2022

GASUM FINANCIAL REVIEW

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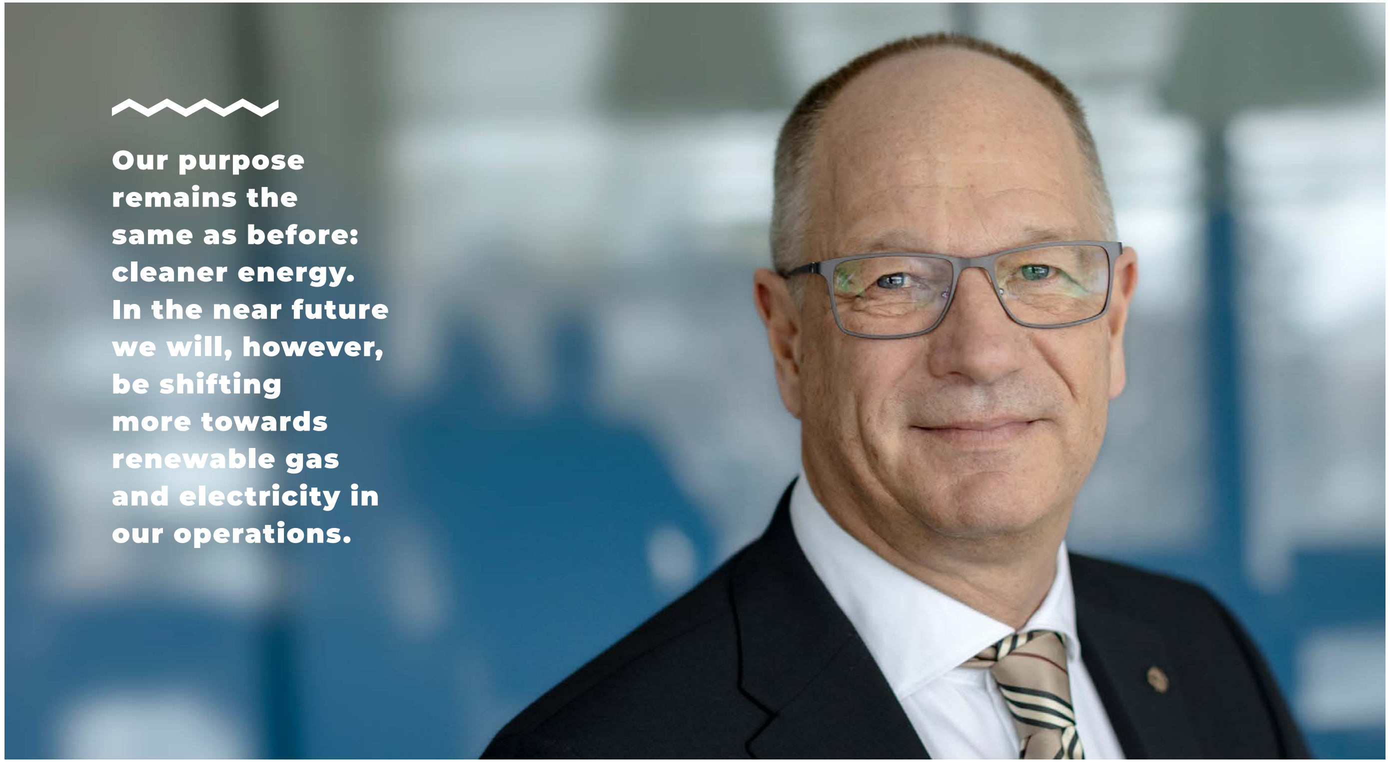
Emerging from a turbulent year with a positive result and a fresh strategy

Gasum managed to ride through a tumultuous 2022 and to come out at the other side with a positive result. This is a demonstration of the resilience and expertise of the Gasum staff. We also launched a new strategy for the next five years.

The year 2022 was for Gasum, as for the rest of the energy sector and, indeed, most of the world, a time of unprecedented turbulence and upheaval. As we saw the world starting to finally recover from a global health crisis – the Covid-19 pandemic – Russia started its brutal attack on Ukraine in February. We at Gasum strongly condemn the continuing Russian aggression against a sovereign country.

The war has resulted in tremendous turbulence in the energy markets and led to a number of extraordinary developments throughout the year. In April Russian gas supplier Gazprom Export presented Gasum with a demand that payments for gas should be paid in rubles instead of euros. Gasum refused the demand and took the matter forward to be resolved by an arbitral tribunal in accordance with its agreement with Gazprom. In mid-November the arbitral tribunal gave the decision that Gasum is not obligated to pay in rubles



and further ordered Gasum and Gazprom Export to continue contract negotiations to resolve the situation.

Natural gas pipeline deliveries from Russia have been discontinued since May 2022. Because of the situation, we have had to arrange for an entirely new supply and logistics chain to secure natural gas deliveries for our customers. We have managed to do this without any interruptions in the deliveries during 2022, which has been a fantastic demonstration of the dedication and expertise of the Gasum staff.

While Gasum procures liquefied natural gas from a number of different sources, we are contractually obligated to continue LNG purchases also from Russia. The LNG supply contract with Gazprom Export is a so-called take-or-pay agreement, which means that Gasum has to pay for a certain amount of LNG per year, even if we didn't collect it. Natural gas or LNG deliveries from Russia are currently not sanctioned by the EU or any country Gasum operates in, which means there are no legal grounds to stop the purchases. Naturally, we hope that this situation will be resolved in some manner soon.

We have also had to make other kinds of adjustments throughout the year to adapt to the extraordinarily changed market landscape. We began a profit improvement program during the second quarter of the year, which included several actions to reduce the costs of our operations. A part of the program was a restructuring, which resulted in a new organization starting July 2022. We also took action to mitigate the impact of market volatility by reducing hedge levels.

Even in times of crisis, it is important to look forward. This is why during the year we also created a new strategy for Gasum. We involved personnel widely in the creation process of the new strategy, which is based on offering our customers an energy platform of complete end-to-end value chains in biogas, natural gas and renewable power. And our new strategy is not just words on a piece of paper: we have already created a roster of 50 different projects to implement it within the next five years.

Our purpose remains the same as before: cleaner energy. In the near future we will, however, be shifting more towards renewable gas and electricity in our operations.

Our goal of bringing seven terawatt hours (TWh) of renewable biogas to the market by 2027 is a showcase of this shift. We will achieve the goal though both increasing investment in our own production but also sourcing certified biogas from trusted partners. When we reach this goal, we will have achieved a cumulative carbon dioxide saving of 1.8 million tons for our customers.

Gasum has already begun a significant investment program in order to make the goal a reality. We are planning to construct five large new biogas plants in Sweden in the coming years and have started construction work at the site of the first one in Götene, Sweden. As feedstock the plant will mainly use manure, which has the ability to turn biogas from a low-carbon to a carbon-negative fuel. In addition, the plant will produce 350,000 tons of high quality environmentally friendly recycled fertilizers yearly.

Liquefied natural gas remains an important stepping stone towards lowering emissions in the maritime and land transportation sectors in the near future. Increasing interest in taking up liquefied biogas, LBG, as an alternative is a strong signal that decarbonizing further down the line is very possible.

Gasum possesses excellent competences in the renewable electricity market. However, driving the development of our capabilities and offering further will give us an even stronger competitive edge in the future. Investment in developing the expertise and wellbeing of our personnel is a top priority for implementing our strategy, as is continuously improving processes, and making data-driven decisions.

I would like to end by expressing my deepest thanks to the personnel of Gasum for their remarkable resilience during a turbulent time. It is thanks to your tenacity and professionalism that we have made it through an extraordinary year with a positive result and are setting off on a new one with an optimistic outlook.

Mika Wiljanen
Chief Executive Officer

Financial statements and Board of Directors' report 2022

Board of Directors' report

Financial development of Gasum Group's business in 2022

In 2022 Gasum navigated the unprecedentedly challenging energy market and took action to adapt to an extremely volatile operating environment.

Volatility of the energy market as well as Russia's war against Ukraine and the ensuing geopolitical tensions significantly impacted Gasum's business and performance in 2022. Due to uncertainty and high volatility in gas prices, sales volumes decreased by 37% in 2022 and were 15.6 TWh (2021: 24.8 TWh). Despite the lower volumes of gas, a steep rise in market prices led to a significant increase in revenue compared to financial year 2021.

In the Industry business, volumes delivered to customers decreased by 31% year on year. During 2022, turbulence in energy market and high gas and power prices made the market in the industrial segment challenging. This also increased the demand for risk management services and products amongst customers. Gasum is in a unique position to help its customers to hedge their energy related risks. Despite the challenging environment, Gasum ensured energy supplies to all its customers and continued to work actively towards sustainable development goals together with its customers.

Volumes delivered in the Traffic business increased by 38% year on year. In road transport, Gasum continued to expand the market and filling station network for passenger cars and heavy-duty vehicles in the Nordic countries and opened a total of nine new gas filling stations around the Nordic countries during the year.

In the Maritime business, volumes delivered to customers decreased by 59% year on year. Significant market turbulence and high gas prices had a negative impact especially on the Maritime business and growth of the LNG powered vessel market in the short-term. As a result, Gasum booked impairment of Maritime business CGU goodwill EUR 11 million during 2022. Gasum continues to work with its maritime customers towards sustainable development goals in this segment and is well positioned for long-term growth as more LNG powered vessels are expected to enter the market.

In April 2022, Gasum launched an extensive program in order to improve the company's profitability. The program included several actions to reduce the costs of operations and improve margins. The implementation of the program progressed according to the plan during 2022. In 2022, Gasum took also actions to mitigate the impact of market volatility by reducing the hedge levels. This has led to a lower financial impact through valuation of financial instruments and reduced requests for cash collaterals as guarantees for hedge positions despite continuing market volatility.

Despite the challenging operational environment, Group profitability reached the planned level following the actions made in performance improvement and improved sales margins due to market and price development. In 2021, Gasum recognized a significant loss for hedges securing the margins in 2022 and later. As planned, a significant portion of the losses were recovered in 2022 through the hedged underlying margins.

The Gasum Group's revenue for the period under review totaled EUR 2,722.5 million, up 73% on the corresponding period a year earlier (2021: EUR 1,571.0 million). The Group's operating result was EUR 149.9 million positive (2021: EUR -238.5 million) and the operating result margin was 5.5% (2021: -15.2%).

The Group's balance sheet totaled EUR 1,947.3 million (December 31, 2021: EUR 2,420.7 million) on December 31, 2022. The Group's net interest-bearing debt at the reporting date totaled EUR 309.4 million (December 31, 2021: EUR 473.1 million), including borrowings from financial institutions as well as finance lease liabilities. Decrease in net interest-bearing debt resulted from positive operative performance and decrease in working capital. Margin from LNG business contributed to the positive operative cash flow in 2022. Decrease in working capital resulted mainly from the release of cash collaterals paid in 2021 for the hedge derivatives.

In 2022, Gasum repaid a EUR 210 million short-term loan, which was taken in September 2021 to strengthen the financial position of Gasum and to prepare for the consequences from the general market situation and uncertainty. Equity at end of 2022 was at EUR 543.1 million, an increase of 25% from EUR 433.7 million in 2021. The Group's equity ratio was 28.3% (December 31, 2021: 18.0%). Gasum and Governia Oy agreed in December 2021 on a capital loan of EUR 200 million treated as equity of Gasum to strengthen the financial position and prepare for consequences from the general market situation and uncertainty.

Key financial indicators*

EUR thousand	2022	2021
Revenue	2,722,488	1,571,031
Adjusted operating profit*	37,094	-74,319
Operating profit	149,898	-238,516
Adjusted operating profit (%)*	1.4%	-4.7%
Operating profit (%)	5.5%	-15.2%
Equity ratio (%)	28.3%	18.0%
Adjusted return on equity (%)*	8.6%	-26.3%
Return on equity (%)	25.3%	-55.1%
Adjusted return on investment (%)*	2.4%	-7.6%
Return on investment (%)	12.0%	-21.4%
Balance sheet total	1,947,332	2,420,708
Net interest-bearing debt	309,366	473,095
Gearing ratio (%)	57.0%	109.1%
Gearing ratio (%) excluding the impact of IFRS 16 leases	25.5%	61.4%
Personnel at the end of period	321	356

*Calculated without unrealized gains and losses from derivatives relating to operative business and non-recurring items. Comparison figures have been adjusted to follow the same principle. In 2022 adjusted items include unrealized gain/loss in hedge derivatives of EUR 157.8 million, reduction of inventory values to net realisable value of EUR 25.0 million, impairment charge of goodwill related to Skangas acquisition of EUR 11.0 million, legal costs related to arbitration of EUR 7.8 million and writedown of fixed assets of EUR 0.8 million for Suomenoja plant closure. In 2021 items affecting comparability and were adjusted include unrealized gain/loss in hedge derivatives of EUR 154.1 million and loss of court case for electricity taxes in Gasum AS and smaller one-time arbitration and legal costs.

During 2022, Gasum launched a new strategy for the next five years and started implementing it through numerous projects and investments. Gasum's purpose continues to be cleaner energy, with emphasis shifting increasingly towards renewable energy forms. Towards the end of 2022 Gasum began preparing for the construction of the first one of five planned new large biogas plants in Sweden. During 2022 Gasum brought 1.7 TWh of biogas to the market, which equals an increase of 40% from 2021. Gasum traded 7.3 TWh worth of Guarantees of Origin for renewable electricity generated by wind, hydro or solar power or bioenergy, an increase of nearly 18% year on year.

The Gasum Group's capital expenditure before government grants in 2022 totaled EUR 37.5 million (2021: EUR 54.9 million). Capital expenditure was especially related to the construction of new biogas plants and the expansion of existing plants as well as expansion of the Nordic filling station network. Gasum received a total of EUR 20.7 million in investment support in Finland and Sweden during the financial year (2021: EUR 8.3 million).

Gasum's goal is that by 2027 a significant portion of the company's profit will come from renewable energy. Gasum aims to bring 7 TWh of biogas to the market by 2027 and achieving this target means a cumulative reduction of 1.8 million tons of carbon dioxide emissions for our customers.

Operating environment

Energy market – Industry and power

The year started in calmer waters which soon changed as Russia started its attack on Ukraine in February and as a result gas prices as well as market volatility increased dramatically. Security of supply fears fueled European companies to fill inventories with LNG, resulting in record-high levels of LNG cargoes arriving at European LNG terminals. Central European power prices skyrocketed to new highs of over €550/MWh.

At the start of the second quarter electricity prices remained on a high level due to cold and dry weather, maintenance problems with French nuclear power plants and high gas and coal prices. In May Russian gas company Gazprom Export cut off pipeline gas supplies through Finland and Bulgaria and reduced deliveries through Nord Stream 1 by 60% as their demand for ruble payments was not met by European gas importers, including Gasum. European gas inventories climbed towards long-term average levels as companies filled inventories mainly with shipments of LNG.

At the end of the summer season Nordic electricity prices continued on a high level due to equally continued high gas and coal prices driven by Central European price developments. Gas prices started the third quarter at EUR 150/MWh due to uncertainties related to the war in Ukraine, but they ended the quarter at around EUR 188/MWh, historically an extremely high price level. The filling of inventories was mainly driven by LNG deliveries, and several countries announced plans to build LNG receiving terminals to secure supply.

During the last quarter of 2022, Nordic electricity prices drifted lower from the peak prices seen in end of August, but still remained at high levels in October as gas and coal prices continued at high levels as well. In other words, the main reason for high Nordic power prices was still the Central European price development with war in Ukraine being the biggest driver. The emission allowance price moved to 20% higher levels from 65 EUR/ton to above 80 EUR/ton as the political situation remained uncertain related to gas price caps and RePowerEU program impacts.

The gas market started the fourth quarter at about 180 EUR/MWh mainly due to uncertainties linked to the war in Ukraine. Towards the end of the year, European gas prices continued to drift lower as European gas storages were filled above 90% and plenty of LNG was available. Russian gas deliveries to Europe continued through the Ukraine pipeline only with about 25% capacity and the rest through the Turkstream pipeline. The amount of LNG cargoes arriving to European LNG terminals was again at a record high level throughout the fourth quarter. The LNG prices were at well below the front month prices as there were far too many vessels arriving to Europe without available slots in the terminals. The LNG prices dropped close to 50 EUR/MWh for some of the delivery locations and several LNG vessels decided to wait for delivery with a possibility of a higher price.

Inflation pressure continued to impact the global economy throughout the year. Central banks continued to change interest rate increase paths and there were several rate hikes in USA and Europe. At the end of the year the market was reacting downwards on the back of high inflation, tightening monetary policy and likely continuing supply disruptions.

Road and Maritime

Throughout the year delivery times of new LNG trucks have been prolonged significantly due to problems with key components. The growth of the number of LNG-powered trucks has slowed down also due to the extremely high prices of liquified biogas (LBG) and LNG.

The maritime industry has also been hit by the high price levels of LNG. The main reason was the price differential between marine gasoil (MGO) and LNG, which continued to impact the growth of the LNG-powered vessels' market negatively.

In the long run, the number of LNG-powered vessels is expected to increase significantly as the orderbook for new vessels is still massive. The new EU Emissions Trading System, due to be phased in gradually 2024-2025 to include maritime transportation, will include all emissions from ships calling at an EU port for voyages within the EU as well as 50% of the emissions from voyages starting or ending outside of the EU and emissions that occur when ships are at berth in EU ports. Under the proposal, the EU ETS would cover around two thirds of maritime transport emissions — 90 million tonnes of carbon dioxide — and provide a price signal that incentivizes improvements in energy efficiency and low-carbon solutions and reduces the price difference between alternative fuels and traditional maritime fuels.

Circular economy – biowaste and biogas

The year 2022 saw an increased interest in the importance of utilizing more circular economy solutions to mitigate climate change. Biogas contributes to mitigating climate change both in the form of renewable energy and through recycled nutrients, which are produced as a side stream. Recycled nutrients along with renewable energy have an important role due to increased prices of nutrients and fertilizers of mineral or fossil origin, although the peak prices of the past year seem to be over now. Demand for biogas and recycled nutrients has been increasing throughout the year caused by the sharp rise in energy and nutrient prices and by security of supply concerns.

Increasing the production of biogas is in a strong tailwind, especially in the Nordics, but also at the European level. There is strong competition inside the biogas sector, especially when it comes to feedstock, as new and incumbent players are acting in the same geographical market area.

New ways of producing renewable synthetic biogas are being launched throughout the EU, where biomethane production is based on methanization of hydrogen produced with renewable electricity and carbon dioxide sourced either from biogas upgrading or from powerplants' flue gases. Many of these new projects are in their early feasibility study phase but it is likely that the first commercial-scale applications will be seen soon.

In Sweden subsidy schemes for biogas production and use of biogas has been in an unclear state because of overcompensation concerns since the summer of 2022 when the previous support scheme ended. Regardless of this unclarity, Gasum is planning to increase biogas production in Sweden through several new planned biogas plant projects. Work at the site of the first investment, a new 120 GWh/a biogas plant located in Götene, has been started. Expected commissioning of the plant using animal-based side streams, such as manure, and food industry side streams as feedstock will be in the latter half of 2024.

In Finland, neither biogas production nor usage subsidies are in place, instead biogas has been part of the blending obligation of transport fuels since the beginning of 2022. The blending mandate levels were temporarily lowered during 2022 but will eventually increase back to the previous higher level in coming years. The blending mandate incentivizes biogas production.

National investment subsidies in Finland for increasing biogas production have been halted due to the need for an EU decision on potential overlapping of the blending obligation and investment subsidies as state support. There are measures to promote biogas production, economic growth, and job creation, but the incentives for investments are stronger in the neighboring country Sweden.

European energy policy aims at boosting biogas production as part of the REPowerEU plan. In order to implement the plan, the European Commission together with the European Biogas Association have founded a network called Biogas Industrial Partnership (BIP). Due to the current geopolitical situation, i.e., in order to phase out Russian gas, the European Commission proposed a rapid increase of European biomethane production to 35 billion cubic meters (bcm) by 2030, up from 3 bcm in 2020. A recent study shows that the potential of biogas production in the Nordic countries is about 2 bcm. The BIP is connecting multiple stakeholders in the value chain, Gasum among others, to support the achievement of this volume target at the EU level.

This volume is also supported by the synthetic methane production potential. Both biogas and synthetic biomethane rely on the infrastructure built for natural gas that can and will be utilized increasingly for renewable energy purposes. All the needed elements for increased biogas production are in place in most European countries.

Strategy

In October 2022 Gasum launched a new strategy. The strategy is being implemented through 50 new projects, many of which were already started in 2022.

Gasum aims to bring 7 TWh of renewable biogas to the market by 2027. This will be achieved through both increasing investment in own production but also sourcing certified biogas from partners. Gasum's goal is that by 2027 a significant portion of the company's profit will come from green energy sources. This means increasing the role of biogas and trade in renewable electricity.

To this end, towards the end of 2022, Gasum began preparing for the construction of the first one of five planned new large biogas plants in Sweden. Once finished, each of the plants will produce the equivalent of 120 GWh annually of liquefied biogas or LBG.

Gasum's expertise in energy sourcing and portfolio management gives the company a competitive edge. Natural gas, and its liquefied form LNG, continues to be an important stepping stone on the journey towards a more sustainable future. There is much to be done to lower emissions in maritime and heavy-duty land logistics.

