric acid, ktonnes   | 557     | 515     | 502     | 571     | 553     | 536     | 564     | 533     | 503     | 505     |
| Liquid sulphur dioxide, ktonnes                                       | 53      | 36      | 43      | 42      | 38      | 39      | 42      | 37      | 45      | 50      |
| Palladium concentrate, tonnes   | 3       | 3       | 2       | 2       | 3       | 2       | 2       | 2       | 3       | 2       |
| <b>Financial data, SEK m</b>  |         |         |         |         |         |         |         |         |         |         |
| Revenues  | 1,882   | 1,669   | 1,799   | 2,226   | 2,398   | 2,029   | 2,417   | 2,678   | 2,759   | 2,883   |
| Operating profit before depreciation                                  | 637     | 338     | 441     | 715     | 832     | 374     | 748     | 1,038   | 1,135   | 1,221   |
| Operating profit  | 395     | 83      | 187     | 470     | 535     | 53      | 405     | 727     | 852     | 900     |
| Investments   | 192     | 199     | 270     | 1,074   | 481     | 345     | 147     | 383     | 398     | 356     |
| <b>BERGSÖE</b>  |         |         |         |         |         |         |         |         |         |         |
| <b>Smelting material, ktonnes</b>                                     |         |         |         |         |         |         |         |         |         |         |
| Battery raw materials   | 65      | 57      | 56      | 57      | 62      | 63      | 63      | 64      | 64      | 70      |
| <b>Production, ktonnes</b>  |         |         |         |         |         |         |         |         |         |         |
| Lead alloys   | 43      | 39      | 42      | 41      | 43      | 45      | 44      | 45      | 46      | 50      |
| <b>Financial data, SEK m</b>  |         |         |         |         |         |         |         |         |         |         |
| Revenues  | 760     | 632     | 793     | 787     | 698     | 715     | 783     | 817     | 882     | 1,221   |
| Operating profit before depreciation                                  | 142     | 106     | 99      | 95      | 52      | 57      | 64      | 37      | 126     | 124     |
| Operating profit  | 127     | 91      | 82      | 75      | 34      | 39      | 45      | 18      | 109     | 110     |
| Investments   | 12      | 12      | 14      | 24      | 10      | 12      | 10      | 11      | 26      | 66      |

| Ten-year overview –<br>Smelters, cont.                        | 2008  | 2009  | 2010  | 2011  | 2012  | 2013  | 2014  | 2015   | 2016   | 2017   |
|---|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|
| <b>HARJAVALTA</b>   |       |       |       |       |       |       |       |        |        |        |
| <b>Smelting material, ktonnes</b>                             |       |       |       |       |       |       |       |        |        |        |
| Copper concentrate  | 529   | 400   | 434   | 456   | 516   | 471   | 551   | 528    | 552    | 543    |
| Secondary raw materials                                       | 7     | 11    | 22    | 14    | 16    | 26    | 21    | 23     | 27     | 24     |
| Copper, total   | 536   | 411   | 456   | 471   | 532   | 497   | 572   | 551    | 579    | 566    |
| Nickel concentrate  | 273   | 211   | 262   | 259   | 248   | 251   | 239   | 282    | 294    | 259    |
| <b>Production</b>   |       |       |       |       |       |       |       |        |        |        |
| Cathode copper, ktonnes                                       | 122   | 97    | 113   | 116   | 125   | 119   | 130   | 126    | 129    | 133    |
| Nickel in matte, ktonnes <sup>1)</sup>                        |       |       |       |       |       |       |       | 17     | 31     | 25     |
| Gold, tonnes  | 2     | 2     | 2     | 2     | 4     | 4     | 4     | 4      | 4      | 5      |
| Gold, '000 troy oz.   | 66    | 56    | 57    | 72    | 117   | 119   | 139   | 141    | 124    | 150    |
| Silver, tonnes  | 59    | 58    | 65    | 73    | 128   | 101   | 142   | 126    | 101    | 66     |
| Silver, '000 troy oz.   | 1,886 | 1,876 | 2,077 | 2,350 | 4,122 | 3,244 | 4,577 | 4,042  | 3,247  | 2,134  |
| Sulphuric acid, ktonnes                                       | 659   | 501   | 573   | 600   | 639   | 590   | 658   | 667    | 703    | 677    |
| Liquid sulphur dioxide, ktonnes                               | 37    | 33    | 27    | 35    | 37    | 37    | 37    | 37     | 33     | 35     |
| Palladium concentrate, tonnes                                 | 0.21  | 0.27  | 0.72  | 0.84  | 0.54  | 1.47  | 1.91  | 2.15   | 2.57   | 2.90   |
| <b>Financial data, SEK m</b>                                  |       |       |       |       |       |       |       |        |        |        |
| Revenues  | 1,432 | 1,261 | 1,468 | 1,552 | 1,666 | 1,631 | 1,746 | 2,214  | 2,281  | 2,353  |
| Operating profit before depreciation                          | 212   | 203   | 318   | 373   | 479   | 496   | 485   | 943    | 935    | 953    |
| Operating profit before depreciation, excl. PIR <sup>3)</sup> | 339   | 62    | 318   | 373   | 479   | 496   | 485   | 943    | 935    | 953    |
| Operating profit  | 64    | 24    | 154   | 222   | 324   | 316   | 279   | 736    | 704    | 707    |
| Operating profit excl. PIR <sup>4)</sup>                      | 191   | -117  | 154   | 222   | 324   | 316   | 279   | 736    | 704    | 707    |
| Investments   | 225   | 148   | 122   | 229   | 215   | 246   | 225   | 396    | 432    | 808    |
| <b>KOKKOLA</b>  |       |       |       |       |       |       |       |        |        |        |
| <b>Smelting material, ktonnes</b>                             |       |       |       |       |       |       |       |        |        |        |
| Zinc concentrate  | 576   | 571   | 587   | 600   | 589   | 602   | 577   | 584    | 547    | 560    |
| <b>Production, ktonnes</b>                                    |       |       |       |       |       |       |       |        |        |        |
| Zinc  | 298   | 295   | 307   | 307   | 315   | 312   | 302   | 306    | 291    | 285    |
| Silver in concentrate, kg                                     |       |       |       |       |       |       | 5,651 | 16,079 | 17,180 | 18,188 |
| Silver in concentrate, '000 troy oz.                          |       |       |       |       |       |       | 182   | 517    | 552    | 585    |
| Sulphuric acid <sup>5)</sup>                                  |       |       | 199   | 302   | 313   | 319   | 314   | 343    | 315    | 326    |
| <b>Financial data, SEK m</b>                                  |       |       |       |       |       |       |       |        |        |        |
| Revenues  | 1,848 | 1,979 | 2,062 | 1,818 | 1,778 | 1,795 | 2,004 | 2,350  | 2,223  | 2,363  |
| Operating profit before depreciation                          | 632   | 558   | 685   | 417   | 432   | 398   | 639   | 943    | 789    | 921    |
| Operating profit  | 469   | 362   | 505   | 246   | 261   | 248   | 459   | 739    | 572    | 688    |
| Investments   | 162   | 99    | 248   | 237   | 210   | 318   | 216   | 166    | 297    | 322    |
| <b>ODDA</b>   |       |       |       |       |       |       |       |        |        |        |
| <b>Smelting material, ktonnes</b>                             |       |       |       |       |       |       |       |        |        |        |
| <b>Zinc concentrate</b>                                       |       |       |       |       |       |       |       |        |        |        |
| (incl. zinc clinker)  | 270   | 245   | 277   | 283   | 279   | 263   | 302   | 310    | 339    | 338    |
| <b>Production, ktonnes</b>                                    |       |       |       |       |       |       |       |        |        |        |
| Zinc  | 145   | 139   | 149   | 153   | 153   | 143   | 166   | 163    | 171    | 172    |
| Aluminium fluoride <sup>3)</sup>                              | 35    | 33    | 22    | 35    | 36    | 34    | 35    | 31     | 32     | 0      |
| Sulphuric acid  | 113   | 108   | 123   | 125   | 128   | 119   | 123   | 123    | 121    | 104    |
| <b>Financial data, SEK m</b>                                  |       |       |       |       |       |       |       |        |        |        |
| Revenues  | 1,200 | 1,123 | 1,128 | 1,212 | 1,184 | 1,070 | 1,395 | 1,554  | 1,522  | 1,309  |
| Operating profit before depreciation                          | 360   | 161   | 184   | 123   | 184   | 116   | 355   | 522    | 461    | 383    |
| Operating profit  | 210   | 6     | 39    | -25   | 31    | -26   | 209   | 390    | 314    | 225    |
| Investments   | 146   | 22    | 75    | 44    | 61    | 269   | 166   | 283    | 214    | 298    |