Gasum's role is to be a trusted partner to its customers in the energy transition – the company offers energy solutions, services and guidance on the way to a carbon-free future.

The foundation of the strategy lies on the bedrock of continuously improving processes and making data-driven decisions. Ultimately, however, Gasum's success hinges on the expertise and capability of the personnel. That is why the management sees investment in developing the competence and wellbeing of the personnel as a top priority. Sustainability is seen holistically through environmental, social and economic lenses. This means enabling emission reductions for customers, reducing the environmental impacts of Gasum's own operations, promoting a safe work environment and ensuring responsible business practices.

Quality, environment, safety, security and responsibility

The positive trend in the demand for biogas continued throughout the year, and the company helped its customers achieve their emission reduction goals in both industrial processes as well as logistics solutions for road and maritime transport. The emissions reduction achieved in 2022 through biogas deliveries was 444,000 tons of carbon dioxide. Gasum is also a major player in the wind power segment and has further increased its market share during the year. As a supplier of wind power, Gasum enables increasing production of renewable energy in Finland.

Gasum continued to strengthen its circular economy cooperation and established a joint venture with Biolan and Pöytyän Maanparannus called Kiertoravinne Oy. Kiertoravinne develops nutrients, fertilizers, additives and soil conditioners suitable for agricultural and industrial use from biogas plant side streams. After a transition period, all the nutrient production from Gasum's biogas plants in Finland will be processed by Kiertoravinne. Gasum also continued activities in a project coordinated by the Baltic Sea Action Group where sewage wastewater from cargo ships is discharged at the port and used in biogas production, instead of discharging at sea, to reduce the nutrient load of the Baltic Sea.

The development of Gasum's safety and security culture continued as the company improved its safety results year-on-year. The total recordable injury frequency (TRIF) was 5.3 (62% reduction). There were three occupational injuries (LTI, MTI, RWI) for Gasum's own employees as well as contractors (nine in 2021). There were zero environmental breaches and other environmental nonconformities with significant environmental impacts in 2022.

Gasum's biogas plants and LNG terminals were externally audited in the fall of 2022 and certifications were renewed as well as expanded. Expansions cover all seven Gasum biogas plants in Sweden as well as the Finnish biogas plant in Lohja. Gasum operates in accordance with quality (9001), environment (14001) occupational health and safety (45001), energy management (50001) as well as biogas sustainability system requirements.

The Gasum Responsibility Program is derived from the Gasum strategy and stakeholder and materiality analysis and supports the Sustainable Development Goals (SDGs) of the UN 2030 Agenda. Gasum has committed to the UN Global Compact initiative on corporate sustainability. Gasum reports on sustainability in accordance with the GRI Standards.

Research and product development

The circular economy and opportunities arising from renewable gases are at the core of Gasum's research and product development. Gasum is involved, for example, in two large research projects: Hydrogen and Carbon Value Chains in Green Electrification (HYGCEL) and Circular Economy of Water in Industrial processes (CEIWA).

Gasum also finished a two-year research project studying centralized sewage sludge treatment, funded by the Finnish Ministry of the Environment. Gasum supports research and development in the gas sector through the Gasum Gas Fund. In 2022, six research grants, amounting to a total of EUR 74,960 (2021: EUR 63,000), were given out from the Gasum Gas Fund administered by the Finnish Foundation for Technology Promotion.

Personnel

On December 31, 2022, the Gasum Group had a total of 321 employees (December 31, 2021: 356). Of these, 61% were employed in Finland, 26% in Sweden, 12% in Norway and 1% in Germany.

Gasum's new strategy was launched in October 2022 and one of the development streams is People & Culture. To make sure Gasum has the right competencies now and in the future, competence mapping will be implemented to identify competence gaps and development needs.

Inspirational leadership continues to be one of the key drivers in implementing Gasum's strategy and maintaining and developing our common culture. Gasum aims to strengthen a culture that engages, energizes and focuses on building and sharing a common understanding and purpose.

During 2022 the Leading for Impact process, was continued by asking all Gasum employees to evaluate their line managers and the climate their line managers are creating for them. The monthly employee Pulse survey, introduced in 2020, continued to be an active part of improving the employee experience at Gasum.

In order to secure the profitability of the company, Gasum began a cost saving program in May of 2022 which included restructuring of the organization. The restructuring and its effects on personnel were addressed in consultation processes under local laws covering the whole Gasum Group and all countries. A new organizational structure was implemented on 1 July 2022. The total number of reduced positions was 44, including 20 redundancies. During the fall it was possible to offer new temporary and permanent positions to some employees whose employment was terminated after the change negotiations.

Changes in management

Mika Wiljanen was appointed as the CEO of Gasum Group effective from 1 March 2022. Kai Laitinen continues as CFO after serving as interim CEO until 28 February 2022.

Johan Grön (Vice President, Biogas) and Jukka Metsälä (Vice President, Traffic) left the company during 2022 both serving until 30 April. Mr Grön's tasks were taken up by existing management member Tor Husebø (Vice President, Projects & Biogas Production) and Mr Metsälä's tasks were taken up by existing management member Tommy Mattila (Vice President, Industry & Traffic).

Anja Kuparinen (Vice President, Human Resources & Legal) stepped down from her position in the management of the company 1 December 2022 and left the company in January 2023. Head of HR starting 1 December 2022 has been Emilia Einiö, who reports directly to the CEO. Management of the Legal team was taken over by existing management member Terhi Nyyssönen (CIO, IT & Legal).

Ownership structure and governance

Gasum is fully (100%) owned by the State of Finland. Of the shares, 73.5% are held by the state-owned Gasonia Oy and

26.5% directly by the State of Finland. There were no changes in shareholding during the period under review.

The ordinary general meeting of Gasum Ltd on 22 April 2022 confirmed the number of members of the Board of Directors to be six. Elina Engman was re-elected as the Chair, Stein Dale was elected as the Deputy Chair, the current members Minna Pajumaa, Päivi Pesola and Ari Vanhanen were re-elected as members and Erkka Repo was elected as a new member for the next term of office of the Board of Directors.

Risk factors affecting financial performance

The geopolitical risks are discussed in detail in 'Geopolitical uncertainty' in the Board of Directors' Report.

Gas market price development has continued at unprecedented levels and with extreme market price volatility during 2022. Similar development was experienced in the power market in 2022. Energy market development has increased focus on certain financial risks, especially commodity price risks and liquidity risks.

Gasum operates in the energy sector and its financial performance entails strategic, operational, financial, economic, environmental, and personnel safety risks.

Strategic

The company's most important strategic risks are related to the demand of its main products, such as biogas, liquefied natural gas (LNG) and renewable power. Over the long-term, demand for natural gas, biogas and LNG is affected by the economic and energy political operating environment and the price level of gas compared with other available fuels. Over the short term, demand for gas is affected by the prices of other available fuels, weather conditions and the operating environment of customers.

Gasum is the largest producer of renewable biogas in the Nordics, and it also procures biogas from its partners. The demand for renewable energy as well as feedstock for renewable energy production continues to increase as Europe moves towards renewable sources of energy. The increasing competition for feedstock and renewable energy may affect Gasum's position.

Gasum took the long-term natural gas supply contract with Gazprom Export to arbitration in May 2022 following Gazprom's demand for gas to be paid in rubles. The legal proceedings are described in more detail in the financial statement note 5.5. Legal proceedings and claims. Uncertainty remains over the continuance of the contract and the realization of recognized inventory asset, which is for the most part unpaid. Related to the asset, Gasum has recognized a EUR 158 million obligation as a liability. Should the natural gas deliveries be resumed, the company has a large minimum purchase obligation for 2023, taking into account the current market demand in Finland.

Gasum procures liquefied natural gas from Norway, globally through terminals in Central Europe and from Russia. Gasum has a long term LNG sourcing contract with Gazprom Export, which includes take-or-pay clauses for minimum quantities. Although the majority of the LNG directly sourced by Gasum is coming from outside of Russia, for example sanctions or other measures against Russian gas sector, or countermeasures by Russia could have significant impacts on Gasum's operating environment, the surrounding markets and the company's LNG supply chain, hedging and related result. The company is mitigating the risk of supply cuts e.g. by exploring alternative supply methods and decreasing the hedging of Russian sourcing exposures.

Energy policy objectives as well as customers' need to switch to cleaner fuels are increasing interest in especially biogas and LNG as fuel for industry, maritime and road transport. Customers' switch to gas use is affected by access to technologies, availability of renewable biogas as part of gas supply and the general price level of gas compared with other fuels. Gasum from its part facilitates access to technologies and invests in biogas production.

The political risk mainly relates to changes in EU and national legislation, energy support and, in particular, taxation. The company prepares for these risks relating to its operating environment by actively monitoring related developments. In addition, Gasum seeks to continuously draw attention to the company's viewpoints as regards the impacts of proposed amendments to legislation or taxation.

Operational

Gasum is exposed in its activities to operational risks which relate in particular to the supply chain and supply security, project risks, contractual risks as well as the functioning and efficiency of various processes and controls. The company uses biogas plants, liquefaction plants, terminals, transmission pipelines, trucks and ships for the production and distribution of gas. As the company's logistics operations take place both on land and at sea, the company is exposed to the operational risk of disruption to customers' energy supply. The company also prepares for potential disruptions in the supply of gas by having reserve fuel arrangements in place. Gasum monitors its operations, production and logistics on a daily basis.

Gasum has an ambitious investment plan into biogas production and the investment projects are subject to risks in project execution, rising construction prices and counterparty risks.

Some of the gas and power supply and sales agreements include minimum purchase and delivery obligations that result in volume and price risks for Gasum. These risks are managed in the contracting phase through risk assessments and in the delivery phase through daily forecasting and hedging processes.

Cyber risks continue to be prominent, and Gasum is investing continuously in employee training and in technical solutions to improve cybersecurity and resilience in case of a cyber attack.

Legal risks are further discussed in financial statement note 5.5. Legal proceedings and claims.

Financial

Gasum's business involves risks relating to the market price development of gas and other energy products, which the company hedges with derivative instruments. In addition to the increasing price risks, the highly volatile market environment has resulted in risks related specifically to the derivatives' effect on cash and equity. This risk has been mitigated through maintaining cash reserves, selecting instruments and counterparts and decreasing the financial hedging volumes. The high commodity prices and increased volatility have also affected the level of working capital. Credit risks have increased in 2022 as the operating environment for many counterparties has changed and the price of energy increased. Other financial risks include interest rate risk, other price risks, foreign currency risk and liquidity risk. Financial risks and their management are discussed further in the relevant note to the financial statements.

Safety and security, the environment

Gasum has adopted the objective of preventing harm to people, the environment, assets and business relations. Gasum continuously identifies, manages and monitors these risks and protects against them by means of diligent processes and controls as well as normal insurance cover.

Risk management processes

The company's general risk management framework is described in the Gasum Governance and Remuneration Report and in more detail in the Enterprise Risk Management Policy accepted by the Gasum Board of Directors. The priority of the Enterprise Risk Management Policy is to help Gasum's businesses, management and employees to better safeguard the company's operations and support the implementation of the company's strategy. The main principle of the company's risk management policy is to take responsibility for risks and respond to risks where they arise. Each unit is responsible for identifying, assessing and managing its own risks.

The Audit and Risk Committee is responsible for guidance and oversight of the company's risk management. Group Risk Management supports business activities, coordinates the risk management processes and reports to the CFO. Group Risk Management is also responsible for monitoring the key risks of the Group and for guidelines and tools to ensure effective risk management in the company's business activities.

Geopolitical uncertainty

Russia attacked and started a war against Ukraine in February of 2022. The war and ensuing actions such as sanctions have resulted in extraordinary turbulence in the energy markets and for Gasum's business throughout the year. The turbulence is expected to continue as the war also continues in Ukraine.

Gasum always complies with applicable sanctions and restrictions and is continuously monitoring geopolitical risk development as well as conducting active dialogue with the relevant national authorities and stakeholders regarding the situation. The company does not have operations or assets in Russia, outside long-term supply agreements with Gazprom Export.

Geopolitical uncertainty affects the realization of certain long term supply contracts, which are described in more detail in 'Risk factors affecting financial performance' in the Board of Directors' Report and in the financial statement note 5.5. Legal proceedings and claims.

The current geopolitical situation has increased both the price level and volatility of gas and other energy prices. Followingly, the commodity price risks, derivative risks and liquidity risks have increased. The risks for demand decline have partly realized due to the high energy price. The company has continued to develop the capability to react to possible challenges in the energy markets.

COVID-19

The global COVID-19 pandemic continued to affect the operations of the company during the start of 2022. Health and safety measures to prevent the spread of infections were continued in accordance with national recommendations.

During the pandemic, Gasum formed a working group to monitor regulation and guidance from the authorities and the effects on Gasum employees. The working group has followed guidelines set out in Gasum's business continuity plan.

Future outlook

Russia's brutal war against Ukraine has affected the energy market and Gasum's operations in a profound way during 2022. The continued effects of the war are felt in our operating environment in 2023. Although the energy market continues to be in turmoil, in terms of volatility, some kind of "calming down" can be observed.

Gasum has honed its organizational model and renewed its strategy to match the changed situation and is capable of operating in a new kind of environment – the customer is at the center of all activities and the company is able to help customers navigate within the changing landscape.

Despite the turbulent markets, Gasum expects gas solutions to remain at the core of the energy sector as gas is needed in industry as well as maritime and land transportation. Demand for renewable gases is expected to grow, and as the leading operator in the Nordic countries, Gasum is in a position to take the reins in this segment.

In accordance with the company's renewed strategy, Gasum will continue investments in 2023. Construction of Gasum's newest biogas plant in Götene, Sweden, is expected to proceed at pace during the year. The company is strengthening its already solid capabilities in the power market to offer its customers comprehensive services.

Gasum aims to offer 7 TWh of biogas annually to the Nordic market by 2027 through increasing its own production as well as sourcing from trusted partners. This will result in a cumulative reduction of 1.8 million tons of carbon dioxide. It also means that an increasing portion of the company's profits will come from the production, purchasing and selling of renewable energy.

Management and the Board of Directors of the company have assessed that there is no material uncertainty of the going concern for the company. Risks of business continuity are, among other things, evaluated through a variety of scenarios. In addition, the company has sought to develop the capability to react to challenges in the energy markets.

Events after reporting period

Gasum's new biogas plant in Götene, Sweden, received final construction permits at the end of January 2023. Construction is expected to proceed at pace during 2023 and continue into 2024. The plant will produce 120 gigawatt hours (GWh) worth of liquefied biogas or LBG per year from the start of 2025 onwards. The plant will use mainly manure as feedstock and produce 350,000 tons of high quality environmentally friendly fertilizer to be returned to the farmers providing the feedstock. The Götene plant is the first of five planned large scale biogas plants in Sweden that form a substantial investment towards fulfilling Gasum's strategy to increase biogas availability on the Nordic market.

After the reporting period the company has in January 2023 filed with the Svea Court of Appeal a challenge concerning parts of the arbitral award received in the arbitration against Gazprom Export. Gasum is currently continuing its bilateral negotiations with Gazprom Export as required by the arbitral tribunal. For further information please see financial statement note 5.5. Legal proceedings and claims.

Board of Directors' proposal for distribution of profits

On December 31, 2022, the parent company had distributable funds of EUR 384,959,906.82. The Board of Directors proposes to the general meeting of shareholders that no dividend is to be paid for the financial year from January 1 to December 31, 2022.

Consolidated statement of income

€ thousand	Note	Jan 1–Dec 31, 2022	Jan 1–Dec 31, 2021
Revenue	**2.1**	**2,722,488**	**1,571,031**
Other operating income	2.2	522,536	383,693
Materials and services	2.3	-2,343,687	-1,377,289
Personnel expenses	2.4	-35,473	-39,338
Depreciation, amortization and impairment	2.5	-92,886	-68,792
Other operating expenses	2.6	-623,844	-706,925
Share of profit/loss of investments accounted for using the equity method		764	-897
Operating result		**149,898**	**-238,517**
Finance income		140,193	26,936
Finance expenses		-148,899	-44,222
Total finance income and expenses	2.8	-8,706	-17,286
Result before taxes		**141,192**	**-255,804**
Current income tax expense	2.9	-12,719	-3,061
Change in deferred taxes	3.8	-5,155	4,220
Result for the period		**123,318**	**-254,645**
Result for the period attributable to:			
Owners of the parent		123,310	-254,641
Non-controlling interest		8	-4

Consolidated statement of comprehensive income

€ thousand	Note	Jan 1–Dec 31, 2022	Jan 1–Dec 31, 2021
Result for the period		**123,318**	**-254,645**
Other items in comprehensive income			
Items that will not be reclassified to profit or loss			
Remeasurements of post-employment benefit obligations	3.10	774	-2,446
Taxes related to items that will not be reclassified to profit or loss		-155	489
Total		619	-1,957
Items that may be reclassified subsequently to profit or loss			
Translation differences		-14,694	808
Cash flow hedges		0	423
Taxes related to items that may be reclassified subsequently to profit and loss		0	-85
Total		-14,694	1,148
Total comprehensive result for the period		**109,243**	**-255,454**
Total comprehensive income for the period attributable to:			
Owners of the parent		109,235	-255,448
Non-controlling interest		7	-6

Consolidated balance sheet

€ thousand	Note	Dec 31, 2022	Dec 31, 2021
ASSETS			
Non-current assets			
Intangible assets	3.1	169,001	192,788
Property, plant and equipment	3.2	621,527	691,937
Equity-accounted investments	3.3	11,648	11,021
Other investments at fair value through profit or loss		50	50
Derivative financial instruments	4.3	133,655	37,501
Deferred tax assets	3.8	0	2,252
Other non-current assets		212	212
Total non-current assets		**936,093**	**935,760**
Current assets			
Inventories	3.5	257,862	247,451
Derivative financial instruments	4.3	186,652	233,316
Trade and other receivables	3.4	354,627	616,817
Current tax assets		5,908	0
Cash and cash equivalents	3.7	206,190	387,364
Total current assets		**1,011,239**	**1,484,948**
Total assets		**1,947,332**	**2,420,708**

Consolidated balance sheet

€ thousand	Note	Dec 31, 2022	Dec 31, 2021
EQUITY AND LIABILITIES			
Share capital	4.4	10,000	10,000
Reserve for invested unrestricted equity		159,739	159,739
Fair value reserve	4.5	0	0
Translation differences		-16,290	-1,596
Retained earnings		190,594	66,527
Capital loan		199,000	199,000
Total equity attributable to owners of the parent		**543,043**	**433,670**
Non-controlling interest		25	18
Equity		**543,068**	**433,688**
Liabilities			
Non-current liabilities			
Loans	4.6	344,498	445,656
Non-current lease liabilities	4.7	139,430	169,972
Derivative financial instruments	4.3	104,054	50,901
Deferred tax liabilities	3.8	11,480	7,050
Provisions	3.9	11,918	27,329
Post-employment benefits	3.10	4,386	5,600
Total non-current liabilities		**615,766**	**706,508**

€ thousand	Note	Dec 31, 2022	Dec 31, 2021
Current liabilities			
Loans	4.6	0	207,911
Derivative financial instruments	4.3	211,924	383,438
Trade and other payables	3.6	563,109	684,766
Current income tax liabilities		13,465	4,396
Total current liabilities		**788,498**	**1,280,512**
Total liabilities		**1,404,264**	**1,987,020**
Total equity and liabilities		**1,947,332**	**2,420,708**

Consolidated Statement of changes in equity

	Attributable to owners of the parent								
Jan 1, 2022 € thousand	**Share capital**	**Reserve for invested unrestricted equity**	**Fair value reserve**	**Retained result**	**Translation differences**	**Capital loan**	**Total**	**Non-controlling interests**	**Total share-holders' equity**
Equity at January 1, 2022	**10,000**	**159,739**	**0**	**66,527**	**-1,596**	**199,000**	**433,670**	**18**	**433,688**
Result for the period				123,310			123,310	8	123,318
Other items in comprehensive income									
Remeasurement of post-employment benefits				619			619		619
Cash flow hedges									0
Translation differences					-14,694		-14,694		-14,694
Other items				137			137		137
Total comprehensive income for the period				**124,066**	**-16,290**		**109,373**	**8**	**109,380**
Equity at December 31, 2022	**10,000**	**159,739**	**0**	**190, 594**	**-16,290**	**199,000**	**543,043**	**25**	**543,068**
Jan 1, 2021 € thousand									
Equity at January 1, 2021	**10,000**	**159,739**	**-338**	**323,125**	**-2,406**	**0**	**490,120**	**24**	**490,144**
Result for the period				-254,641			-254,641	-5	-254,645
Other items in comprehensive income									
Remeasurement of post-employment benefits				-1,957			-1,957		-1,957
Cash flow hedges			338				338		338
Translation differences					810		810		810
Total comprehensive income for the period			**338**	**-256,598**	**810**		**-255,450**	**-5**	**-255,454**
Transactions with owners									
Capital loan						199,000	199,000		199,000
Equity at December 31, 2021	**10,000**	**159,739**	**0**	**66,527**	**-1,596**	**199,000**	**433,670**	**18**	**433,688**

Consolidated statement of cash flows

€ thousand	Note	Jan 1–Dec 31, 2022	Jan 1–Dec 31, 2021
Cash flows from operating activities			
Result before income tax		141,184	-255,801
Adjustments			
Depreciation, amortization and impairment	2.5	92,860	68,792
Finance items - net	2.8	8,706	17,286
Unrealized gains/losses on financial instruments		-157,798	154,085
Gains and losses on the divestment of fixed assets		0	-1,971
Other non-cash adjustments		59,644	40,038
Change in working capital		-38,251	-114,671
Cash inflow from operating activities before financial items and taxes		106,345	-92,242
Interest paid, leasing interest and other financial items		-50,148	-24,181
Received financial income		30,354	4,688
Taxes paid		-20,797	1,300
Cash flow from financial items and taxes		-40,591	-18,193
Net cash flows from operating activities		**65,754**	**-110,434**

€ thousand	Note	Jan 1–Dec 31, 2022	Jan 1–Dec 31, 2021
Cash flows from investing activities			
Investments in tangible assets		-37,155	-54,934
Investments in intangible assets		-358	446
Investment grants received		20,681	8,305
Proceeds from sale of tangible assets		0	347
Business acquisitions		0	0
Divestments of subsidiaries		0	145,435
Increase/Decrease in non-current receivables		115,894	-47,658
Net cash flows from investing activities		**99,062**	**51,940**
Cash flows from financing activities			
Proceeds from capital loans		0	199,000
Proceeds from non-current borrowings		0	100,835
Repayment from non-current borrowings		-100,448	0
Proceeds from current borrowings		0	207,900
Repayments of current borrowings		-210,000	-60,469
Payment of leasing liabilities		- 37,324	-10,468
Dividends paid			
Net cash flows from financing activities		**-347,771**	**436,798**
Net decrease (-)/increase (+) in cash and cash equivalents		**-182,955**	**378,303**
Cash and cash equivalents at the beginning of the period		387,364	7,967
Cash outflow from demerger			
Exchange rate differences/Losses on cash and cash equivalents		1,782	1,094
Cash and cash equivalents at the end of the period	**3.8**	**206,190**	**387,364**

The Net debt reconciliation is presented under 4.1 Capital management.