The operating profit per smelter excludes the revaluation of process inventory, with the exception of Harjavalta, 2008–2009.

1) Included as of 1 July 2015.

2) Silver in concentrate at Kokkola is included in the production figure shown as of 2014.

3) The aluminium fluoride operations at Odda were divested in 2017.

4) Process Inventory Revaluation.

5) Electronic scrap recycling was not reported separately between 2005 and 2009.

6) Investment in sulphuric acid plant, 2010.

# Definitions and industry concepts

## Financial definitions

**Balance Sheet total** The sum of the assets side or the sum of the equity and liabilities side of the Balance Sheet.

**Capital employed** The Balance Sheet total less interest-bearing investments, tax receivables and non-interest-bearing provisions and liabilities.

**Cash flow from operating activities** Cash flow generated via the operating profit, adjusted for items not affecting cash flow, tax paid and change in working capital.

**Cash flow per share** The cash flow for the period divided by the average number of outstanding shares.

**Dividend yield** Dividend per share as a percentage of the share price.

**Earnings per share** Net result for the period divided by the average number of outstanding shares.

**Equity/assets ratio** Equity as a percentage of the Balance Sheet total.

**Equity per share** Equity divided by the number of outstanding shares.

**Free cash flow** Cash flow from operating activities including cash flow from investment activities.

**FTE – Full Time Equivalent** A metric that corresponds to one employee working full time for one year.

**Net debt** Interest-bearing current and long-term liabilities (including pension liabilities) less financial assets (including cash and cash equivalents).

**Net debt/equity ratio** Net debt divided by equity.

**Operating profit (EBIT)** Revenues less all costs attributable to the operations but excluding net financial items and tax.

**Operating profit (EBIT) excluding revaluation of process inventory** Revenues minus all costs attributable to the operations but excluding the effects of the revaluation of process inventory, net financial items and tax.

**P/E ratio** Share price divided by earnings per share.

**Return on capital employed** Operating profit divided by the average capital employed. The average capital employed for each year consists of an average of the closing capital employed in the last 13 months. Measured before tax.

**Return on equity** Profit for the year as a percentage of average equity in the last 13 months. Measured after tax.

**Total return** The sum of the share's performance during the year plus dividend paid divided by the share price at the beginning of the year.

Explanations and calculations for the following financial metrics are available at [www.boliden.com](http://www.boliden.com): Operating profit (EBIT) excluding revaluation of process inventory, Operating profit (EBIT), Free cash flow, Net debt, Return on capital employed, Return on Equity, Net debt/equity ratio, and Equity/Assets ratio. These financial metrics are used by Boliden but are not defined in accordance with IFRS regulations.

## Definition of Cash cost

Boliden uses the Wood Mackenzie's cash cost metrics, C1 Normal costing and C1 Pro rata costing, to measure the mines' cost position in relation to other mines worldwide. The lower a mine's cash cost, the better its cost position. Cash cost is expressed in US\$/lb. of metal and can be multiplied by 22.0462 (rounded off) to obtain the price in USD per tonne of metal.

### Normal costing

In normal costing calculations, the costs are allocated in their entirety to one main metal and then reduced by the net revenue<sup>1)</sup> of other metals, known as by-products.

|   |   |
|---|---|
| + | Mining operations, concentration and administration costs <sup>2)</sup> |
| + | Costs of freighting concentrate to smelters                             |
| + | Treatment and refining charges (TC/RC)                                  |
| – | Deductions for net revenue of by-products                               |
| = | <b>Cash cost C1 Normal costing</b>                                      |

### Pro rata costing

In pro rata cash costing, the costs are divided up between the various metals on the basis of the individual metal's share of the total net revenue.

### Composite costing

In composite costing, mines are included using either normal costing or pro rata costing on the basis of criteria based on the metals' net revenue. If a metal accounts for 65 per cent or more of the total net revenue, the cash cost is calculated using normal costing, while if a metal accounts for less than 65 per cent of the total net revenue, the cash cost is calculated using pro rata costing.

|   |  |
|---|--|
| + | Income from payable metal                  |
| – | The metal's freight cost                   |
| – | The metal's treatment and refining charges |
| = | <b>The net revenue of the metal</b>        |

## Definition of Cash margin

Boliden uses Wood Mackenzie's cash margin compilations to measure the smelter's cost position in relation to other smelters. The cash margin is the difference between income and cash cost, expressed in US\$/lb. of metal and can be multiplied by 22.0462 (rounded off) to obtain the price in USD per tonne of metal. The income comprises treatment and refining charges, free metals and income from by-products.

The income for zinc smelters includes income generated by sales of surplus energy, while for copper smelters, the income generated by the sales of sulphuric acid and surplus energy is added as a credit when calculating the cash cost.

The calculations for copper smelters are expressed as unit of metal produced from concentrate, while for zinc smelters, it is expressed as unit of finished metal produced. Income is normally included if it is regarded as having been derived from the main process during the production of metal and the product is saleable.

<sup>1)</sup> Calculating the net revenue of mines' metals

The net revenue is the payable income from the metal, less freight costs and treatment and refining charges.

<sup>2)</sup> Administrative costs attributable to the mine.



## Industry-specific concepts and definitions

**Alloy** Substance with metallic properties which is composed of two or more chemical elements, at least one of which is a metal.

**Base metals** The most common metals, e.g. zinc, copper, lead, nickel and aluminium.

**Cash cost** Common measurement used to show the costs affecting a mine's cash flow, converted into US dollars (average rate for the measurement period). Usually shown in cents per ounce. To show the cash cost in USD/tonne, multiply by 22. Used to compare the mine's cost position in relation to other mines. See Definitions.

**Complex ore** Ore that contains several metals, e.g. zinc, copper, lead, gold and silver.

**Concentrator** A plant in which ore is processed mechanically and/or chemically to extract and produce a concentrate of the valuable minerals.

**Copper cathode** An end product from copper smelters in the form of 99.99 per cent pure copper plates.

**Free metals** The percentage of metal concentrates bought in that an individual smelter can process over and above the payable metal content. This percentage generates income without incurring a raw material cost.

**Galvanising** An electrochemical process whereby a metal is coated with a thin layer of another metal, such as zinc. Galvanising is commonly used to protect against corrosion (rust).

**Gold doré** A gold/silver alloy cast as a bullion in the refinery. Further processed to pure gold and silver at a smelter.

**Jarosite** A mineral primarily comprising iron sulphate that is a common waste product of zinc production.

**Kaldo furnace** Rotating and tippable furnace for the smelting and process treatment of copper, lead and precious metals, etc., including the recycling of metals from electronic scrap. The plastic present in the scrap is used to smelt the metals, thereby reducing the process' energy requirement.