Notes to the consolidated financial statements

1 General accounting policies

1.1. General information

Gasum Ltd is a Finnish limited liability company and the parent company of the Gasum Group ('Gasum', the 'Group' or the 'company', unless otherwise stated) domiciled in Espoo, Finland, and with its registered address in Revontulenpuisto 2 C, FI-02151 Espoo, Finland.

The energy company Gasum is a Nordic gas sector and energy market expert that offers cleaner energy and energy market expert services for industry and for combined heat and power (CHP) production as well as cleaner fuel solutions for road and maritime transport. Gasum produces biogas in its Nordic biogas plant network and sources biogas from the production of certified European partners. Besides biogas, the plants also produce recycled nutrients for agricultural and industrial uses. Gasum is the leading supplier of biogas in the Nordic countries.

Gasum imports natural gas to Finland and is the biggest liquefied natural gas (LNG) supplier in the Nordic countries. The company strengthens the position and infrastructure of LNG and supplies LNG for maritime transport, industry and heavy-duty vehicles in the Nordic countries. Gasum has expanded the maritime LNG distribution operating area further to Central Europe, including the Amsterdam-Rotterdam-Antwerp (ARA) area. The company has a Nordic gas filling station network that also serves heavy-duty vehicles.

Gasum helps its customers to reduce their own carbon footprint and that of their customers. Together with its partners, Gasum promotes development towards a carbon-neutral future on land and at sea. The Gasum Group has around 320 employees in Finland, Norway, Sweden and Germany.

Gasum Ltd is 100% owned by the State of Finland directly and through the state-owned Gasonia Oy. Copies of the consolidated financial statements are available at Gasum's head office in Revontulenpuisto 2 C, 02150 Espoo, Finland, and on the company website at www.gasum.com in Finnish and English. The consolidated financial statements of the Gasum Group are the highest level to which Gasum Ltd and its subsidiaries are consolidated.

The Board of Directors of Gasum Ltd approved these financial statements for issue at its meeting on March 23, 2023.

1.2. Basis of preparation

Gasum Ltd's consolidated financial statements have been prepared in accordance with the International Financial Reporting Standards (IFRS) as adopted by the European Union and in compliance with the standards and interpretations applicable as at December 31, 2022. Accounting standards have not been applied in the consolidated financial statements before their effective date. The notes to the consolidated financial statements are also in accordance with the requirements of the Finnish accounting and corporate legislation supplementing the IFRS. The consolidated financial statements have been prepared primarily under the historical cost convention unless otherwise indicated. Financial assets and liabilities recognized at fair value through profit or loss have been measured at fair value. The financial statements are presented in thousands of euros unless otherwise stated.

1.3. Consolidation principles

The consolidated financial statements are for the parent company and all of its subsidiaries. Subsidiaries are all such entities over which the parent company has direct or indirect control. Gasum controls an entity when it is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Subsidiaries are fully consolidated from the date on which control is transferred to the Group and deconsolidated from the date that control ceases.

Subsidiaries are consolidated using the acquisition method of accounting. The consideration transferred for the acquisition of a subsidiary comprises the fair values of the assets transferred, the liabilities incurred to the former owners of the acquiree and the equity interests issued by the Group. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured at their fair values at the acquisition date. Any retained interest in any difference between the consideration and the acquired assets is goodwill. Acquisition-related costs are expensed as incurred.

Intercompany transactions, balances and unrealized gains and losses on transactions between Group companies are eliminated. Transactions with non-controlling interests that do not result in loss of control are accounted for as equity transactions, that is, as transactions with the owners in their capacity as owners. The difference between fair value of any consideration paid and the relevant share acquired of the carrying value of net assets of the subsidiary is recorded in equity.

The share of non-controlling interests within the equity of subsidiaries is presented separately from the equity attributable to the shareholders of the parent. The share attributable to non-controlling interests is determined at the date of acquisition as the proportionate share of the non-controlling interests in the net value of the assets acquired. Following the acquisition, the share of the non-controlling interests is the share determined in the acquisition plus the share of changes in equity attributable to those interests.

An associated company is an entity where the Group has significant influence and where the Group, as a general rule, has a holding of 20–50%. Joint venture is an arrangement where two or more parties have contractually agreed joint control of the arrangement. Joint control exists only when decisions about the relevant activities require the unanimous consent of the parties sharing control.

Associated companies and joint ventures have been consolidated using the equity method. Under the equity method, interests in joint ventures are initially recognized at cost and adjusted thereafter to recognize the Group's share of the post-acquisition profits or losses and movements in other comprehensive income. When the Group's share of losses in a joint venture or associated company equals or exceeds its interest in the joint venture or associate, the Group does not recognize further losses, unless it has incurred legal or constructive obligations or made payments on behalf of the entity. Unrealized gains on transactions between the Group and its associated companies and joint ventures are eliminated to the extent of the Group's interest. Unrealized losses are also eliminated unless the transaction provides evidence of an impairment of the asset transferred. Accounting policies of joint ventures and associated companies have been changed where necessary to ensure consistency with the policies adopted by the Group.

Foreign currency items

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which the entity operates (the functional currency). The determination of the functional currency requires some management judgment, but often the currency of the economic environment is clearly identifiable. The consolidated financial statements are presented in euros, which is the parent company's functional and presentation currency.

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions. Monetary items denominated in foreign currencies are translated into the functional currency using the exchange rates prevailing at reporting dates. Non-monetary items are translated at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of transactions in foreign currencies and translation of monetary items are recognized in the income statement. Foreign exchange gains and losses relating to loans and finance are presented under finance costs in the income statement. All other foreign exchange gains and losses are presented in net amounts in the income statement as part of other profit/loss (-) from operations.

The income statements of foreign subsidiaries have been translated into euros at average exchange rates for the reporting period and their balance sheets at the exchange rate prevailing at the reporting date. The resulting translation difference as well as other translation differences arising from the translation of a subsidiary's equity are recognized in other comprehensive income. Translation differences are presented as a separate item under equity.

The Group has companies operating in Norway and Sweden with the euro determined as its functional currency. These companies operate in the gas market and gas market prices are determined according to word market prices in euros, whereby the company's revenue and sourcing are based on euros in accordance with IAS 21.

1.4. New and revised standards

The consolidated financial statements have been prepared in compliance with the same accounting policies as in 2021. Other new standards, interpretations and amendments to existing standards effective from 2022 did not affect the Group.

Forthcoming IFRS standards, interpretations and amendments

Several new standards, amendments and interpretations will only take effect later than in the reporting period which started on January 1, 2022 and have not been applied in the preparation of these financial statements. Other forthcoming standards, interpretations and amendments to existing standards are not expected to have significant effects on the Group.

1.5. Critical accounting estimates and judgmental items

The preparation of financial statements in conformity with IFRS requires the use of certain critical accounting estimates as well as management judgement in the process of applying the accounting policies when preparing financial statements. The estimates and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

The Group makes estimates and assumptions concerning the future. The resulting accounting estimates will, by definition, seldom equal the related actual results. The most critical estimates and assumptions and judgmental items are discussed in more detail in the following.

Valuation of inventories

The Group regularly monitors any decline of the net realizable value of inventories below cost and, where necessary, recognizes an impairment loss. Valuations take account of fluctuations after the reporting period in selling prices and selling costs insofar as there is additional evidence of these at the end of the reporting period. Prepayments reported under inventories include minimum annual Take-or-Pay obligations regarding the undelivered gas, which are estimated to be used in the years ahead. For more information on inventory values see Note 3.5.

Leases

When recognizing leases in the balance sheet, assumptions must be made concerning the lease term and the discount rate used. When assessing the term of new leases, renewal options extending the lease term are not acknowledged until the use of an extension option is likely. For more information on leases see Note 3.2.

Other contractual obligations

The Group has certain contractual obligations relating to procurement and sales contracts concerning different forms of gas. At the reporting date, the Group assesses the grounds for the obligations as well as related sales and procurement entries and impacts on stock inventories and non-interest-bearing liabilities. Management judgment is based on the contracts, negotiations conducted with counterparties and, where necessary, contractual expert opinions. Any compensation for non-compliance with daily minimum purchase obligations is recognized by Gasum in profit or loss for the period and with annual purchase obligations under inventories.

Geopolitical situation and estimation certainty

Changes in the market environment and developments in the geopolitical situation relating to Russia's war against Ukraine as well as changes in interest, inflation and currency rates in different countries may have future effects on the Consolidated Financial Statement. These factors can affect in the future the carrying amounts of assets and liabilities, the timing and amount of recognized earnings and cash flows. Russia's war against Ukraine and possible actions in the energy market may have a negative impact on Gasum's financial position. This could potentially lead to write downs of prepayment in the inventory and disruptions and claims related to the long term supply contracts and related minimum purchase obligations. The company has taken various mitigating actions, such as reducing the derivative exposure in the commodity market and developing an alternative sourcing arrangement for the pipeline natural gas. The company is evaluating the sufficiency of the actions continuously. Should the natural gas deliveries be resumed, the company has a large minimum purchase obligation for 2023, taking into account the current market demand in Finland.

Management and the Board of Directors of the company have assessed that there is no material uncertainty of the going concern for the company. Risks of business continuity are, among other things, evaluated through a variety of scenarios. In addition, the company has sought to develop the capability to react to challenges in the energy markets. The financial statements are prepared on a going concern basis.

The significant assumptions and estimates are presented in respective relevant individual Notes in the Financial Statement.

- Inventories (3.5)
- Legal proceedings and claims (5.5)
- Trade and other current payables (3.6)

Provisions

Deciding on the existence of grounds for recognizing provisions and determining the amounts of provisions necessitates estimates of the existence and amounts of the obligation. The company has not recognized provisions such as those relating to a penalty fee submission made by the Energy Authority to the Market Court. For more information about the Energy Authority's submission see Note 5.5. For more information about provisions see Note 3.9.

Pension benefits

The present value of the pension obligations depends on a number of factors that are determined on an actuarial basis using a number of assumptions. The discount rate is one of the factors resulting in net costs (or income) arising from pension benefits depending on the assumptions employed in the determination. Any changes in these assumptions will impact the carrying amount of pension obligations.

Goodwill and impairment testing

In the Gasum Group, goodwill relating to acquisitions of business units is allocated to cash-generating units (CGU) which are expected to benefit from the business combination generating the goodwill. The units determined by Gasum as CGUs are Industry, Maritime and Traffic business units. The intangible and tangible assets of the Supply and Trading unit have been allocated to the Industry and Maritime business units for impairment testing. Goodwill relating to Biogas in turn has been allocated to the Traffic business unit as it primarily serves Traffic customers.

On December 31, 2022, goodwill on the Gasum balance sheet amounted to EUR 88.9 million (2021: EUR 107.4 million). Goodwill is tested annually or whenever there are indications of impairments. The assumptions used in impairment testing require the exercise of management judgement. The most significant discretionary assumptions are related to the terminal year growth rate and the discount rate used. Further information on the sensitivity of the recoverable amount to changes in assumptions is provided under Note 3.1 Intangible assets.

Taxes

The Group companies are liable to income tax in Finland, Sweden, Norway and Germany. The utilization of tax losses calls for judgement on the part of management and impacts on the extent to which deferred income tax assets are recognized for these. The Group's balance sheet at December 31, 2022 includes a deferred income tax asset of EUR 9.0 million recognized for adopted losses (2021: EUR 16.8 million). Further information regarding taxes is presented under Note 2.9 Income tax expenses and Note 3.8 Deferred taxes.

Fair value measurement of certain financial instruments

Gasum's accounting policy for determining the fair value of financial instruments is described in Note 4.3. Management adjustment is exercised when determinizing the level 3 derivatives that lack quoted prices or where recently observed market prices are not available. The judgement relate to the following areas:

- The choice of valuation techniques
- The calculation of fair value adjustments in order to incorporate relevant risk factors such as credit risk and liquidity risk
- The judgement of which market parameters are observable

The fair value of financial assets and liabilities measured at fair value using valuation technique, level 3 in fair value hierarchy, was EUR 38.0 million in the end of the year (2021: EUR 14.7 million). Valuation adjustments (Credit value adjustment and close-out cost adjustment) made when determining the fair value of financial instruments amounted to EUR 8.2 million (2021: EUR 0.0 million)

2 Notes to the income statement

2.1. Revenue

Business structure

The Gasum Group's functions are grouped into two sales units and three units supporting business activities. The sales units are Industry & Traffic and Maritime. The supporting units are Commercial Product Management & Business Development, Supply & Trading and Projects & Biogas Production.

The **Industry sales unit** markets and sells gas, power and energy solutions as well as energy market services to industrial companies primarily in the Nordic countries. The unit sells industry fuels comprising liquefied natural gas (LNG), liquefied biogas (LBG) and renewable power (from hydro, wind, solar or bioenergy sources) as well as energy market services, including Guarantees of Origin for electricity, power market portfolio management and trading services, 24/7 control room services for risk management and price optimization, expert services in emissions trading, and demand-side management services for electricity consumption optimization. The unit's sales constitute external sales.

The **Traffic sales unit** markets and sells fuels for road transport, builds and maintains the gas filling station network and develops the road fuel gas market in the Nordic countries. The products sold by the unit are liquefied natural gas (LNG) and liquefied biogas (LBG) as well as compressed natural gas (CNG) and compressed biogas (CBG). The products are used in heavy-duty long-haul transport as well as in delivery and passenger vehicles, including buses, waste management vehicles and passenger cars. The unit's sales constitute external sales.

The **Maritime sales unit** markets and sells fuel for maritime transport and builds the maritime gas market in Northern Europe. The products sold by the unit are liquefied natural gas (LNG) and liquefied biogas (LBG) for ferries, passenger ships, tankers, bulk carriers and supply and container ships as well as bunkering services for a global maritime transport clientele in the Baltic Sea, North Sea and ARA areas as well as in France. The unit's sales constitute external sales.

The **Supply and Trading (ST) unit** sources, supplies and produces services mainly for the sales units. ST sales are divided into internal sales to sales units and external sales to customers outside the Group. External sales comprise mainly natural gas sales. ST is divided into three functions: Trading and Optimizing, Terminals, and Logistics Operations. ST functions are described in more detail below:

- **Trading and Optimizing function** sources and supplies natural gas, liquefied natural gas (LNG), renewable power (from hydro, wind, solar and bioenergy sources) as well as biogas from the production of certified European partners for the needs of the business units. Trading and Optimizing is also responsible for pricing of the Group's products, trading in financial products, and the sales of natural gas in the transmission network to customers in the Nordics and Baltics. The function also trades in the following financial products: natural gas index products, physically delivered gas products, emission allowances (EUAs), oil derivatives (Brent, Propane), and power derivatives.
- **Terminals function** is responsible for managing and maintaining 5 import LNG/LBG terminals across Nordics
- **Logistic Operations function** is responsible for the logistics of Gasum's gas supply chain, which consists of 1 terminal through a joint venture, 2 bunkering vessels, 3 carrier vessels and dozens of road tankers and gas containers.

The **Projects & Biogas Production** produces biogas from wastewater sludge, industrial side streams, animal-based side streams and biowaste in Finland and Sweden and provides waste processing and circular economy services in Finland. The unit produces biogas at 17 biogas plants and 3 partnership facilities in Finland and Sweden. The unit develops biogas production by building further production capacity and biogas plants. It also sells and markets recycled fertilizers and nutrients created as by-products of biogas production for agricultural and industrial needs. Gas produced by the Biogas unit is sold via ST to sales units and further to external customers. Fertilizers and waste processing constitute external sales of the unit.

Commercial Product Management (CPM) is responsible for communications, marketing and productization of Gasum's offering of services and products. CPM is also responsible for business development activities.

Accounting policies

Revenue recognition

Sales revenue is recognized in accordance with IFRS 15 Revenue from Contracts with Customers. Revenue from contracts with customers adjusted for discounts and indirect taxes is recognized as revenue. The company uses the five-step recognition model in accordance with the IFRS

15 standard when determining the recognition of sales revenue. Performance obligations are identified specifically for each contract and sales revenue is recognized when control of a good or service transfers to a customer. Accordingly, revenue is as a general rule recognized at the time of delivery in accordance with the terms and conditions of delivery. The recognition of the various performance obligations is described in greater detail below. Discounts and energy tax are included in sales prices and any variable consideration is recognized in accordance with the time of recognition. In the context of gas sales, variable considerations are typically linked to various indices, whereby the variable consideration is determined on the basis of the indices applicable at any given time and is therefore known at the time of revenue recognition.

The company does not have any significant financing components or rights to return in its contracts with customers. The company does not have any non-standard payment terms, either.

Natural gas sales

Natural gas is transmitted via the transmission network owned by Gasgrid Finland Oy (since the demerger effective from January 1, 2020) and invoiced to customers monthly according to actual consumption. Revenue is recognized on the basis of quantities supplied as indicated by measuring equipment and the prices in effect at the time or, depending on the sales channel, on the basis of the time of delivery, for example.

Sales revenue is recognized monthly on the basis actual invoiced unit quantities. As a general rule, uncertainty relating to variable considerations is resolved each month when Gasum recognizes monthly revenue, for example, based on the price index in accordance with the sales agreement and the volume or the quantity of services or units supplied. In some cases, the estimation of variable consideration requires management judgment regarding the timing of performance obligations e.g. in situations where Take-or-Pay clauses apply. An amount of variable consideration is adjusted for the effects of the time value of money if its significance is material. The management estimates transaction prices under sales agreements and amounts of money allocated to one or more performance obligations.

Liquefied natural gas (LNG) sales

Liquefied natural gas (LNG) is invoiced to customers according to deliveries and revenue is recognized on the basis of the time of delivery. The time of delivery varies customer-specifically according to the terms and conditions of their respective contracts. In addition to gas, LNG sales may also contain other performance obligations, including terminal and delivery services. Revenue from terminal services is recognized over time and revenue from delivery services once the service has been performed.

Gasum has control of the LNG until the time of delivery. LNG sales revenue is recognized when control is transferred to the customer. LNG sales agreement types include several fixed and variable considerations and pricing models. At the time of invoicing, however, pricing is fixed as any uncertainty relating to considerations is resolved every month on the basis of, for example, updated indices.

Sales revenue from contracts with a Take-or-Pay clause is not recognized before the customer exercises its remaining rights as regards any undelivered quantities. However, sales revenue is recognized when the likelihood of the customer exercising its remaining rights becomes very remote. If Gasum expects to be entitled to a penalty, the amount of expected penalty is recognized in proportion to the delivery rights not exercised by the customer.

Biogas sales

Biogas is transmitted using methods including the transmission network and containers and invoiced to customers monthly according to actual consumption. Revenue from biogas sales is recognized on the basis of quantities delivered as reported by the metering systems. The transaction price is fixed at the time of monthly invoicing, whereas variable considerations are determined on the basis of indices.

Waste processing and fertilizer sales

The price of the waste processing service includes variable considerations, such as the proportion of dry solids in waste, and annual incentives. At the time of monthly invoicing, however, the price is fixed. The effects of annual incentives on sales revenue are confirmed during the year. The effect of incentives is not projected in the recognition of sales revenue as the impacts are immaterial. In waste processing services, the customer at the same time receives and consumes the service provided by Gasum. Revenue from waste processing services is recognized over a period of time and, because the timing difference is not significant, sales revenue is recognized at the time of receiving waste. Fertilizer sales revenue is recognized when control is transferred to the customer in accordance with the terms and conditions of delivery.