**LBMA** London Bullion Market Association. International market responsible for the daily pricing of precious metals.

**LME** London Metal Exchange. International market where non-ferrous metals are bought and sold. Trading on the LME is used as the basis for the daily pricing of metals worldwide. The LME also maintains warehouse stocks of the metals traded.

**Metal concentrate** Also known as dressed ore or mined concentrate. Metal concentrate is the result of the concentration processes that separate out the financially valuable minerals present in ore from those with no financial value.

**Metal content** The quantities of, for example, zinc, copper, lead, gold and silver contained in

concentrates. Zinc concentrates generally contain approximately 50 per cent zinc metal, while copper concentrates generally contain approximately 25 per cent copper. The lead content of mined concentrate is usually around 65 percent.

**Metal equivalents** Used to describe the environmental impact of emissions and discharges to air and water. The metal equivalent (Me-eq) takes into account the toxicity of each metal (relative to Cu) and provides a better metric of the environmental impact than the combined weight of the metals.

**Metal premium** The price agreed in advance, over and above the LME price, and paid by customers for specifically adapted metal that is free delivered.

**Mineralisation** A concentration of minerals in the bedrock.

**Mineral Reserves** Those parts of a mineral resource that can be mined and processed in accordance with the company's profitability requirements and taking into account factors such as waste rock dilution and the percentage of metal in an ore that can be extracted in the concentration process are transferred to Mineral Reserves and hence eliminated from the Mineral Resources. Mineral Reserves are divided into two categories: probable Mineral Reserves and proven Mineral Reserves.

**Mineral Resource** A concentration of minerals in the bedrock that may become commercially extractable. Mineral Resources are divided into three categories: inferred Mineral Resources, indicated Mineral Resources, and measured Mineral Resources.

**Open pit** A method of mining mineral deposits located near the surface. The waste rock is stripped and the ore mined directly at the surface.

**Ore** Economic term for minerals, rock types or other bedrock components that can be profitably mined to extract metals or other valuable substances.

**Ore grade** The average quantity of valuable metals in a tonne of ore, expressed as grams per tonne for precious metals and as a percentage for other metals.

**Payable metal content** The percentage of the metal content of the concentrate for which the smelters pay when purchasing concentrate.

**Precious metals** Metals that are less commonly present in the earth's crust than base metals and which are regarded, to a greater extent, as a type of investment asset by financial sector players. The most common precious metals are gold, silver, platinum and palladium.

**Price escalators (PP)** Also known as price-sharing clauses. The clauses in the agreements for zinc smelting charges that distribute changes in metal prices between mines and

smelters. There have been no price escalator clauses in copper treatment and refining charges for many years now.

**Raw materials feed** A smelter's raw material input, i.e. the amount of metal concentrate or secondary materials processed and refined.

**Recovery** The percentage portion of the quantity of a given metal in an ore extracted during the concentration process.

**Secondary material** Various types of recycling materials from which metals can be recovered, e.g. electronic and metal scrap, metal ashes, slag, dust and scrap lead batteries.

**Smelter** A plant in which metal raw materials, metal concentrates or secondary materials are processed to separate metals from impurities.

**Treatment and refining charges (TC/RC)** The price of concentrate is defined as the LME price less treatment and refining charges, which comprise the remuneration received by the smelter for refining the smelting material (concentrate and secondary materials) and extracting metals. Copper smelters' processes can be broken down into a treatment phase and a refining phase, while zinc smelters' processes only involve a treatment phase, and hence zinc smelters' remuneration only comprises a treatment charge (TC).

**Underground mine** Mine where the ore is mined using underground tunnels. The mining methods used in Boliden's underground mines include the cut-and-fill method and sub-level stoping.

**Waste rock** Economic term for rock which, unlike ore, contains no valuable material.

**Zinc ingot** An end product from zinc smelters with detailed specifications with regard to degree of purity, weight and size.