Energy market services

Energy market services cover power market portfolio management and trading services, market analyses, balance services in the wholesale physical power market, control room services for electricity balance risk management, demand-side management services for electricity consumption optimization, energy market software solutions, Guarantees of Origin services for electricity, and expert services for emissions trading. Customers can choose which of the above services they buy, whereby they are treated as separate performance obligations. Because Gasum has control of the performance obligations until their transfer, it acts as a principal in accordance with IFRS 15 and applies the no-netting principle to the revenue recognition of performance obligations.

Participation and connection fees

Gasum's customers pay participation and connection fees when connecting to the transmission network. Participation fees are recognized to revenue over the expected life of the customer contract based on Gasum's accumulated experience. Connection fees are recognized to revenue when there is reasonable certainty that the related economic benefits will flow to Gasum.

The tables below present the breakdown of revenue in accordance with the Group business structure. Management judgment has been exercised concerning the comparative figures for 2021. As regards 2022, Gasum had one individual customer accounting for more than 10% of Group revenue. Trade receivables relating to sales revenue are presented in Note 3.4 Trade and other receivables.

Revenue by business unit € thousand	2022	2021
Industry	658,282	374,114
Maritime	169,467	115,540
Traffic	175,857	76,102
Supply & Trading	2,548,369	1,446,105
Projects & Biogas Production	74,436	61,276
Other and internal sales	-903,923	-502,106
Total	**2,722,488**	**1,571,031**

Comparison figures from 2021 adjusted to correspond change in business unit structure.

Revenue by region € thousand	2022	2021
Finland	1,697,293	939,345
Other countries	1,025,195	631,686
Total	**2,722,488**	**1,571,031**

The large change in revenue from 2021 to 2022 is due to a surge in natural gas market price.

2.2. Other operating income

Accounting policies

Insurance recovery

Insurance recovery is recognized when there is a reasonable assurance that the compensation will be received. Insurance recovery is recognized in the income statement under other operating income in the same reporting period as the corresponding costs incur.

Government grants

Government grants are recognized at their fair value where there is a reasonable assurance that the grant will be received, and the Group will comply with all attached conditions. Government grants related to costs are recognized under other operating income in the income statement over the period necessary to match them with the costs that they are intended to compensate. Government grants relating to the acquisition of tangible assets are deducted from the cost of the asset and recognized in the income statement by deducting the depreciation for the respective asset. Investment subsidy (yet to be received) related to unfinished investments is recognized where there is a reasonable assurance that the subsidy will be received and corresponding costs have incurred. Support is recognized as current or non-current receivables and as reduction of unfinished investments. Other income includes production subsidies received by biogas plants and insurance recovery.

Gains from realized and unrealized derivative financial instruments

Gains from realized and unrealized derivative financial instruments attributable to movements in their fair value are recognized by Gasum in other operating income. The high price of gas and larger hedge positions resulted in an increased market value of hedge derivatives, which is why realized and non-realized gains from derivative financial instruments increased year on year. For more information on derivative financial instruments see Notes 4.2 and 4.3.

Other operating income € thousand	2022	2021
Gains from sale of fixed assets	84	347
Proceeds from sale and leaseback arrangement	860	1,624
Gains from realized derivative financial instruments	256,036	156,214
Gains from unrealized derivative financial instruments	263,026	220,859
Other income	2,530	4,649
Total	**522,536**	**383,693**

2.3. Materials and services

Materials and services € thousand	2022	2021
Materials and supplies	-2,324,828	-1,361,986
External services	-18,859	-15,303
Total	**-2,343,687**	**-1,377,289**

The large change in materials and services from 2021 to 2022 is due to a surge in natural gas market price.

2.4. Personnel

Personnel expenses € thousand	2022	2021
Salaries and remunerations	-27,401	-30,612
Pension expenses – defined contribution pension plans	-4,422	-4,514
Pension expenses – defined benefit pension plans	80	143
Statutory employer contributions	-3,730	-4,355
Total	**-35,473**	**-39,338**

Salaries and remunerations of CEO and Members of the Board of Directors € thousand	2022	2021
CEO	-350	-577
Members of the Board of Directors	-279	-257
Total short-term employee benefits	**-629**	**-834**

Personnel on average	2022	2021
Finland	212	219
Sweden	90	99
Norway	42	65
Germany	3	3
Personnel on average	**347**	**386**

Personnel at the end of the period	2022	2021
Finland	196	212
Sweden	85	94
Norway	38	46
Germany	2	4
Personnel at the end of the period	**321**	**356**

2.5. Depreciation, amortization and impairment

Accounting policies

Depreciation, amortization and impairment

Items are depreciated straight-line over their estimated useful lives. Land and water areas are not depreciated. Depreciations of right-of-use assets are included in depreciation of fixed assets in the statement of income. Leases are presented in Note 3.2 Tangible assets.

The estimated useful lives are:
- Software 3–5 years
- Customer relationships 10–25 years
- Pipelines related to gas distribution 40–65 years
- Terminal-related pipelines 25 years
- Terminal-related buildings and structures 40–52 years
- Terminal-related tanks 40 years
- Other buildings and structures 30–40 years
- Filling stations 15–25 years
- Production plant machinery and equipment 25 years
- Other machinery and equipment 3–25 years

Depreciation, amortization and impairment € thousand	2022	2021
Depreciation of land*	-1,403	-2,972
Depreciation of buildings and structures	-21,679	-23,635
Depreciation of machinery and equipment	-49,388	-32,623
Depreciations of other tangible assets	-700	-760
Depreciation of tangible assets**	-73,170	-59,990
Amortization of intangible assets	-8,292	-7,350
Impairment***	-11,398	-1,451
Total	**-92,860**	**-68,792**

* Right-of-use assets in accordance with IFRS 16.
** New right of use asset plant Risavika started in end of year 2021
*** The impairment of goodwill EUR 11.0 million and write down of Suomenoja plant EUR 0.4 million

2.6. Other operating expenses

Losses from realized and unrealized derivative financial instruments attributable to movements in their fair value are recorded by Gasum in other operating expenses.

Other operating expenses € thousand	2022	2021
Rents	-1,876	-1,264
Maintenance expenses	-16,777	-16,915
External services	-29,418	-19,832
Loss from realized derivate financial instruments	-451,439	-252,418
Loss from unrealized derivative financial instruments	-106,389	-374,984
Personnel-related expenses other than salary expenses	-2,938	-2,129
Fixed operating expenses	-2,616	-2,183
Administrative expenses	-3,917	-8,856
Marketing and entertainment expenses	-1,587	-2,551
Insurance policies	-1,434	-1,156
Compensation for daily minimum purchase obligation of natural gas	4,054	-15,685
Other	-9,506	-8,951
Total	**-623,844**	**-706,925**

The high price of gas and larger hedge positions resulted in an increased market value of hedge derivatives, which is why realized and unrealized losses from derivative financial instruments decreased compared to the previous year. For more information on derivative financial instruments see Notes 4.2 and 4.3. The provision for a daily minimum purchase obligation of natural gas has been adjusted according to tribunal decision from arbitration. For more information see Note 5.5.

2.7. Audit fees

Audit fees € thousand	2022	2021
Statutory audit fees	-830	-772
Audit opinions	-58	-55
Tax services	-82	-163
Other services	-5	-220
Total	**-974**	**-1,210**

2.8. Finance income and finance expenses

Finance income € thousand	2022	2021
Foreign exchange gains	122,647	26,310
Realized and unrealized gains on interest rate derivatives	16,139	506
Other finance income	1,407	120
Total	**140,193**	**26,936**

Finance expenses € thousand	2022	2021
Interest expenses on finance loans	-7,895	-6,699
Foreign exchange losses	-122,493	-24,684
Interests on lease liabilities	-10,642	-11,114
Realized and unrealized losses on interest rate derivatives	-4,413	-590
Other finance expenses	-3,456	-1,135
Total	**-148,899**	**-44,222**
Total finance income and finance expenses	**-8,706**	**-17,286**

Other finance expenses mainly consist of amortized collateral payments and brokerage fees.

Changes in finance income and expenses compared to the financial year 2021 are mainly due to changes in foreign currency rates and related currency derivatives as well as changes in fair value of interest rate derivatives.

2.9. Income tax expenses

Income taxes

Accounting policies

Current and deferred income tax

The tax expense for the period comprises current and deferred tax. Tax is recognized in the income statement, except to the extent that it relates to items recognized in other comprehensive income or directly in equity. In that case, the tax is also recognized in other comprehensive income or directly in equity, respectively. The current income tax charge is calculated on the basis of the tax laws enacted at the balance sheet date. Deferred income tax is recognized on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts. Temporary differences arise from issues including depreciation differences, provisions, defined benefit pension plans and confirmed losses.

Taxes € thousand	2022	2021
Current tax	-12,617	-3,068
Taxes for previous periods	-102	7
Change in deferred taxes	-5,155	4,220
Total	**-17,874**	**1,160**

Income taxes recognized in the consolidated income statements differ from the income taxes calculated using the Finnish corporation tax rate as follows:

€ thousand	2022	2021
Result before income tax	141,218	-255,804
Mathematical tax based on Finland's corporate tax rate	-28,244	51,161
Effect of different tax rates applied to foreign subsidiaries	-201	242
Tax exempt income	341	465
Non-deductible expenses*	-12,570	-1,765
Previously unrecognized deferred tax assets	0	0
Unrecognized deferred tax receivables on losses	0	-50,055
Utilization of previously unrecognized tax losses	23,005	487
Taxes for previous periods	207	359
Permanent differences	17	-3
Translation differences**	901	1,488
Other items	-1,330	-1,219
Total	**-17,874**	**1,160**

* Non-deductible expenses include goodwill impairment (11 million euros) in 2022.
**Translation differences include the differences in tax rate due to functional currency and translation differences in the calculation of current tax.

The impacts of taxes relating to components of other comprehensive income are as follows:

Tax effects relating to components of other comprehensive income € thousand	2022			2021		
	Before tax	Tax effect	After tax	Before tax	Tax effect	After tax
Remeasurement of post-employment benefits	774	-155	619	-2,446	489	-1,957
Cash flow hedges	0	0	0	423	-85	338
Other comprehensive income	**774**	**-155**	**619**	**-2,023**	**404**	**-1,619**

3 Capital employed

3.1. Intangible assets

Accounting policies

Intangible rights consist primarily of patents and licenses as well as value allocated to customer accounts from business combinations.

Intangible assets are recognized at cost if the cost of the item can be measured reliably and it is likely that future economic benefits associated with the item will flow to the Group. Assets are amortized over their estimated useful lives. The assets' residual values, useful lives and amortization method are reviewed at a minimum at the end of each reporting period and adjusted, if appropriate, to reflect changes in the expected economic benefits. Compensatory allowances to landowners are accounted for as intangible assets with an indefinite useful life. They are not subject to amortization and are tested annually for impairment.

The estimated useful lives are:

- Software 3–5 years
- Customer relationships 10–25 years

Impairment

Intangible assets with finite useful lives are tested for impairment only when indications exist that their carrying value may be impaired. Recoverable amount is additionally assessed annually for the following asset classes regardless of whether indications of impairment exist: goodwill, intangible assets with indefinite useful lives, and intangible assets in progress. The recoverable amount is the higher of an asset's fair value less costs of disposal and value in use. An impairment loss is recognized for the amount by which the asset's carrying value exceeds its recoverable amount.

Reconciliation of intangible assests

2022 € thousand	Goodwill	Intangible rights	Other intangible assets	Total
Cost at January 1	107,416	113,479	14,963	235,857
Additions	0	1	357	357
Disposals	0	-9	-252	-261
Reclassifications	0	0	2,524	2,524
Adjustments	0	116	0	116
Changes in exchange rates	-7,493	0	0	-7,493
Cost at December 31	**99,923**	**113,586**	**17,591**	**231,100**
Accumulated amortization at January 1	0	36,461	6,608	43,069
Amortization for the period	0	5,356	2,935	8,291
Impairment	11,000	0	0	11,000
Disposals	0	-9	-252	-261
Changes in exchange rates	0	0	0	0
Accumulated amortization at December 31	**11,000**	**41,808**	**9,290**	**62,098**
Net book value at January 1, 2022	107,416	77,018	8,354	192,788
Net book value at December 31, 2022	88,922	71,778	8,301	169,001

2021 € thousand	Goodwill	Intangible rights	Other intangible assets	Total
Cost at January 1	122,724	113,496	12,719	248,940
Additions	1,553	31	5,405	6,989
Disposals	-16,182	0	-75	-16,675
Reclassifications	0	0	2,480	2,480
Adjustments	0	226	-5,567	-5,341
Changes in exchange rates	-679	-274	0	-535
Cost at December 31	**107,416**	**113,479**	**14,963**	**235,857**
Accumulated amortization at January 1	0	31,261	4,273	35,534
Amortization for the period	0	4,975	2,374	7,349
Impairment	0	0	0	0
Disposals	0	0	-39	-39
Changes in exchange rates	0	226	0	226
Accumulated amortization at December 31	**0**	**36,461**	**6,608**	**43,069**
Net book value at January 1, 2021	122,724	82,236	8,447	213,407
Net book value at December 31, 2021	107,416	77,018	8,354	192,788

Goodwill

Accounting policies

The acquisition method of accounting is used to account for business combinations. Goodwill is recognized at the excess of cost over the Group's share of the acquisition-date fair value of the net identifiable assets of the acquired subsidiary. Goodwill is measured at original cost less impairment. Goodwill is tested annually and whenever there are indications of impairment. Towards this end, goodwill is allocated to cash-generating units (CGU). Any negative goodwill is recognized immediately. Any impairment of goodwill recognized is not reversed.

Allocation of goodwill

In the Gasum Group, goodwill relating to acquisitions of business units is allocated to cash-generating units (CGU) which are expected to benefit from the business combination generating the goodwill. The units determined by Gasum as CGUs are the Industry, Maritime and Traffic business units as well as the unbundled natural gas sales business, which is part of the Supply and Trading unit. No goodwill is allocated to the natural gas sales business. The intangible and tangible assets of the Supply and Trading unit have been allocated to the Industry and Maritime business units for impairment testing. Following the organizational change, goodwill relating to the LNG and Energy Market Services businesses has been allocated to the Industry and Maritime business units in proportion to their fair values, whereas goodwill relating to the Biogas business has been allocated to the Traffic business unit as it primarily serves Traffic customers.

Goodwill € thousand	2022	2021
CGU: Industry business	62,472	67,134
CGU: Maritime business	25,967	39,418
CGU: Traffic business	483	864
Total	**88,922**	**107,416**

Reconciliation of goodwill

Reconciliation of goodwill € thousand	2022	2021
Net book value at January 1	107,416	122,724
Additions	0	1,553
Impairment losses for the financial period	-11,000	-16,182
Changes in exchange rates	-7,493	-679
Book value at December 31	**88,922**	**107,416**

Impairment testing

Goodwill is subjected to impairment testing whenever there are indications of impairment and always at least once a year. If any such indications exist, the recoverable amount of the respective asset is assessed. An impairment loss is recognized immediately in profit or loss for the amount by which the asset's carrying value exceeds its recoverable amount. The useful life of the asset is reviewed in connection with recognition of impairment losses. Recoverable amounts are based on management estimates of future cash flows at the cash generating unit (CGU) level and forecast cash flows prepared concerning them. In impairment testing, the recoverable amount is based on value-in-use calculations (expected future net cash flows derived from the asset or CGU in question discounted to net present value). The forecast period is five years and the terminal value has been determined on the basis of the final year. Cash flows beyond the forecast period are extrapolated using a long-term estimated growth rate of 1%, which is judged suitable to the Group's growing energy-sector business in the Nordic countries. The forecast business volumes are based on the current structure, including investments that have already been started.

As a result of the impairment test, an impairment loss of EUR 11.0 million related to Maritime business CGU goodwill was recognised in the income statement in December 2022. The main assumptions behind the impairment of Maritime goodwill were related to the significant turbulence in the energy market, which has impacted the growth of the LNG powered vessel market negatively in short-term. Impairment charge of goodwill related to Skangas acquisition made in 2014.

There were no impairments of goodwill during the 2022 reporting period concerning Industry and Traffic CGUs. The recoverable amounts of in the testing model exceeded the carrying amounts of the assets of these CGUs by several tens of percent or more.

Following the impairment loss recognized in the recoverable amount of goodwill in the Group is equal to the carrying amount of EUR 88.9 million.

Main variables used in the value-in-use calculation:

1. Volume growth, which is based on an estimate of the sales growth at existing business units
2. Market environment and prevailing market prices and price scenarios
3. Discount rate, which is determined using the Weighted Average Cost of Capital (WACC), a reflection of the Group's average cost of capital. WACC reflects market view concerning time value of money and risk associated with the industry sector of the Group. Parameters used to determine WACC are based on observable figures of comparable companies in the same industry sector and market risk premium. Management determines components of the WACC so that risk-free rate, expected return and beta are consistent with external information sources. WACC is computed with targeted long-term capital structure of the Group.

The pre-tax discount rate used in the calculations for the CGUs is 9.47% (2021: 6.73%).

Sensitivity analyses

Sensitivity analyses for key assumptions – discount rate, EBITDA development and residual value growth factor – were performed in connection with impairment testing. The key variables in the calculations are change in the discount rate, poorer than estimated development of EBITDA, and lower volume growth in the period beyond the forecast period. On the basis of the sensitivity analyses, the probability of impairment losses on goodwill of Industry and Traffic CGU units is very low. Examined individually, foreseeable changes in no key variable would lead into a situation where the recoverable amount would be below the carrying value and result in the recognition of an impairment loss of goodwill in Industry and Traffic CGU units.

Goodwill of Maritime CGU is sensitive for changes in main variables as there is no headroom between the carrying amount of Maritime and the recoverable amount determined in the testing and thus negative changes in main variables may cause need for additional impairment.

3.2. Tangible assets

Accounting policies

Tangible assets

Tangible assets mainly consist of LNG distribution terminals, biogas production plants, pipelines relating to gas distribution and other machinery and equipment. Property, plant and equipment (PPE) items are recognized at historical cost less depreciation and impairment charges.

The cost includes expenditure that is directly attributable to the acquisition, construction and production of the item of PPE and capitalized borrowing costs arising from these. In addition, the cost includes any estimated costs arising from obligations to dismantle, remove and restore the items of PPE. The cost for self-constructed assets include material costs, directly attributable employee benefit costs and other directly attributed costs arising from development to completion for the intended use. In case an item of PPE consists of multiple assets with different useful lives, each asset is accounted and measured as separate item of PPE. Any replacement costs are capitalized and remaining value in the balance sheet at the date of replacement is derecognized.

Costs incurred subsequently to add to, replace part of or service an item of PPE are included in the item's carrying amount only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. Costs of servicing, i.e. repair and maintenance costs, are recognized in profit or loss as incurred. Grants received are recognized as reductions of the cost where there is a reasonable assurance that the grant will be received, and the Group will comply with all attached conditions. There are no material borrowing costs capitalized in PPE.

Items are depreciated straight-line over their estimated useful lives. Land and water areas are not depreciated.

The estimated useful lives are:

- Pipelines related to gas distribution 40–65 years*
- Terminal-related pipelines 25 years
- Terminal-related buildings and structures 40–52 years
- Terminal-related tanks 40 years
- Other buildings and structures 30–40 years
- Filling stations 15–25 years
- Production plant machinery and equipment 25 years
- Other machinery and equipment 3–25 years

* Not applicable to cushion gas accounted for as an item of PPE which is depreciated only when the expected residual value is lower than the acquisition cost or carrying value at reporting date. Cushion gas means the smallest volume of gas required for flawless gas transmission delivery.

The assets' residual values, useful lives and depreciation method are reviewed at a minimum at the end of each reporting period and adjusted, if appropriate, to reflect changes in the expected economic benefits. Recognition of depreciations is commenced when the asset is ready for its intended use.

Impairment

Tangible assets with finite useful lives are tested for impairment only when indications exist that their carrying value may be impaired. The recoverable amount is the higher of an asset's fair value less costs of disposal and value in use. An impairment loss is recognized for the amount by which the asset's carrying value exceeds its recoverable amount.

Reconciliation of tangible assets

2022 € thousand	Land and water	Buildings and structures	Machinery and equipment	Other tangible assets	Construction in progress	Total
Cost at January 1	32,665	461,910	407,350	29,604	83,711	1,015,240
Additions	1,949	16,148	6,885	837	13,773	39,591
Disposals	-120	-17,098	-9,056	-769	-2,247	-29,290
Reclassifications	0	33,806	764	0	-37,104	-2,534
Adjustments	0	12,563	15,365	3,419	-27,946	3,401
Changes in exchange rates	-1,076	-7,316	-288	0	0	-8,679
Cost at December 31	**33,419**	**500,013**	**421,021**	**33,091**	**30,187**	**1,017,730**
Accumulated depreciation at January 1	9,758	157,772	139,588	8,465	7,720	323,303
Depreciations for the period	1,403	21,679	49,388	700	0	73,170
Impairment		192	206	0	0	398
Accumulated depreciation on disposals	0	-474	-479	0	0	-953
Reclassifications	0	4	-5	-9	0	-10
Adjustments	0	0	0	0	295	295
Accumulated depreciation at December 31	**11,161**	**179,173**	**188,698**	**9,156**	**8,015**	**396,203**
Net book value at January 1, 2022	22,908	304,137	267,762	21,139	75,991	691,937
Net book value at December 31, 2022	22,258	320,840	232,323	23,934	22,172	621,527

2021 € thousand	Land and water	Buildings and structures	Machinery and equipment	Other tangible assets	Construction in progress	Total
Cost at January 1	62,828	505,573	428,040	35,631	79,156	1,111,228
Additions	3,234	10,765	56,504	139	35,624	106,266
Disposals	- 36,024	-74,939	-80,518	-6,215	-10,458	-208,154
Reclassifications	0	16,345	1,819	31	-20,682	-2,487
Adjustments	0	4,163	1,513	17	71	5,764
Changes in exchange rates	2,627	3	-7	0	0	2,623
Cost at December 31	**32,665**	**461,910**	**407,350**	**29,604**	**83,711**	**1,015,240**
Accumulated depreciation at January 1	5,335	134,775	106,173	7,703	7,720	261,707
Depreciations for the period	2,972	23,635	32,623	760	0	59,990
Impairment	1,451	0	0	0	0	1,451
Accumulated depreciation on disposals	0	-8,241	-52	2	0	-8,291
Reclassifications	0	366	-232	0	0	134
Adjustments	0	7,236	1,076	0	0	8,312
Accumulated depreciation at December 31	**9,758**	**157,772**	**139,588**	**8,465**	**7,720**	**323,303**
Net book value at January 1, 2021	57,493	370,798	321,866	27,928	71,436	849,521
Net book value at December 31, 2021	22,908	304,137	267,762	21,139	75,991	691,937

The impairment amounting to EUR 398,10 thousand in 2022 relates to Suomenojan jalostuslaitoksen impairment in Gasum Oy, Finland. Tangible assets include right-of-use assets in accordance with IFRS 16 Leases.

Accounting policies

Leases where the Group is the lessee

In accordance with the IFRS 16 standard, the Group recognizes, for almost all contracts classified as leases, on the balance sheet the receivable based on the right-of-use asset and the corresponding lease liability by measuring future lease payments at the present value. Lease liabilities have been discounted using the Group's incremental borrowing rate. Contracts providing the Group with the right to control the use of an identified leased asset for a specific period of time in exchange for consideration are classified as leases. Service agreements are not classified as leases. Right-of-use assets are depreciated on a straight-line basis for the remaining lease term, which transfers part of the lease costs recognized as other operating expenses under depreciation and amortization and the part of the payments that reflects interests under finance costs. The Group has both fixed-term and indefinite-term leases. When recognizing leases in the balance sheet, management judgment is exercised when estimating the actual term of a lease and the discount rate used. When estimating the actual term of a lease, the management takes into account any contractual penalties concerning lease termination, lease incentives and renewal options extending the lease term. When assessing the term of new leases, renewal options are not acknowledged until the use of an extension option is likely.

The Group applies the exemptions allowed by the standard concerning short-term leases with a lease term of 12 months or less and leases for which the underlying asset is of low value, such as IT hardware, which is recognized to profit or loss under other operating expenses. The leases recognized on the balance sheet comprise carriers and trailers used for LNG transport, liquefaction plant for LNG, land areas, facilities, vehicle leasing agreements and other leased machinery and equipment.

Carriers are typically leased for a period of 20–25 years. Lease terms of other right-of-use assets are typically as follows: office equipment 3–5 years, facilities 3–5 years, vehicles 3–15 years, land areas 10–20 years.

The Group does not act as a lessor in the manner referred to in IFRS 16.

Right-of-use assets in accordance with IFRS 16

2022 € thousand	Land and water	Buildings and structures	Machinery and equipment	Other tangible assets	Total
Net book value at January 1, 2022	**16,708**	**2,219**	**163,859**	**9**	**182,795**
Additions	1,924	444	454		2,822
Disposals	-10	-253	-4,251	0	-4,513
Depreciation	-1,393	-1,273	-35,635	-9	-38,309
Reclassifications			-628		-628
Changes in exchange rates	-773	-82	-747		-1,601
Net book value at December 31, 2022	**16,457**	**1,056**	**123,053**	**0**	**140,565**

2021 € thousand	Land and water	Buildings and structures	Machinery and equipment	Other tangible assets	Total
Net book value at January 1, 2021	**51,323**	**3,626**	**131,032**	**4**	**185,984**
Additions	1,754	148	50,217	16	52,135
Disposals	-36,024	-55	-1,269	0	-37,348
Depreciation	-2,971	-1,502	-16,113	-12	-20,599
Changes in exchange rates	2,627	3	-7	0	2,622
Net book value at December 31, 2021	**16,708**	**2,219**	**163,859**	**9**	**182,795**

Lease liabilities

€ thousand	2022	2021
Non-current lease liability	139,430	169,972
Current lease liability	31,628	36,919
Total	**171,058**	**206,891**

Cash flow from leases

€ thousand	2022	2021
Interest expenses of lease liabilities	10,642	11,114
Repayments of lease liabilities*	37,232	10,468
Rents remaining in income statement	1,996	1,326
Total	**49,869**	**22,908**

* New right of use asset plant Risavika started at the end of 2021

3.3. Share of investments consolidated using the equity method

Accounting policies

Joint ventures and associates

Associated companies and joint ventures have been consolidated using the equity method. Under the equity method, interests in joint ventures are initially recognized at cost and adjusted thereafter to recognize the Group's share of the post-acquisition profits or losses and movements in other comprehensive income. Accounting policies of joint ventures and associated companies have been changed where necessary to ensure consistency with the policies adopted by the Group. When the Group's share of losses in a joint venture or associated company equals or exceeds its interest in the joint venture or associate, the Group does not recognize further losses, unless it has incurred legal or constructive obligations or made payments on behalf of the entity.

Joint ventures and associate December 31, 2022	Country of incorporation	% of ownership interest	Measurement method	
Manga LNG Oy	Finland	25.0	Equity method	Joint venture
Vadsbo Biogas AB	Sweden	50.0	Equity method	Joint venture
Kiertoravinne Oy	Finland	19.9	Equity method	Associate

Gasum, Biolan and Pöytyän Maanparannus joined forces at the beginning of August in Kiertoravinne Oy. Kiertoravinne, which focuses on recycled nutrients, was originally established by Biolan in 2021. Its ownership base grew at the beginning of August and the company is now owned by Biolan, its subsidiary Novarbo Oy, Gasum Oy and Pöytyän Maanparannus Oy. Gasum Group ownership is totalling 19.9 percent of ownership interest in the entity. Gasum Group exercise a significant control over the the entity by having a representative on the board of directors of Kiertoravinne Oy. The Group interest is accounted for using the equity method in the consolidated financial statements.

Interests in joint ventures and associate	2022	2021
Net book value at January 1	11,022	11,266
Share of result for the period	553	-244
Additions	100	0
Changes in exchange rates	-26	-1
Net book value at December 31	**11,648**	**11,022**

2022 Reconciliation of book value of joint ventures and associate	Manga Group Oy*	Vadsbo Biogas AB	Kiertoravinne Oy
Net assets of joint ventures and associates	44,271	957	467
Group's ownership interest in net assets	10,068	479	93
Book value of joint ventures and associates	10,068	479	93

Summarized financial information for joint ventures and associate

Summarized financial information of joint ventures and associate € thousand	Non-current		Current				
	Assets	Liabilities	Assets	Liabilities	Revenue	Result	Ownership interest
2022							
Manga LNG Oy*	76,541	33,995	33,897	32,171	91,042	2,842	25%
Vadsbo Biogas AB	1,599	1,299	1,436	778	1,826	4,441	50%
Kiertoravinne Oy	0	0	633	166	308	-33	19.9%
Total	**78,140**	**35,294**	**35,966**	**33,116**	**93,176**	**7,250**	

Summarized financial information of joint ventures and associate € thousand	Non-current		Current				
	Assets	Liabilities	Assets	Liabilities	Revenue	Result	Ownership interest
2021							
Manga LNG Oy*	80,967	40,574	28,206	26,582	74,902	2,936	25%
Vadsbo Biogas AB	2,098	1,732	1,214	544	1,413	436	50%
Total	**83,064**	**42,305**	**29,420**	**27,126**	**76,315**	**3,372**	

* Manga LNG Oy forms a group together with its subsidiary. The figures presented are group figures.

3.4. Trade and other receivables

Accounting policies

Trade and other receivables

Trade receivables are amounts due from customers for goods sold or services performed in the ordinary course of business. Trade receivables are recognized at invoiced amounts. Gasum analyzes credit loss risk in accordance with IFRS 9. The fair values of trade and other receivables equal their carrying amount. The maximum exposure to credit risk is the carrying value of each receivable.

Gasum Ltd has entered into trade receivable factoring arrangements with two Nordic banks to enhance its working capital. In this arrangement, Gasum sells selected clients' trade receivables borne by most recent gas and power sales transactions to the bank and receives cash on immediate basis. The bank carries the credit risk of a sold trade receivable. Gasum is responsible for satisfying performance obligations, i.e. that the client receives the promised goods or services in the agreed manner.

Trade and other receivables € thousand	2022	2021
Trade receivables	292,777	421,380
Accrued income	27,736	12,957
Energy tax receivables	0	93
Other receivables	40,021	182,387
Total	**360,534**	**616,817**

Other receivables include deposits relating to the company's derivative operations.

The ageing analysis of trade receivables after impairment is as follows:

Ageing analysis of trade receivables after impairment € thousand	2022	2021
Not due	247,304	362,097
Overdue by		
Less than 3 months	45,233	59,111
More than 3 months	240	171
Total	**292,777**	**421,380**

3.5. Inventories

Accounting policies

Inventories

Inventories are stated at the lower of cost and net realizable value. Net realizable value is the estimated selling price in the ordinary course of business, less applicable variable selling expenses. Cost is determined asset-specifically using the average or the first-in first-out (FIFO) method and comprises all costs incurred in bringing the inventories to their present location and condition.

Inventories € thousand	2022	2021
Product inventories	80,180	68,451
Other inventories	385	715
Prepayments	177,298	178,285
Total	**257,862**	**247,451**

In 2022 product inventories include a write-off to net realizable value amounting to EUR 25.3 million (in 2021: EUR 0).

Gasum has concluded a long-term gas supply contract under which, in addition to the contracted volumes of natural gas supply, the minimum annual volume of natural gas supplied is agreed. In case Gasum does not use the minimum annual volume of gas, Gasum will be obliged to pay a prepayment under the contract, which gives Gasum the right to receive the unused amount of the agreed annual supply volume in later years. Prepayments reported under inventories include minimum annual Take of Pay obligations regarding the undelivered gas amounting to EUR 177.3 million (2021: EUR 178.3 million), which are estimated to be used in the years ahead. There is no time limit for the reception of the gas under the terms of the gas supply contract. Recognized asset is for the most part unpaid. Gasum has recognized 158.0 million euros obligation as liability under accrued trade payables and other accruals in company balance sheet. Realization of inventory asset and gas deliveries involve risks eg. due to surrounding geopolitical situation.

3.6. Trade and other current payables

Current liabilities to others € thousand	2022	2021
Trade payables	260,605	367,897
Contract liabilities	30,293	16,162
Participation fee revenue recognition liability	83	125
Other liabilities	57,663	77,575
Accruals and deferred income	182,837	186,089
Lease liabilities	31,628	36,919
Total	**563,109**	**684,766**

The revenue recognition liability for participation fees is related to fees that customers pay when connecting to the network and which are recognized over the average life of the customer contract. Trade payables include liabilities under Take-or-Pay contracts from Gazprom totaling EUR 53.3 million (2021: EUR 53.3 million) and EUR 133.2 million liability for gas deliveries from April and May 2022 which Gasum has declined to pay in rubles and therefore the above amounts were unpaid at year end. For more information see Note 5.5. Other liabilities include a value-added tax liability EUR 41.9 million (2021: EUR 69.7 million). Accruals and deferred income include liabilities under Take-or-Pay contracts EUR 104.7 million (2021: EUR 104.7 million) and investment support received in advance relating to the Biogas unit's investing activities in Sweden. Accruals include natural gas daily minimum purchase obligations amounting to EUR 11.6 million, which is based on arbitration award. Contract liabilities include advance payments related to transfers of goods taking place in the future.

3.7. Cash and cash equivalents

Accounting policies

Cash and cash equivalents

The Group's cash and cash equivalents include cash on hand and in bank accounts. The bank overdraft limit used is presented under other current payables on the balance sheet.

Cash and cash equivalents € thousand	2022	2021
Cash and cash equivalents	206,190	387,364
Total	**206,190**	**387,364**

3.8. Deferred tax

Accounting policies

Deferred tax

Deferred income tax is recognized on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts. Deferred tax liabilities are not, however, recognized if they arise from the initial recognition of goodwill or undistributed earnings of subsidiaries where the difference will not materialize in the foreseeable future. The most significant temporary differences in the Group arise from the depreciation of property, plant and equipment, from the fair valuation of derivative financial instruments, from defined benefit pension plans and from unused tax losses.

Deferred taxes are calculated on the basis of the tax laws enacted or substantively enacted at the balance sheet dates. Deferred income tax assets are recognized only to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilized. A deferred income tax asset is not recognized if it arises from the initial recognition of an asset or liability in a transaction other than a business combination that at the time of the transaction affects neither accounting nor taxable income. The Group assesses the recognition criteria of deferred income tax assets respectively at the end of each reporting period.

Deferred income tax assets and liabilities are offset in the Group if and only if there is a legally enforceable right to offset current tax assets against current tax liabilities and when the deferred income tax asset and liabilities relate to income taxes levied by the same taxation authority on either the same taxable entity or different taxable entities where there is an intention to set off deferred income tax assets and liabilities or realize the tax receivable and pay the tax liability simultaneously on such future period during which a significant amount of deferred income tax liabilities are expected to be paid or a significant amount of deferred income tax assets are expected to be deducted.

Deferred tax € thousand	2022	2021
Deferred tax assets:		
Financial instruments	303	1,151
Pensions and employee Benefits.	919	1,120
Adopted losses	9,038	16,820
Provisions	3,887	1,445
Fixed assets	853	719
Lease liabilities	5,592	4,984
Other temporary differences	114	197
Intangible assets	691	0
Total	**21,937**	**26,434**
At January 1	26,434	31,498
Netted from deferred tax liability	-24,183	-31,498
Business acquisitions and disposals		
Recognized in income statement	17,275	24,872
Recognized in other comprehensive income	0	489
Other changes	1,653	1,073
Translation differences	218	0
Book value at December 31	**21,397**	**26,434**
Netted from deferred tax liability	1,263	24,183
Total, net	**20,134**	**2,251**

Deferred tax € thousand	2022	2021
Deferred tax liabilities		
Tangible assets	10,711	10,174
Intangible assets	16,350	17,442
Provisions	221	225
Financial instruments	3	869
Adopted losses	3,419	0
Other temporary differences	2,146	2,523
Total	**32,849**	**31,233**
At January 1	31,233	62,507
Netted from deferred tax assets	-24,183	-31,498
Business acquisitions and disposals	0	0
Business disposals	0	-20,427
Recognized in income statement	22,730	20,652
Recognized in other comprehensive income	0	0
Other changes	1,653	0
Translation differences	1,417	0
Book value at December 31	**32,850**	**31,233**
Netted from deferred tax assets	1,263	24,183
Total, net	**31,587**	**7,050**
Deferred tax assets and liabilities, net	**-11,453**	**-4,799**

Deferred tax assets are recognized for tax loss carryforwards to the extent that the realization of the related tax benefit through future taxable profits is probable. On December 31, 2022, the Group had unused tax losses of EUR 189,339 thousand, of which EUR 39,416 thousand are not due and EUR 149,923 thousand are due in 2031.

A large share of the Group's tax liabilities is related to fixed assets. There is a time difference between taxation and accounting in the depreciation of fixed assets, resulting in deferred tax liability. The Group has material temporary differences for which no deferred tax asset has been recognized, such as unused tax losses.

3.9. Provisions

Accounting policies

Provisions

Provisions for environmental restoration, asset retirement obligations, restructuring costs and legal claims are recognized when the Group has a present legal or constructive obligation as a result of past events; it is probable that an outflow of resources embodying economic benefit will be required to settle the obligation; and a reliable estimate of the obligation can be made. The amount of provision is the current value of those costs that the settlement of the obligation is expected to require.

Provisions € thousand	2022	2021
Provisions at the beginning of period	**27,329**	**19,817**
Increase in provisions	466	17,687
Decrease in provisions	-15,686	-6,713
Business acquisitions	0	0
Business disposals	0	-2,039
Provision used	0	-1,375
Unwinding of discount	9	9
Translation differences	-200	-58
Provisions at the end of period	**11,918**	**27,329**
Of which current provisions	0	0
Of which non-current provisions	11,918	27,329

The provisions primarily include contractual terminal and plant dismantling obligations.

3.10. Post-employment benefits

Accounting policies

Post-employment benefits

The Group operates various post-employment benefit schemes, including both defined benefit and defined contribution schemes. Pension arrangements are managed through external pension and life insurance companies.

Defined contribution schemes mean pension plans under which fixed contributions are paid to a separate pension insurance company and the Group does not have any legal or constructive obligations to make further contributions on later dates. The contributions are recognized as employee benefit expenses when they are due. Prepaid contributions are recognized as an asset to the extent that a cash refund or a reduction in future payments is available. Statutory pension costs are expensed in the year they are incurred. Pension schemes other than defined contribution plans are defined benefit plans.

Defined benefit plans typically define an amount of pension benefit that an employee will receive on retirement, usually dependent on one or more factors such as age, years of service and compensation. The liability recognized on the balance sheet in respect of defined benefit pension plans is the present value of the defined benefit obligation at the end of the reporting period less the fair value of plan assets. The defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using interest rates of high-quality corporate bonds that are denominated in the currency in which the benefits will be paid, and that have terms to maturity approximating to the terms of the related pension obligation.

Actuarial gains and losses arising from experience adjustment and changes in actuarial assumptions are charged or credited to equity in other comprehensive income in the period in which they arise. Past service costs are recognized immediately in statement of income.

Finnish statutory earnings-related pension cover is arranged through a pension insurance company and accounted for as a defined contribution plan in the consolidated financial statements. The supplementary pension scheme provided by Gasum is accounted for as a defined benefit plan.

Post-employment benefits € thousand	2022	2021
Balance sheet obligations for:		
Post-employment benefits	4,386	5,600
Liability in the balance sheet	**4,386**	**5,600**
Income statement charge included in operating result for:*		
Defined benefit pension plans	-80	-143
Total	**-80**	**-143**

* The income statement charge included within operating result includes current service cost, net interest income and expense, past service costs and gains and losses on settlement and curtailment.

Defined benefit pension plans

Gasum operates a supplementary pension scheme which is classified as a defined benefit pension plan and is arranged with Mandatum Life Insurance Company. In the arrangement the targeted level of pension benefit is set in percent terms whereby the benefit payable is not linked to the contribution payments Gasum makes into the scheme. The scheme was closed in 1994.

Defined benefit pension plans € thousand	2022	2021
Present value of funded obligations	14,922	20,699
Fair value of plan assets	-10,536	-15,099
Deficit of funded plans	4,386	5,600
Liability in the balance sheet	**4,386**	**5,600**

The movement in the defined benefit obligation over the year is as follows:

€ thousand	Present value of defined benefit obligations	Fair value of plan assets	Net defined benefit obligation
January 1, 2022	**20,699**	**15,099**	**5,600**
Current service cost	55		55
Interest expense or income (-)	181	132	49
	20,935	15,231	5,704
Remeasurements:			
Gain (-)/ loss from change in demographic assumptions			
Gain (-)/ loss from change in financial assumptions	-4,317		-4,317
Experience gains (-) / losses			
Return on plan assets, excluding amounts included in interest expense or income		-3,543	3,543
Contributions:	-659	-474	-184
Employers		360	-360
Plan participants			
Payments from plans:			
Benefit payments	-1,037	-1,037	0
December 31, 2022	**14,922**	**10,536**	**4,386**

€ thousand	Present value of defined benefit obligations	Fair value of plan assets	Net defined benefit obligation
January 1, 2021	**22,162**	**18,429**	**3,733**
Current service cost	46		46
Interest expense or income (-)	61	51	10
	22,269	18,480	3,789
Remeasurements:			
Gain (-)/ loss from change in demographic assumptions			
Gain (-)/ loss from change in financial assumptions	435		435
Experience gains (-) / losses			
Return on plan assets, excluding amounts included in interest expense or income		-1,735	1,735
Contributions:	-942	-743	-199
Employers		160	-160
Plan participants			
Payments from plans:			
Benefit payments	-1,063	-1,063	0
December 31, 2021	**20,699**	**15,099**	**5,600**

The discount rate used to calculate the situation at December 31, 2022 was 3.80%, while for the year before it had been 0.9%. The inflation rate used at December 31, 2022 is 2.60 % as in previous year it was 2.00 %. These changes caused a gain to defined benefit obligation.