### Abbreviations

|  |
|--|
| Lb = pound = 0.4536 kg                 |
| Troy ounce = 31.1035 gram              |
| USD = US dollars                       |
| USc = US cents                         |
| c/Lb = cent per pound = 1/22 USD/tonne |
| SEK = Swedish kronor                   |
| NOK = Norwegian kroner                 |
| EUR = euro                             |
| Ag = silver                            |
| Au = gold                              |
| Cu = copper                            |
| Ni = nickel                            |
| Pb = lead                              |
| Zn = zinc                              |

# Annual General Meeting

Boliden's Annual General Meeting will be held on Friday, 27 April 2018 at Garpenberg.

## Participation

Shareholders wishing to participate in the Annual General Meeting must both be registered in the shareholders' register kept by Euroclear Sweden AB on Saturday, 21 April 2018 (for details of the re-registration process for nominee shareholders, please see below) and have notified the company of their intention to participate, either via Boliden's website, [www.boliden.com](http://www.boliden.com), by calling the company on tel. +46 8 32 94 29, or by writing to the company at the following address: Boliden, c/o Euroclear Sweden AB, Box 191, SE-101 23 Stockholm, Sweden. All such notifications must be received by the company no later than Monday, 23 April 2018.

Shareholders' notifications of their intention to attend the Annual General Meeting shall include the shareholder's name, Civic ID no. or corporate ID no., address and telephone number, and the number of assistants who will accompany them. The information provided will be computerised and used exclusively in connection with the Annual General Meeting.

## Nominee shareholders

In order to be entitled to participate in the Annual General Meeting, nominee shareholders must, no later than Friday, 20 April 2018, have their shares temporarily re-registered in their

own names with Euroclear Sweden AB. All such requests for registration in the shareholder's own name must be submitted to the relevant trustee well ahead of this date.

## Complete convening notice

A complete notice convening the Annual General Meeting, as well as financial and other information, can be found on Boliden's website at [www.boliden.com](http://www.boliden.com). Printed financial information may also be ordered via the website or from Boliden AB, Box 44, SE-101 20 Stockholm, Sweden.

## Financial information

|                  |   |
|------------------|---|
| 27 April 2018    | Interim Report for the first quarter 2018       |
| 20 July 2018     | Interim Report for the second quarter 2018      |
| 24 October 2018  | Interim Report for the third quarter 2018       |
| 13 February 2019 | Fourth quarter Interim and Year-end Report 2018 |

## Questions

Any questions concerning the content of Boliden's financial information can be submitted to:

Boliden's Investor Relations

Tel. +46 8 610 15 00 or

e-mail: [investorrelations@boliden.com](mailto:investorrelations@boliden.com)



Find out more at [www.boliden.com](http://www.boliden.com)

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[www.boliden.com](http://www.boliden.com)

## Boliden's 2017 Annual Report

Boliden's 2017 Annual Report is published in Swedish and in an English translation. The Swedish version takes precedence in the event of any discrepancies between the two versions.


**Production:** Boliden in cooperation with Narva.

**Photo:** Jukka Brusila (p. 1, 48), Nopphon/Shutterstock (p. 4, 5), Stefan Berg (p. 6, 7, 17, 44, 109), Andrew Wulf/Unsplash.com (p. 8, 9), Jeanette Hägglund (p. 28, 66–68), Lars de Wall (p. 29), Ann Lundholm (p. 34), Suvi Hallikainen (p. 35), Johanna Sjövall (p. 40, 43), Tomas Westermark (p. 46), Stefan Johansson/Shutterstock (p. 49), Daniel Olsson (p. 52), Jukka Gröndahl (p. 53), Debby Elovsson (p. cover).

**Illustrations:** Narva **Translation:** Copy Right AB **Print:** Göteborgstryckeriet, Mölndal, 2017







Anode copper, also known as blister copper, is an intermediate product in the copper refining process. The anodes contain not only copper, but silver and gold – by-products that are subsequently separated out to produce pure precious metals.