Significant actuarial assumptions:	2022	2021
Discount rate	3.80%	0.90%
Inflation	2.60%	2.00%
Benefit increase	2.84%	2.30%
Wage coefficient	3.60%	3.20%

Assumptions regarding future mortality are based on actuarial advice in accordance with mortality models for the insured under the Employees Pensions Act (K2008) as well as experience. These assumptions translate into an average life expectancy in years for a person retiring at the age of 65. Life expectancy is defined as the life span prediction of a person of a particular age and its calculation is based on the Gompertz mortality model:

Life expectancy at the age of 65	Male	Female
Aged 45 at balance sheet date	22.0	27.0
Aged 65 at balance sheet date	21.4	25.4

The table below presents the sensitivity analysis concerning a 0.5% change in the discount rate. The sensitivity analysis is based on a change in an assumption while holding all other assumptions constant.

€ thousand	Present value of defined benefit obligation	Fair value of plan assets	Net defined benefit obligation	Current service cost	Net interest
Discount rate 3.80%	14,922	10,536	4,386	28	159
Discount rate +0.50%	14,109	10,066	4,044	26	166
Discount rate -0.50%	15,815	11,048	4,767	30	151
Impact in percentage terms					
Discount rate 3.80%	0.0%	0.0%	0.0%	0.0%	0.0%
Discount rate +0.50%	-5.4%	-4.5%	-7.8%	-6.7%	4.0%
Discount rate -0.50%	6.0%	4.9%	8.7%	7.3%	-5.3%

Through its defined benefit pension plans the Group is exposed to a number of risks, the most significant of which are detailed below:

Changes in bond yields

A decrease in corporate bond yields will increase the plan liabilities. If the bond yields used as bases for discount rates change, the Group may need to change the discount rates respectively. This will have an impact on the net defined benefit obligation as well as the amount of remeasurements recognized in other comprehensive income.

Inflation risk

Some of the Group's defined benefit obligations are linked to inflation, and higher inflation will lead to higher defined benefit obligations. If the development of employer productivity lags behind inflation, the acceleration of inflation may increase the deficit of defined benefit plans.

4 Capital structure

4.1. Capital management

The Group aims to support profitable growth with an efficient capital structure, the management of which is based on assessments of the Group's material risks. Changes in capital structure result from investments in business operations and dividend payments to the owner.

The following table presents Gasum's net debt and gearing, which the company monitors as part of its capital management. The Group's gearing is restricted by a covenant of a borrowing facility concerning the Group's gearing ratio. In other respects, there is no specific target level determined for the Group's capital structure. Instead, the aim is to ensure a high credit rating and, consequently, capacity to support the business growth objectives and generate shareholder value.

Capital management € thousand	2022	2021
Interest-bearing liabilities	515,556	860,459
Cash and cash equivalents	-206,190	-387,364
Net debt	**309,366**	**473,095**
Total equity	543,068	433,688
Total capital	852,434	906,783
Gearing ratio	**57%**	**109%**

Interest-bearing liabilities € thousand	2022	2021
Loans from financial institutions	344,498	653,568
Lease liabilities	171,058	206,891
Interest-bearing liabilities	**515,556**	**860,459**

Net debt reconciliation

The below sets out an analysis of net debt and the movements in net debt for the current period.

Net debt € thousand	2022	2021
Cash and cash equivalents	-206,190	-387,364
Current interest-bearing liabilities	31,628	244,831
Non-current interest-bearing liabilities	483,928	615,628
Net debt	**309,366**	**473,095**

€ thousand	Cash and cash equivalents	Current financial lease liabilities	Non-current financial lease liabilities	Current interest-bearing liabilities	Non-current interest-bearing liabilities	Total
Net debt at December 31, 2020	**-13,038**	**13,289**	**192,090**	**60,469**	**344,833**	**597,643**
Cash flows	-374,326	-17,215		149,542	100,833	-141,166
Foreign exchange adjustments		138	2,001		-10	2,130
Business disposals		-1,186	-34,394			-35,580
Other non-cash movements*		41,892	10,274	-2,100		50,066
Net debt at December 31, 2021	**-387,364**	**36,919**	**169,972**	**207,911**	**445,656**	**473,095**
Cash flows	181,174	-37,232		-207,911	-101,158	-165,127
Foreign exchange adjustments		-126	-581			-707
Business disposals		-341				-341
Other non-cash movements*		32,409	-29,962			2,447
Net debt at December 31, 2022	**-206,190**	**31,628**	**139,429**	**0**	**344,498**	**309,366**

* Mainly includes transfers between non-current and current borrowings in 2021 and 2022 as well as in 2021 and 2022 increases and decreases in lease liabilities not involving cash flows.

4.2. Financial risk management

The Gasum Group's financial risks are managed in accordance with the Commodity Risk, Counterparty and Credit Risk and Treasury Policies approved by the Gasum Board of Directors. The purpose of the risk policies is to identify the Group's risks, establish the appropriate target risk level as well as risk management principles and risk limits. The risk policies are regularly reviewed to ensure that they support the Group's business functions in the pursuit of their objectives and respond to any changes in market conditions or Group operations.

Financial risks include interest rate risk, price risk, foreign currency risk, credit risk and liquidity risk. Group Risk Management monitors Group's risk position and reports regularly to the Market Risk Committee consisting of the company's management and to the Gasum Board of Directors.

Commodity derivatives and risks

Gasum is exposed through its business activities to gas, power, and fuel market price fluctuation. Commodity derivatives are used to hedge the Group's open commodity position relating to business activities as well as price risk relating to power sourcing for own use. For gas, the open commodity position for the following 12 months at the reporting date was EUR 159.0 million (2021: EUR 31.1 million) and for power EUR 2.8 million (2021: EUR 1.9 million). The nominal value of the commodity derivatives totaled EUR 822.5 million at the reporting date (2021: EUR 1,016.7 million). The fair values of commodity derivatives are based on available market quotes at the reporting date. For more information see Note 4.3.

High market volatility in gas and power markets continued in 2022. In 2022, the TTF index for gas fluctuated between EUR 62.27 and EUR 342.86 per megawatt hour (2021: EUR 15.6 – 180.7 / MWh). For power, the Nord Pool power day ahead price moved between EUR 2.0 and EUR 462.1 per megawatt hour (2021: EUR 15.7–309.7 /MWh). Hedging has been performed according to plan and in line with the Risk Policy and Board given risk mandate.

Open commodity positions in business might arise from imbalance in sales and procurement volumes, price index or basis for pricing. The primary aim is to create a natural hedge by linking procurement and sales contracts to the same market price index. If the above-mentioned natural hedge cannot be achieved, the Group will identify risks relating to procurement and sales contracts separately. Open commodity exposures can be hedged with commodity derivatives according to policy risk limits.

Commodity risk position and related derivatives are followed in Risk Management on a daily basis and the company has processes in place for identifying, reporting and taking corrective measures on any breaches. Commodity risk positions are limited with different VaR, open position and hedge level limits. The Commodity Risk Policy and its risk limits have been reviewed in 2022 by the Board of Directors. During the year, there has been a limited mandate to execute derivatives in other than hedging purpose and this mandate is measured with a Value-at-Risk method.

Gas and propane

As a general rule, the pricing of the Group's gas contracts reflects developments in the international market prices of gas. The pricing of Gasum's gas transactions is mainly linked to European gas price indices, other energy (such as propane) and cost development indices.

Power

The gas businesses consume significant amounts of electricity in their processes, resulting in price risk when there are changes in the price of electricity. Derivatives are therefore used to hedge electricity price risk in production. Gasum has entered into long-term Power Purchase Agreements (PPA) for wind power sales and purchases, which are treated as derivate contracts in accordance with IFRS 9 on the balance sheet. Portfolio risk can be hedged with financial derivatives according to risk limits.

Sensitivity analyses for commodity risk

Sensitivity analyses for significant commodity risks are presented in the following table. At the end of the reporting period, the Group had significant cash flow hedges for TTF-based sales and propane-linked procurement. In the calculation of commodity price risk, the position includes outstanding derivatives with external counterparties. The impact in euros of the increase or decrease in the price of each commodity on the Group's income statement and hedge reserve after tax is presented in the table below. The figures are based on the assumption that there has been a 10% increase/decrease in commodity price while all other variables have been held constant. The sensitivity analysis only includes the effect of the hedge derivatives on the result. The hedged sales and purchases typically move in the opposite direction from the hedge derivatives, which partly offsets the derivative effect on the result. The timing difference in accounting is, however, significant as the derivative market value change is booked in result immediately and the sales and purchases are booked in result when they realize.

Sensitivity to commodity risk, € million:	31.12.2022	31.12.2021
Impact of 10% increase in gas and propane prices on result for the period	3.3	-15.8
Impact of 10% decrease in gas and propane prices on result for the period	-3.3	15.8
Impact of a 10% increase in power prices on result for the period	8.9	6.6
Impact of a 10% decrease in power prices on result for the period	-8.9	-6.6
Impact of a 10% increase in oil prices on result for the period	0	0
Impact of a 10% decrease in oil prices on result for the period	0	0

Interest rate derivatives and risks

The Group's business is capital intensive. The current long- and short-term loan portfolio consists of bank financing. All loans are euro-denominated. Primary methods employed to finance seasonal fluctuations in working capital are income financing, working capital management, commercial paper program and overdraft facilities. Of the Group's interest-bearing debt to financial institutions, 100% is based on variable interest rates, resulting in interest-rate price risk for the Group (2021: 100%). Gasum strives to reduce the fluctuation of interest expenses in the statement of income by using derivative financial instruments to hedge some of its interest-rate risk within the limits set by the Group Treasury Policy. Interest rate caps and floors and interest rate swaps have been used as hedging instruments for the variable interest rates paid by the Group on borrowings. The euro area reference rate reform did not affect the interest rate derivatives portfolio. Strategies for interest-rate risk management are continuously developed to find an optimal ratio between risks and hedging expenses. The funding has been raised only to the parent entity.

Interest rate derivatives are used to hedge against the interest rate risk of the Group's borrowings. Interest rate derivatives are measured at fair value and changes in fair value recognized in profit or loss. As of December 31, 2022 the nominal values of the outstanding interest rate derivatives were EUR 917.5 million (2021: EUR 517.5 million). Gains and losses on interest rate swaps are recognized in the consolidated income statement as financial items. The fair value of interest rate swaps is calculated as the present value of the estimated future cash flows based on market-priced yield curves. The Group's interest rate risk is managed with the Group Treasury

Policy, which sets the minimum and maximum limits in terms of amount and time for interest rate hedges in proportion to loans. According to the Group Treasury Policy, the average maturity of the debt portfolio should be more than 2 years. For interest rate derivatives, the Treasury Policy sets the limits for both the hedging rate (varies between 0–100% for different periods) as well as the interest rate duration (3–18 months).

As of December 31, 2022 the Group's interest-bearing liabilities totaled EUR 515.6 million (2021: EUR 860.5 million). Interest-bearing liabilities include loans from financial institutions and lease liabilities. The average duration of Gasum's debt portfolio at the end of 2022 was 1.3 years (2021: 1.7 years). The average duration of Gasum's interest-rate hedge portfolio was 10.1 months (2021: 4.7 months).

The interest rate risk of the Group's borrowings based on variable interest rates is as follows:

Nominal value € thousand	Loans from financial institutions	Floating rate debt	Derivative financial instruments
December 31, 2022	344,498	344,498	917,500
December 31, 2021	653,568	653,568	517,500

Sensitivity analyses for interest rate risk

Interest rate sensitivity is analyzed by presuming an increase of 1 percentage point in market rates and examining its impact on Group profit and loss. The impact on profit and loss arises from the interest rate risk and changes in the fair value of interest rate derivatives at present. All loans from financial institutions and interest rate derivatives at period-end are included in the calculation. The impact of taxes is excluded from the sensitivity analysis.

Sensitivity to interest rate risk, € million:	31.12.2022	31.12.2021
Impact on profit/loss of increase of 1 percentage point in market interest rates	-0.8	-3.1
Of which the impact of interest expenses of borrowings	-4.8	-5.4
Of which changes in the market value of interest rate derivatives	4.0	2.3
Impact on profit/loss of decrease of 1 percentage point in market interest rates	1.0	1.0
Of which the impact of interest expenses of borrowings	4.9	1.2
Of which changes in the market value of interest rate derivatives	-3.9	-0.2

Currency derivatives and foreign currency risks

The Group's foreign currency risk is managed in accordance with the Group Treasury Policy. Transaction risks are hedged at the local level in the reporting currency of each company to avoid translation differences in the income statement. The transaction position is divided into balance sheet and cash flow positions. The Group Treasury Policy sets the boundaries for the foreign currency risks of the cash flow position in terms of time and amount. The cash flow position consists of already agreed or forecast items and cash flows denominated in a foreign currency over the following 24 months. Generally, balance sheet foreign currency risk is hedged fully, and the outstanding transaction position mandate is €10 million. Generally, translation risk is not hedged.

The Group's operating cash flows are primarily denominated in euro. In addition, in some of the Group's Norwegian and Swedish subsidiaries the functional currency is euro and expenses are incurred in local currencies that are not netted against corresponding local currency revenues. These expenses expose the Group to foreign currency risk, which is primarily hedged with either forwards or options. On December 31, 2022 the nominal values of the outstanding currency derivatives totaled EUR 144.3 million (2021: EUR 198.5 million). The fair value of currency derivatives is calculated on the basis of observable forward prices and volatilities of currencies. The Group did not apply hedge accounting to currency derivatives at year-end 2022. The euro has been determined as the functional currency of some of the Group's subsidiaries operating outside the euro area. The euro-denominated transactions of these companies do not present foreign currency risk for the Group. Subsidiaries for which a local currency has been determined as the functional currency give rise to foreign currency risk if the currency of a transaction is other than the functional currency. Foreign currency risks of subsidiaries with a local currency are hedged in accordance with the Group Treasury Policy.

The Group's foreign currency risk is presented below by currency pair. Foreign currency risk includes financial assets and liabilities in the currency pair in question, cash, internal borrowings, and trade receivables and payables in the balance sheet.

Currency risk against EUR, € thousand	NOK	SEK	GBP	USD	DKK	Total
December 31, 2022	-16,649	-15,016	175	914	76	-30,500
December 31, 2021	6,842	23,600	22	12,462	-106	42,820

Sensitivity analyses for foreign currency risk

Sensitivity to foreign currency risk has been calculated in Group profit or loss using a 10% change in foreign exchange rate. The most significant foreign currency risks in Gasum's business and financing relate to NOK and SEK. The impact of taxes is excluded from the sensitivity analysis.

Sensitivity to currency risk, € million:	31.12.2022	31.12.2021
Appreciation of NOK by 10%	-4.5	0.5
Depreciation of NOK by 10%	3.6	-0.8
Appreciation of SEK by 10%	7.7	2.1
Depreciation of SEK by 10%	-6.3	-3.0
Appreciation of USD by 10%	0.1	0.5
Depreciation of USD by 10%	-0.1	-0.2

Credit risk

The Gasum Group's credit risk management process and division of responsibilities are determined in the Gasum Counterparty and Credit Risk Policy. According to the Gasum Counterparty and Credit Risk Policy, the credit profile of all new counterparties is checked prior to commencing business and monitored regularly. Credit exposures are monitored in Risk Management. Credit loss risk has been analyzed in accordance with IFRS 9.

Liquidity risk

Liquidity risk refers to the risk relating to the Group's ability to meet its monetary obligations. Liquidity risk management seeks to ensure access to financing and low financing costs. The Group manages the liquidity risk by maintaining a sufficient liquidity reserve. The Group aims for a dispersed debt structure in terms of both maturity and sources of finance. The Group also had significant cash holdings at the reporting date as well as unused liquidity reserves by means of which the company seeks to ensure the performance of future obligations also in adverse market situations. At the date of the financial statements on December 31, 2022, the Group had undrawn committed reserve facilities totalling EUR 220 million (2021: EUR 120 million).

The Group's borrowings are subject to financial covenants concerning both the gearing ratio and available liquidity. These covenants are reported to the lenders on a quarterly and monthly basis respectively. Due to market conditions in the commodities market, a short-term release of one of the covenants was agreed for a fixed period with the lenders. However, the covenant as originally stated, was not at any point in breach during the reporting period.

The company's business results in recognizing unrealized derivative receivables and payables in the balance sheet, with the related cash realizing in the future through the realization of commodity sales. The following table presents the Group's non-derivative financial liabilities and derivative financial liabilities divided into relevant maturity groupings at the balance sheet date. The table does not include the effect of a capital loan treated as an equity instrument as the related amounts will not be recognized until the decision on the payment of interest has been made and the obligation of Gasum Ltd to pay the interest arises. The time of interest payment is decided by the company at its discretion. The amounts disclosed in the table are the contractual undiscounted cash flows. The maturity of derivative financial assets is also disclosed.

Maturity of non-derivative and derivative financial liabilities:

December 31, 2022 € thousand	Less than 1 year	1–2 years	2–5 years	5+ years	Total
Loans from financial institutions		344,498			344,498
Trade payables	260,605				260,605
Derivative financial instruments (no hedge accounting)	211,924	50,813	26,380	26,862	315,978
Lease liabilities*	31,628	5,727	18,863	114,839	171,058
Used overdraft facilities	0				0
Interest payments on loans	8,147	12,578			20,725
Total	**512,304**	**413,617**	**45,243**	**141,701**	**1,112,864**

December 31, 2021 € thousand	Less than 1 year	1–2 years	2–5 years	5+ years	Total
Loans from financial institutions	207,911		445,656		653,567
Trade payables	367,897				367,897
Derivative financial instruments (no hedge accounting)	383,437	38,988	4,015	7,898	434,338
Lease liabilities*	36,919	33,731	39,198	97,042	206,890
Other financial liabilities	104,689				104,689
Used overdraft facilities	0				0
Interest payments on loans	4,977	2,546	2,553		10,077
Total	**1,105,830**	**75,265**	**491,422**	**104,940**	**1,777,458**

* Includes interest effect

Maturity of derivative financial assets:

December 31, 2022 € thousand	Less than 1 year	1–2 years	2–5 years	5+ years	Total
Derivative financial instruments (no hedge accounting)	186,636	63,631	35,433	34,591	320,290
Total	**186,636**	**63,631**	**35,433**	**34,591**	**320,290**

December 31, 2021 € thousand	Less than 1 year	1–2 years	2–5 years	5+ years	Total
Derivative financial instruments (no hedge accounting)	233,311	12,974	8,293	16,234	270,812
Total	**233,311**	**12,974**	**8,293**	**16,234**	**270,812**

4.3. Financial instruments

Accounting policies

Financial assets

The Group classifies its financial assets in the following categories: financial assets measured at fair value through profit or loss (or through other comprehensive income) and financial assets measured at amortized cost. The classification is based on the business model employed for managing the financial assets and the contractual cash flow characteristics of the financial assets.

Financial assets at fair value through profit or loss

Financial assets at fair value through profit or loss comprise financial assets held for trading and investments that the Group has decided not to recognize through other comprehensive income. Financial assets are classified as current unless they mature in more than 12 months after the end of the reporting period. In addition, derivative financial instruments to which hedge accounting is not applied are classified as financial assets at fair value through profit or loss. The fair value of derivatives is determined on the basis of published price quotations. As regards commodity and foreign currency derivatives, fair value gains and losses are presented under other operating expenses/income, and derivatives hedging financial items under financial items.

Financial assets at amortized cost

Gasum classifies its financial assets as at amortized cost if both of the following criteria are met: The asset is held within a business model whose objective is to collect the contractual cash flows, and the contractual terms give rise to cash flows that are solely payments of principal and interest.

Financial assets classified as at amortized cost include loans and other receivables which are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. Loans and other receivables are classified as current unless they mature in more than 12 months after the end of the reporting period, which is when they are classified as non-current. Cash and cash equivalents include cash on hand and in bank accounts. Overdraft facilities are included in other current liabilities presented under current liabilities. The Group applies the IFRS 9 approach to measuring expected credit losses associated with trade receivables. To measure the expected credit losses, trade receivables have been grouped based on shared credit risk characteristics and the days past due. The expected credit loss rates are based on historical credit losses and reflect current and forward-looking information on macroeconomic conditions.

Financial liabilities

The Group's financial liabilities are classified as financial liabilities measured at fair value through profit or loss and financial assets measured at amortized cost. Financial liabilities are classified as current unless the company has an unconditional right to defer settlement of the liability for at least 12 months after the reporting period, which is when they are classified as non-current.

Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss include derivative financial instruments to which hedge accounting is not applied. Realized or unrealized gains and losses attributable to movements in the fair value of derivatives are recorded in the statement of profit or loss for the period during which they were acquired or incurred.

Financial liabilities at amortized cost

Borrowings are recognized initially at fair value, net of transaction costs incurred. Borrowings are subsequently carried at amortized cost using the effective interest method. Transaction costs are included in the original book value of financial liabilities.

Derivative financial instruments

Derivatives are initially recognized at fair value on the date a derivative contract is entered into by the Group and are re-measured at their fair value at the date of the financial statements. The method of recognizing the resulting gain or loss from re-measurement at fair value depends on the designation of the derivative contract and is either as operating income and expense or as financial items.

The Group uses derivatives to hedge against financial and business risks in accordance with the Commodity Risk and Treasury Policy adopted by the Group. Unrealized fair value movements of derivatives are recorded through profit and loss at the end date of each reporting period. Gasum has an ISDA or a corresponding master agreement with each derivative counterparty.

Derivative financial instruments to which hedge accounting is not applied are classified as financial items at fair value through profit or loss, and gains and losses from their fair value movements are, for commodity derivatives, recorded in other operating income or expenses and, for interest rate derivatives, in finance income or costs for the period during which they were acquired or incurred. Changes in the fair values of foreign currency derivatives taken to hedge exchange rate movements of items denominated in foreign currency are recognized in the income statement as other operating income/expenses. Changes in the fair values of foreign currency derivatives taken to hedge the Group's internal borrowings are recognized through profit and loss in financial income or loss. Changes in the fair values of derivatives for future purchases of electricity are recognized in the income statement as purchases of materials. At the reporting date, instruments with a positive fair value have been recognized in the balance sheet as assets and instruments with a negative fair value as liabilities. Items which mature in more than 12 months are recorded in non-current receivables and liabilities and those which mature earlier in current receivables and liabilities.

Financial instruments by category

December 31, 2022 € thousand	At fair value through profit or loss	At fair value through other comprehensive income	At amortized cost	Total
Assets as per balance sheet:				
Other investments at fair value through profit or loss	50			50
Derivative financial instruments (no hedge accounting)	320,290			320,290
Gas	94,214			
Oil				
Power	217,323			
Interest rate	7,597			
Foreign exchange	1,156			
EUA	0			
Trade and other receivables			333,687	333,687
Other non-current assets			212	212
Cash and cash equivalents			206,190	206,190
Total	**320,340**	**0**	**540,089**	**860,429**

December 31, 2021 € thousand	At fair value through profit or loss	At fair value through other comprehensive income	At amortized cost	Total
Assets as per balance sheet:				
Other investments at fair value through profit or loss	50			50
Derivative financial instruments (no hedge accounting)	270,812			270,812
Gas	174,520			
Oil				
Power	91,474			
Interest rate	2,344			
Foreign exchange	1,204			
EUA	1,269			
Trade and other receivables			603,857	603,857
Other non-current assets			212	212
Cash and cash equivalents			387,364	387,364
Total	**270,862**	**0**	**991,433**	**1,262,295**

December 31, 2022 € thousand	At fair value through profit or loss	At fair value through other comprehensive income	At amortized cost	Total
Liabilities as per balance sheet:				
Loans			344,498	344,498
Lease liabilities			171,058	171,058
Derivative financial instruments (no hedge accounting)	315,978			315,978
Gas	139,382			
Oil	0			
Power	174,607			
Interest rate	0			
Foreign exchange	1,989			
EUA	0			
Trade and other current payables			464,796	464,796
Other non-current liabilities			4,386	4,386
Total	**315,978**	**0**	**984,738**	**1,300,716**

December 31, 2021 € thousand	At fair value through profit or loss	At fair value through other comprehensive income	At amortized cost	Total
Liabilities as per balance sheet:				
Loans			653,568	653,568
Lease liabilities			206,891	206,891
Derivative financial instruments (no hedge accounting)	434,449			434,449
Gas	352,963			
Oil	0			
Power	75,525			
Interest rate	3,694			
Foreign exchange	1,484			
EUA	674			
Trade and other current payables			566,509	566,509
Other non-current liabilities			5,600	5,600
Total	**434,340**	**0**	**1,432,567**	**1,866,906**

The table below presents commodity derivatives by type of contract. Commodity derivatives comprise gas and power derivatives.

Volume and maturity of commodity derivatives	2023				2024			
	Volume			Fair value	Volume			Fair value
December 31, 2022	MWh	MT	Bbl	Net, € thousand	MWh	MT	Bbl	Net, € thousand
Sales agreements – Gas								
No hedge accounting	-2,254,306	-6,400	0	-29,476	-380,903	0	0	-12,448
Sales agreements – Oil								
No hedge accounting	0	0	0	0	0	0	0	0
Sales agreements – Power								
No hedge accounting	-975,086			-68,760	-544,582			-22,392
Total	**-3,229,392**	**-6,400**	**0**	**-98,235**	**-925,485**	**0**	**0**	**-34,841**
Purchase agreements – Gas								
No hedge accounting	2,270,144	51,900		-11,315	403,797	9,000		7,416
Purchase agreements – Oil								
No hedge accounting	0	0	0	0	0	0	0	0
Purchase agreements – Power								
No hedge accounting	1,062,360			81,890	642,669			29,421
Total	**3,332,504**	**51,900**	**0**	**70,574**	**1,046,466**	**9,000**	**0**	**36,837**

Volume and maturity of commodity derivatives	2022				2023			
	Volume			Fair value	Volume			Fair value
December 31, 2021	MWh	MT	Bbl	Net, € thousand	MWh	MT	Bbl	Net, € thousand
Sales agreements – Gas								
No hedge accounting	-7,648,659	-31,500	0	-275,378	-1,297,740	0	0	-29,523
Sales agreements – Oil								
No hedge accounting	0	0	0	0	0	0	0	0
Sales agreements – Power								
No hedge accounting	-1,884,915			-51,386	590,979			-4,543
Total	**-9,533,574**	**-31,500**	**0**	**-326,764**	**-1,888,719**	**0**	**0**	**-34,066**
Purchase agreements – Gas								
No hedge accounting	4,618,614	190,500		123,013	173,370	43,500		3,398
Purchase agreements – Oil								
No hedge accounting	0	0	0	0	0	0	0	0
Purchase agreements – Power								
No hedge accounting	1,803,498			53,311	664,791			6,000
Total	**6,422,122**	**190,500**	**0**	**176,324**	**838,161**	**43,500**	**0**	**9,398**

Fair value estimation

Financial instruments valued at fair value are classified according to the valuation method. The hierarchy levels used have been determined as follows:

- Level 1: quoted prices (unadjusted) in active markets for identical assets and liabilities
- Level 2: inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices)
- Level 3: inputs for assets or liabilities that are not based on observable market data (that is, unobservable inputs)

Derivative financial instruments € thousand	At December 31,2022		At December 31,2021	
	Assets	Liabilities	Assets	Liabilities
Commodity derivatives (hierarchy level 1)	19,463	3,039	129,577	194,826
Commodity derivatives (hierarchy level 2)	153,943	210,852	107,899	219,236
Commodity derivatives (hierarchy level 3)	138,131	100,098	29,787	15,100
Interest rate derivatives (hierarchy level 2)	7,597	0	2,345	3,693
Currency derivatives (hierarchy level 2)	1,156	1,989	1,204	1,484
Total	**320,290**	**315,978**	**270,812**	**434,339**
Non-current portion:				
Commodity derivatives (hierarchy level 1)	2,107	406	1,087	119
Commodity derivatives (hierarchy level 2)	24,851	26,710	7,904	34,449
Commodity derivatives (hierarchy level 3)	102,222	76,856	26,161	12,640
Interest rate derivatives (hierarchy level 2)	4,474	0	2,345	3,693
Currency derivatives (hierarchy level 2)	0	82	3	0
Total non-current portion	**133,654**	**104,054**	**37,500**	**50,901**
Total current portion	**186,636**	**211,924**	**233,312**	**383,438**

Commodity derivatives classified to hierarchy level 3 are presented in the table below.

Commodity derivatives level 3 € thousand	At December 31, 2021	Losses	Gains	At December 31, 2022
Power derivatives	14,687	-84,999	108,345	38,033
Total	**14,687**	**-84,999**	**108,345**	**38,033**

Commodity derivatives level 3 € thousand	At December 31, 2020	Losses	Gains	At December 31, 2021
Power derivatives	2,287	-14,777	27,177	14,687
Total	**2,287**	**-14,777**	**27,177**	**14,687**

Power derivatives are recognized at fair values by calculating the discounted difference between the contract price and the forecasted electricity price. The forecasted price of electricity is based on quoted market prices, price predictions and when market price data is not available, on Gasum management judgement. The fair values of level 3 power derivatives are subject to credit value adjustment and liquidity adjustment as described in the accounting policies.

Offsetting of derivative financial instruments

Gasum's derivative transactions involve a valid master agreement (e.g. ISDA, EFET or FK master agreement for derivatives trading) with each counterparty. The derivatives falling under the scope of a master agreement can be netted in conditional circumstances such as default or bankruptcy. The Group does not have any other offsetting agreements than those related to derivatives. The fair values of derivatives are reported gross on the balance sheet. The following table presents the recognized derivative financial instruments that are offset or subject to netting agreements but not offset. The column 'net amount' shows the impact on the Group's balance sheet if set-off rights were exercised.

Offsetting of derivative financial instruments December 31, 2022 € thousand	Gross amounts of recognized financial instruments in the balance sheet	Related financial instruments not set off in the balance sheet	Net amount
Financial assets			
Derivative financial instruments			
Interest rate derivatives	7,597	0	7,597
Commodity derivatives	311,537	105,362	206,175
Currency derivatives	1,156	714	442
Total	**320,290**	**106,076**	**214,214**
Financial liabilities			
Derivative financial instruments			
Interest rate derivatives	0	0	0
Commodity derivatives	313,990	113,612	200,377
Currency derivatives	1,989	714	1,275
Total	**315,979**	**114,326**	**201,652**

Offsetting of derivative financial instruments December 31, 2021 € thousand	Gross amounts of recognized financial instruments in the balance sheet	Related financial instruments not set off in the balance sheet	Net amount
Financial assets			
Derivative financial instruments			
Interest rate derivatives	2,345	2,345	0
Commodity derivatives	267,263	217,184	50,079
Currency derivatives	1,204	917	288
Total	**270,812**	**220,446**	**50,367**
Financial liabilities			
Derivative financial instruments			
Interest rate derivatives	3,693	2,345	1,349
Commodity derivatives	429,162	217,184	211,977
Currency derivatives	1,484	917	567
Total	**434,339**	**220,446**	**213,893**

4.4. Equity

Accounting policies

Equity

The Group classifies issued equity instruments on the basis of their nature into either equity or financial liabilities.

An equity instrument is any contract which contains the right to the entity's assets after deducting all its liabilities. Transaction costs directly attributable to the issue or redemption of shares are shown in equity as a deduction from the proceeds. Dividend distribution proposed by the Board of Directors is not deducted from the distributable equity prior to the approval of the company's general meeting of shareholders.

Share capital	Number of Series A shares	Number of Series K shares	Total number of shares	Share capital (€ thousand)
December 31, 2022	50,200,000	2,800,001	53,000,001	10,000
December 31, 2021	50,200,000	2,800,001	53,000,001	10,000

The company's share capital is divided into Series A and Series K shares. There are 50,200,000 Series A shares and 2,800,001 Series K shares. According to the Articles of Association, there are a minimum of 30,000,000 and a maximum of 120,000,000 Series A shares. In addition to Series A shares, there is a minimum of 1 Series K share.

A Series K share carries ten votes and a Series A share one vote at general meetings of shareholders. A holder of a Series K share has the right to demand that the share be converted to a Series A share by notifying the company's Board of Directors thereof.

The reserve for invested unrestricted equity includes other equity investments and the part of the share subscription price that has not specifically been recognized under share capital.

In December 2021, Gasum Ltd issued a capital loan of EUR 200.0 million treated as an equity instrument targeted at Governia Oy which The Prime Minister's Office acquired during financial year 2022. The loan has no maturity date. The loan's annual coupon interest rate is 10% for the first three years and after that increases to 15% per year. The recognition principle for the interest rate is the same as for dividends. The interest rate is recognized when a decision to pay the interest has been made and the obligation of Gasum Ltd to pay the interest arises. The time of interest payment is decided by the company at its discretion. The loan is treated in the Group's IFRS financial statements as equity and does not dilute the ownership of the company's shareholders.

On 31 December 2022 accrued cumulative interest for capital loan was EUR 20 million.

Dividends

Dividend distribution proposed by the Board of Directors is not deducted from the distributable equity prior to the approval of the company's general meeting of shareholders. No dividend was paid on the basis of the financial statements for the 2021 financial year.

4.5. Fair value reserve

Accounting policies

Gasum discontinued hedge accounting during the 2021 financial year and all changes in fair value are recognized in the income statement.

4.6. Loans

Accounting policies

Loans

The non-current loans are based on variable interest rates and recognized in the financial statements at amortized cost. Transaction costs have been added to the fair value of loans using the effective interest method. All loans from financial institutions are euro-denominated bank loans that mature in 2024. Gasum had been granted a waiver valid until January 31, 2023 concerning a financial covenant regarding non-current loans. The covenant terms of the loan are the net debt ratio and liquidity. The covenant terms were not violated at the time of reporting.

Loans € thousand	2022	2021
Non-current:		
Loans from financial institutions	344,498	445,656
Total	**344,498**	**445,656**
Current:		
Loans from financial institutions	0	207,911
Total	**0**	**207,911**
Total loans	**344,498**	**653,568**

5 Other notes

5.1. Business acquisitions and disposals

Acquisitions in 2022

There were no business acquisitions during the 2022 financial year.

Disposals in 2022

There were no business disposals or discontinued operations during the 2022 financial year.

Acquisitions in 2021

There were no business acquisitions during the 2021 financial year.

Disposals in 2021

On November 16, 2021, Gasum closed the disposal of an LNG liquefaction plant located in Norway to North Sea Midstream Partners (NSMP). The companies also entered into an extensive tolling agreement under which Gasum will ensure deliveries of liquefied natural gas (LNG) and liquefied biogas (LBG) to customers from the Risavika liquefaction plant. The transaction is part of Gasum's growth strategy. The transaction optimizes capital allocation and speeds up the execution of the growth strategy. The transaction was conducted as a sale of shares where Gasum Ltd sold all the shares in its wholly-owned subsidiary Risavika Production AS to NSMP Norge AS.

The assets and liabilities relating to the disposal are as follows:

Intangible assets	EUR 16.6 million
Tangible assets	EUR 144.2 million
Inventories	EUR 1.4 million
Deferred tax liabilities	EUR -20.4 million
Mandatory provisions	EUR -2.0 million

Gasum has recognized a right-of-use asset and lease liability of EUR 49.8 million in the balance sheet for the tolling agreement insofar as the company uses the full liquefaction capacity of the plant.

5.2. Guarantees and commitments

Guarantees and commitments € thousand	2022	2021
Pledges	193	193
Contingent liabilities and other commitments	282,411	286,784
Total	**282,604**	**286,977**

Gasum Ltd is responsible for the sourcing and sea carriage for liquefied natural gas (LNG) under the long-term supply agreement between the co-venturers of the Tornio LNG terminal of Manga LNG Oy. Manga LNG Oy is a joint venture of its co-venturers and responsible for gas sourcing and LNG terminal service provision for the co-venturers. Gasum LNG Oy holds 25% of Manga LNG Oy and is responsible under its agreements for sourcing gas from Manga LNG Oy and its ownership-based share of the investment costs, administrative and operational costs of Manga LNG Oy and its subsidiary Manga Terminal Oy as well as costs of terminal services provided by Manga Terminal Oy. Manga LNG Oy and Gasum Ltd have agreed on the minimum annual volumes to be delivered. In case Manga LNG Oy does not use the minimum annual volumes required in the contract, it will pay a prepayment for the difference, which is recorded in Gasum's balance sheet after the actual payment.

Rental commitments

Disclosed under rental commitments are leases where a substantial portion of the risks and rewards of ownership is retained by the lessor and which are charged to profit or loss on a straight-line basis over the period of the lease. Rental payments are determined on the basis of passage of time and the leases do not include call options or index linkages with a material impact on amount of rent. Rental commitments include operating leases to which exemptions concerning short-term or low-value leases enabled by the IFRS 16 Leases standard have been applied.

Rental commitments € thousand	2022	2021
Expiry no later than 1 year	234	39
Expiry later than 1 year but no later than 5 years	345	2
Expiry later than 5 years	0	0
Total	**580**	**41**

Comparison figures have been adjusted to follow the same principle.

5.3. Group companies

The following table presents the Group companies and the Group's associates and joint ventures at December 31, 2022.

Parent company

	Country of incorporation
Gasum Ltd	Finland

Subsidiaries

Subsidiaries	Country of incorporation	Group's ownership interest (%)	% of voting rights
Gasum LNG Oy	Finland	100	100
Gasum Portfolio Services Oy	Finland	100	100
Gasum AB	Sweden	100	100
Gasum Västerås AB	Sweden	98.7	98.7
Gasum Clean Gas Solutions Holding AB	Sweden	100	100
Gasum Clean Gas Solutions AB	Sweden	100	100
Skövde Biogas AB	Sweden	100	100
Gasum AS	Norway	100	100
Gasum Clean Gas Solutions AS	Norway	100	100
Gasum Oü	Estonia	100	100
Gasum AB German Branch	Germany	100	100

Joint ventures and associates

Joint ventures and associated companies		Country of incorporation	Group's ownership interest (%)	% of voting rights
Manga LNG Oy	Joint venture	Finland	25.0	25.0
Vadsbo Biogas AB	Joint venture	Sweden	50.0	50.5
Kiertoravinne Oy	Associate	Finland	19.9	19.9

Gasum, Biolan and Pöytyän Maanparannus joined forces at the beginning of August in Kiertoravinne Oy. Kiertoravinne, which focuses on recycled nutrients, was originally established by Biolan in 2021. Its ownership base grew at the beginning of August and the company is now owned by Biolan, its subsidiary Novarbo Oy, Gasum Oy and Pöytyän Maanparannus Oy. Gasum Group ownership is totalling 19.9 percent of ownership interest in the entity. Gasum Group exercise a significant control over the the entity by having a representative on the board of directors of Kiertoravinne Oy. The Group interest is accounted for using the equity method in the consolidated financial statements.

5.4. Transactions with related parties

Related parties of the Group are (a) Gasum Ltd's associated companies and joint ventures and (b) senior management of the company, including members and secretary of the Board of Directors of Gasum Ltd, the CEO and members of the Gasum Management Team and their close family members and the enterprises over which they or their close family members have control.

Gasum Ltd is the parent company of the Gasum Group. Transactions between the Group and subsidiaries have been eliminated in consolidation and are not included in the amounts of this note. Transactions with other companies included in related parties are specified in the table below, excluding the owner of Gasum Ltd as Gasum is 100% owned by the State of Finland. Transactions with the related parties are carried out on market terms.

Transactions with related parties

Transactions with related parties 2022	Sales of goods and services	Purchases of goods and services	Finance income and costs	Receivables	Liabilities
Joint ventures	80,706	9,120	0	6,250	3,651
Total	**80,706**	**9,120**	**0**	**6,250**	**3,651**

Transactions with related parties 2021	Sales of goods and services	Purchases of goods and services	Finance income and costs	Receivables	Liabilities
Joint ventures	63,652	7,526	0	1,759	4,053
Total	**63,652**	**7,526**	**0**	**1,759**	**4,053**

Management's employee benefits € thousand	2022	2021
Salaries and other short-term employee benefits	2,704	2,919
Post-employment benefits	0	192
Total	**2,704**	**3,111**

5.5. Legal proceedings and claims

Company’s appeals to Market Court concerning decisions made by the Energy Authority on February 26, 2019 and March 15, 2019 and the Energy Authority's penalty fee submission and the Energy Authority's 2020 decisions on unbundled financial statements

In spring 2019, the company appealed to the Market Court on a decision made by the Finnish Energy Authority on February 26, 2019 on the application of the unbundling rules concerning the calculated unbundling of natural gas operations and on a decision relating to the same set of matters made by the Energy Authority on March 15, 2019 on corrective measures to the company’s unbundling calculations regarding the financial statements for January 1 to December 31, 2018. On July 17, 2020 the Energy Authority submitted to the Market Court that the court impose on Gasum a penalty fee for non-compliance with the unbundling provisions of the Natural Gas Market Act in conjunction with the demerger concerning the natural gas transmission network operations. The Energy Authority proposed that the amount of penalty fee be €79.7 million. On April 30, 2021 the Energy Authority supplemented its penalty fee submission with its response and secondarily proposed a penalty fee of the same size on the basis of Gasum’s conduct that has continued for years in consecutive financial statements, involving either intentional or negligent breach of or non-compliance with provisions of the Natural Gas Market Act on unbundling of activities in case of the eventuality that the unbundling provisions of the Natural Gas Market Act would not be applicable to the demerger of Gasum. According to the Energy Authority, the continued conduct first took place at least in the 2017 financial statements and the 2016 comparative figures included in them and continued until the 2019 financial statements.

By a ruling given on 7 November 2022, the Market Court reversed, following Gasum’s appeal, the decisions issued by the Energy Authority concerning Gasum’s financial statements. In addition, the Market Court dismissed the Energy Authority’s proposal concerning the penalty fee. The Energy Authority has appealed the Market Court’s ruling to the Supreme Administrative Court. The Energy Authority requested in its appeal that the Supreme Administrative Court refer the matter to the Court of Justice of the European Union (CJEU) for a preliminary ruling relating to the interpretation of the Natural Gas Market Directive underlying the unbundling provisions of the Natural Gas Market Act.

The Energy Authority has, in addition, issued decisions on January 28, 2022 and June 16, 2022 concerning the company’s unbundled 2020 financial statements. The company has appealed against the decisions made by the Energy Authority to the Market Court and submitted that the Market Court postpone the consideration of the matters until the Supreme Administrative Court has ruled on the above-described appeal matters as well as on the Energy Authority’s the penalty fee submission. No related accounting provisions have been made.

Arbitration proceedings against Venator P&A Finland Oy

In spring 2020, the Gasum subsidiary Gasum LNG Oy filed arbitration proceedings against Venator P&A Finland Oy for failure by Venator to comply with its obligation to purchase the minimum quantity of gas under a natural gas supply agreement. The arbitration procedure resulted in a decision in favor of Gasum LNG Oy in August 2021.

Venator terminated the natural gas supply agreement as of 1 September 2022, whereby all remaining amounts under the agreement fell due. Venator has not paid its outstanding invoice despite of Gasum LNG Oy’s several reminders. In early November 2022, Gasum LNG Oy filed arbitration proceedings against Venator to be able to enforce the outstanding payment. The company is currently waiting for the appointment of the arbitral tribunal and the decision is not expected before end of 2023. In addition, Gasum LNG Oy filed for an interim measure at the Satakunta district court, which was granted in February 2023.

The company has recognized an amount of EUR 32.7 million as a receivable under operating revenue.

Company’s appeal to Vaasa Administrative Court on administrative enforcement decision of September 30, 2021 made by Centre for Economic Development, Transport and the Environment for Southwest Finland and appeal against the amended environmental permit

By its administrative enforcement decision of September 30, 2021, the Centre for Economic Development, Transport and the Environment for Southwest Finland has considered that Gasum’s Turku biogas plant has not, regardless of requests, taken sufficient measures to eliminate odor nuisance from the activities. Gasum Ltd appealed against the decision to Vaasa Administrative Court on October 28, 2021. To reinforce the first main obligation included in the decision, the Centre has imposed a periodic notice of a conditional fine with its basic component amounting to €200,000 and its additional component to €100,000. To reinforce six (of a total of twelve) other main obligations included in the decision, a separate fixed notice of a conditional fine amounting to €50,000 per obligation has also been imposed. Because the administrative enforcement decision is enforceable, Gasum Ltd has, regardless of its appeal, performed all measures in compliance with the Centre’s administrative enforcement decision by the due dates set for the measures in the enforcement decision. The appeal process regarding the administrative enforcement decision is currently pending in Vaasa Administrative Court.

In addition, the Regional State Administrative Agency of Southern Finland has in spring 2022 issued an amended environmental permit decision for the Turku biogas plant. The amended environmental permit decision has not become legally valid yet due to objections filed against the decision by local residents, and therefore the new requirements of the environmental permit have not been implemented yet. The appeal process regarding the amended environmental permit is currently pending in Vaasa Administrative Court, and the court decision is not expected until after summer 2023.

Possible further measures and processes on these matters cannot be ruled out.

Gasum to continue negotiations regarding natural gas supply contract after a decision from the arbitral tribunal

Gasum has a long-term natural gas supply contract with Russian Gazprom Export LLC. In April 2022, Gazprom Export presented Gasum with a demand that the payments agreed in the supply contract should be paid in rubles instead of euros. Gasum did not accept this demand. In addition, the companies had a significant disagreement regarding certain other demands made based on the contract, relating to the amount of and contractual interpretation concerning the minimum purchase obligation based on the contract. Due to these reasons, Gasum referred the matter to arbitration in accordance with the supply contract. Gazprom Export ceased gas supplies to Gasum in May 2022.

On November 14, 2022, the arbitral tribunal issued an award in the matter. According to the award, Gasum is not obligated to pay in rubles nor through the proposed payment procedure. Furthermore, the arbitral tribunal ordered Gasum and Gazprom Export to continue their bilateral contract negotiations to resolve the current situation related to the suspension of deliveries. Gasum has in January 2023 filed with the Svea Court of Appeal a challenge concerning parts of the arbitral award. Natural gas deliveries from Russia in accordance with Gasum’s supply contract are not continuing for the time being. Should the natural gas deliveries be resumed, the company has a large minimum purchase obligation for 2023, taking into account the current market demand in Finland.

Balance sheet values on 31 December 2022 include non-disputed 144.8 million euros trade payables and other provisions for gas deliveries and supply contract related other costs from 2021–2022. Gasum declined to pay for gas deliveries in rubles in April and May 2022 and therefore the above amount was unpaid at year end. Gasum has recognized 171.3 million euros asset under inventories regarding the undelivered gas from financial years 2020–2021 under the terms of the gas supply contract. Recognized asset is for the most part unpaid. There is no time limit for the reception of the gas under the gas supply contract. Gasum has recognized 158.0 million euros obligation as liability under accrued trade payables in company balance sheet on 31 December 2022. The liabilities set out in the arbitral award accrue interest, totaling at EUR 0.7 million at year end. In the beginning of the year 2023 Gazprom export informed Gasum that payment of already existing debts can be made in foreign currency. The Svea Court of Appeal has in January 2023 granted stay of enforcement related to the above 158.0 million euros obligation. Realization of inventory asset and related gas deliveries involve risks due to surrounding geopolitical situation.

5.6. Events after the reporting period

Gasum's new biogas plant in Götene, Sweden, received final construction permits at the end of January 2023. Construction is expected to proceed at pace during 2023 and continue into 2024. The plant will produce 120 gigawatt hours (GWh) worth of liquefied biogas or LBG per year from the start of 2025 onwards. The plant will use mainly manure as feedstock and produce 350 000 tons of high quality environmentally friendly fertilizer to be returned to the farmers providing the feedstock.

Gasum is investing nearly 54 million euros in the Götene plant, of which 15 million has been provided as a grant from the Swedish Environmental Protection Agency's Klimatklivet investment program. The Götene plant is the first of five planned large scale biogas plants in Sweden that form a substantial investment towards fulfilling Gasum's strategy to increase biogas availability by offering 7 TWh of biogas to our customers annually by 2027 from our own production and from trusted partners.

After the reporting period the company has in January 2023 filed with the Svea Court of Appeal a challenge concerning parts of the arbitral award received in the arbitration against Gazprom Export. Gasum is currently continuing its bilateral negotiations with Gazprom Export as required by the arbitral tribunal. For further information please see financial statement note 5.5. Legal proceedings and claims.

Parent company financial statements

Parent company income statement

€	Note	Jan 1–Dec 31, 2022	Jan 1–Dec 31, 2021
Revenue	**1**	**1,851,035,480.05**	**1,040,894,322.74**
Other operating income	2	752,856,041.83	466,777,768.43
Materials and services	3		
Raw materials and consumables			
Purchases during the financial year		-1,844,603,829.58	-991,589,442.52
Change in stocks		-938,069.30	-5,641,206.42
External services		-10,771,006.62	-8,305,636.57
		-1,856,312,905.50	-1,005,536,285.51
Personnel expenses	4		
Salaries and remunerations		-15,521,991.16	-15,867,542.25
Employer's contributions			
Pension costs		-3,095,872.71	-2,697,125.57
Other employer's contributions		-793,915.17	-700,916.09
		-19,411,779.04	-19,265,583.91
Depreciation, amortization and impairment	5		
Depreciation according to plan		-30,003,970.76	-14,512,210.72
Impairment		-398,106.80	0.00
		-30,402,077.56	-14,512,210.72
Other operating expenses	6	-599,112,752.82	-731,207,393.49
Operating profit		**98,652,006.96**	**-262,849,382.46**

€	Note	Jan 1–Dec 31, 2022	Jan 1–Dec 31, 2021
Finance income and costs			
Other interest and finance income	8		
From group companies		12,576,987.01	13,812,672.61
From others		20,099,524.65	1,888,947.80
		32,676,511.66	15,701,620.41
Other interest and finance costs	8		
To group companies		-4,231,665.78	-936,514.87
To others		-16,402,444.07	-15,378,337.46
		-20,634,109.85	-16,314,852.33
Profit before appropriations and taxes		**110,694,408.77**	**-263,462,614.38**
Appropriations	10		
Depreciation difference (increase -, decrease +)		0.00	14,934.13
Received group contribution		1,950,000.00	950,000.00
Paid group contribution		0.00	0.00
		1,950,000.00	964,934.13
Income taxes	11	117.76	13,074.31
Profit/loss for the financial year		**112,644,526.53**	**-262,484,605.94**

Parent company balance sheet

€	Note	Dec 31, 2022	Dec 31, 2021
Assets			
Non-current assets			
Intangible assets			
Intangible rights		59,597.53	188,722.77
Other long-term expenditure		76,655,694.91	27,432,479.05
	12	76,715,292.44	27,621,201.82
Property, plant and equipment			
Land and water areas		440,759.08	440,759.08
Buildings and structures		69,623,559.61	57,632,133.19
Machinery and equipment		53,632,898.38	46,686,258.69
Other tangible assets		6,045,592.29	3,493,525.43
Advances paid and construction in progress		4,413,706.50	31,055,704.48
	13	134,156,515.86	139,308,380.87
Investments			
Shares in Group companies		339,786,886.26	339,786,886.26
Receivables from Group companies		235,270,891.40	232,913,159.22
Other shares and holdings		149,353.40	49,853.40
	14	575,207,131.26	572,749,898.88
Total non-current assets		**786,078,939.56**	**739,679,481.57**

€	Note	Dec 31, 2022	Dec 31, 2021
Current assets			
Inventories	15	178,387,442.83	181,120,814.77
Receivables			
Non-current receivables			
Derivative financial instruments		133,737,533.20	38,182,266.94
Other non-current receivables		211,881.48	211,881.48
	16	133,949,414.68	38,394,148.42
Current receivables			
Trade receivables		111,134,943.58	280,876,804.00
Current receivables from Group companies		285,518,332.70	184,233,233.91
Current receivables from associated companies		5,836,034.97	780,600.51
Other current receivables		18,256,772.43	146,992,241.41
Short-term accruals		19,941,950.55	14,387,914.35
Derivative financial instruments		186,635,707.17	232,629,791.61
	17	627,323,741.40	859,900,585.79
Cash and cash equivalents	18	203,178,032.06	386,146,239.34
Total current assets		**1,142,838,630.97**	**1,465,561,788.32**
Total assets		**1,928,917,570.53**	**2,205,241,269.89**

€	Note	Dec 31, 2022	Dec 31, 2021
Shareholders' equity and liabilities			
Equity			
Share capital		10,000,000.00	10,000,000.00
Capital loan		200,000,000.00	200,000,000.00
Other reserves		124,303,645.75	124,303,645.75
Retained result		148,011,734.54	410,496,340.48
Result for the period		112,644,526.53	-262,484,605.94
		260,656,261.07	148,011,734.54
Total equity	**19**	**594,959,906.82**	**482,315,380.29**
Provisions for liabilities and charges	**21**	**0.00**	**15,685,359.00**
Liabilities			
Non-current liabilities			
Non-current loans from financial institutions		345,000,000.00	445,000,000.00
Derivative financial instruments		104,054,345.42	51,160,734.68
	22	449,054,345.42	496,160,734.68

€	Note	Dec 31, 2022	Dec 31, 2021
Current liabilities			
Short-term loans from financial institutions		0.00	210,000,000.00
Advances received		29,188,413.19	16,162,133.19
Trade payables		202,783,919.67	283,237,450.08
Liabilities to Group companies		271,554,991.42	140,240,015.05
Other liabilities		40,613,070.57	61,516,255.62
Derivative financial instruments		212,945,549.91	385,352,414.67
Accruals and deferred income		127,320,319.56	112,889,289.37
Other current liabilities to participating interest undertakings		497,053.97	1,682,237.94
	23	884,903,318.29	1,211,079,795.92
Total liabilities		**1,322,699,850.50**	**1,707,240,530.60**
Total equity and liabilities		**1,928,917,570.53**	**2,205,241,269.89**

Parent company cash flow statement

€	Note	Jan 1–Dec 31, 2022	Jan 1–Dec 31, 2021
Cash flows from operating activities			
Result before appropriations and taxes		110,694,409	-263,462,614
Adjustments:			
Depreciation and amortization according to plan	5	30,003,971	14,512,211
Unrealized gains/losses on financial instruments	8	24,618,627	147,802,058
Finance income and costs	8	-153,889,650	613,232
Other non-cash items		-12,042,402	31,803,176
Net cash flow before change in working capital		-615,045	-68,731,937
Change in working capital			
Increase (-)/Decrease (+) in current non-interest-bearing receivables		119,120,840	-388,770,385
Increase (-)/Decrease (+) in inventories		-21,885,255	-10,728,662
Increase (-)/Decrease (+) in current non-interest-bearing liabilities		41,318,329	305,705,783
Cash flow from operating activities before financial items and taxes		138,553,914	93,793,264
Interest paid and other finance costs arising from operations		-21,308,809	-13,830,429
Interest received from operating activities		21,057,180	16,883,497
Direct taxes paid		118	2,119,689
Net cash flow from operating activities		**137,687,358**	**-157,352,445**
Cash flows from investing activities			
Capital expenditure on tangible and intangible assets		-81,225,451	-19,958,241
Proceeds from sale of tangible and intangible assets		0	202,508
Business acquisitions and disposals		0	30,173,090

€	Note	Jan 1–Dec 31, 2022	Jan 1–Dec 31, 2021
Investments in shares in associated companies		99,500	
Loans given		62,980,976	63,524,779
Investment grants received		7,279,254	6,357,054
Net cash flow from investing activities		**-11,154,721**	**80,299,191**
Cash flows from financing activities			
Proceeds from current borrowings		1,755,741	212,060,688
Repayments of current borrowings		-210,000,000	-60,424,601
Proceeds from non-current borrowings		-101,157,983	100,000,000
Repayments of non-current borrowings			
Proceeds from capital loans		0	200,000,000
Group contributions received/given			
Dividends paid			
Net cash flow from financing activities		**-309,402,243**	**451,636,087**
Net decrease (-)/increase (+) in cash and cash equivalents		**-182,869,605**	**374,582,833**
Cash and cash equivalents at the beginning of the period		386,146,239	6,861,608
Foreign exchange gains and losses on cash and cash equivalents		-98,602	-57,347
Outgoing and incoming cash and cash equivalents in business acquisitions and divestments		0	4,759,145
Cash and cash equivalents at the end of the period		203,178,032	386,146,239

Accounting policies for parent company financial statements

The financial statements of Gasum Ltd have been prepared according to Finnish accounting law and principles. The financial statements have been prepared for the 12-month period from January 1 to December 31, 2022.

Revenue recognition principle

The revenue of Gasum Ltd consists primarily of gas and power sales. Sales revenue is recognized upon delivery of gas or power. Service sales revenue is recognized upon performance of service.

Research and development expenditure

Research and development expenditure is expensed in the year it is incurred.

Pensions

Gasum Ltd has obtained statutory pension cover from an external pension insurance company. Pension costs are expensed in the year they are incurred.

Leasing

Leasing costs are recognized under other operating expenses. The remaining leasing payments are stated in the notes under guarantees and commitments. The leasing contracts have been concluded under ordinary terms.

Derivatives

The parent company's Enterprise Risk Management Policy is included in Group-level risk management documentation. Risk management aims to use derivatives to hedge the outstanding commodity position, the interest rate risk of borrowings based on variable interest rates as well as the foreign currency risk between foreign currencies and the euro. For more detailed information on risk management, see the Group's Notes 4.2 and 4.3.

Changes in the fair value of derivatives (positive or negative) are recognized through profit or loss in the statement of income and hedge accounting is not applied. Changes in the fair value of commodity derivatives are recognized in other operating income or expenses, changes in the fair value of interest rate derivatives in finance income or costs, and changes in the fair value of foreign currency derivatives in above-mentioned items based on the nature of the hedged item for the business activity.

Exchange traded derivatives are marked to market and the fair value of non-exchange traded derivatives is determined using market data available from market information providers.

Provisions for liabilities and charges

Provisions for liabilities and charges in the balance sheet comprise items that are either contractual or otherwise binding obligations but that have yet to be realised.

Taxes

Taxes comprise current income tax. Taxes for previous periods are included in income taxes in the income statement.

Non-current assets and depreciation and amortization

Intangible and tangible assets are stated on the balance sheet at cost less accumulated depreciation and amortization. Accumulated depreciation and amortization is recorded on a straight-line basis over the expected useful life of intangible and tangible assets.

The depreciation periods are as follows:

- Buildings and structures 15–65 years
- Machinery and equipment 3–15 years
- Other tangible assets 20–40 years
- Other long-term expenditure 5–10 years
- Intellectual property 3–5 years.
- No depreciation is made on land.

Shares in subsidiaries as well as other shares and similar rights of ownership under investments in non-current assets are measured at cost.

Inventories

Inventories are stated on the balance sheet in accordance with first-in first-out (FIFO) method at the lower of cost and replacement cost or probable sales price.

Foreign currency items

Receivables and liabilities denominated in foreign currencies have been converted into the currency of Finland, the euro, at the exchange rate quoted at the reporting date.

Fair value measurement of certain financial instruments

Gasum's accounting policy for determining the fair value of financial instruments is described in Note 4.3. Management adjustment is exercised when determinizing the level 3 derivatives that lack quoted prices or where recently observed market prices are not available. The judgement relate to the following areas:

- The choice of valuation techniques
- The calculation of fair value adjustments in order to incorporate relevant risk factors such as credit risk and liquidity risk
- The judgement of which market parameters are observable

The fair value of financial assets and liabilities measured at fair value using valuation technique, level 3 in fair value hierarchy, was EUR 38.0 million in the end of the year (2021: EUR 14,7 million). Valuation adjustments (CVA and close-out cost adjustment) made when determining the fair value of financial instruments amounted to EUR 8 million (2021: EUR 0 million).

Other

Gasum Ltd demerged into two separate companies as per January 1, 2020, with the assets and liabilities relating to the transmission business unbundled into a new company, Gasgrid Finland Oy, on that date.

Parent company notes

Notes to the parent company income statement

1. Revenue

Revenue by region

€	2022	2021
Finland	1,544,900,976.56	862,805,225.00
Other countries	306,134,503.49	178,089,097.74
Total	**1,851,035,480.05**	**1,040,894,322.74**

2. Other operating income

Other operating income

€	2022	2021
Rental income	15,800.78	17,997.67
Proceeds from sale of fixed assets	4,189.12	100,000.00
Gains from derivative financial Instruments	528,680,373.97	385,941,933.29
Other income*	224,155,677.96	80,717,837.47
Total	**752,856,041.83**	**466,777,768.43**

*Other income includes management fees to EUR 8.9 million (2021: EUR 7.3 million) as well as transmission price income amounting to EUR 214.8 million (2021: EUR 73.8 million).

3. Materials and services

Materials and services

€	2022	2021
Materials and supplies		
Purchases during the period	1,844,603,829.58	999,264,187.40
Change in stocks	938,069.30	-2,033,538.46
Total materials and supplies	1,845,541,898.88	997,230,648.94
External services	10,771,006.62	8,305,636.57
Total	**1,856,312,905.50**	**1,005,536,285.51**

4. Personnel expenses and number of personnel

Personnel expenses

€	2022	2021
Salaries and remunerations	15,521,991.16	15,867,542.25
Pension costs	3,095,872.71	2,697,125.57
Statutory employer contributions	793,915.17	700,916.09
Total	**19,411,779.04**	**19,265,583.91**

Additional information of the remuneration of the CEO and Board members in Group Note 2.4.

Personnel on average	2022	2021
White collar	162	167
Blue collar	30	28
Personnel on average	**192**	**195**

5. Depreciation, amortization and impairment

Depreciations, amortization and impairment €	2022	2021
Amortization of intangible assets	129,125.24	154,189.35
Amortization of other long-term expenditure	18,415,583.84	4,767,347.81
Depreciation of buildings and structures	4,119,635.08	3,642,594.85
Depreciation of machinery and equipment	6,980,423.11	5,730,403.20
Depreciations of other tangible assets	359,203,49	217,675.51
Total depreciation and amortization	**30,003,970.76**	**14,512,210.72**
Impairment	398,106.80	0.00
Total	**30,402,077.56**	**14,512,210.72**

6. Other operating expenses

Other operating expenses €	2022	2021
Rents	6,208,333.78	11,416,499.50
Maintenance costs	8,104,363.30	6,509,320.08
External services	22,517,078.10	14,380,063.34
Marketing costs	1,132,899.63	1,749,889.73
Realized losses on derivatives	451,908,119.91	267,231,459.14
Unrealized losses on derivatives	104,668,702.45	371,567,263.91
Other	4,573,255.65	58,352,897.79
Total	**599,112,752.82**	**731,207,393.49**

7. Audit fees

Audit fees €	2022	2021
Statutory audit fees	525,918.20	478,600.00
Audit opinions	32,033.00	16,530.50
Tax services	37,847.25	61,905.60
Other services	5,000.00	20,522.40
Total	**600,798.45**	**577,558.50**

8. Finance income and costs

Finance income €	2022	2021
Interest income on other non-current receivables	1,305,533.05	38,238.24
Interest and finance income from others	18,793,991.60	1,850,709.56
Interest and finance income from Group companies	12,576,987.01	13,812,672.61
Total	**32,676,511.66**	**15,701,620.41**

Changes in interest income include income received from interest rate derivates and short term deposit rates.

Finance costs €	2022	2021
Interest expenses on finance loans	5,769,707.35	4,020,441.67
Other finance costs	14,864,402.50	12,294,410.66
Total	**20,634,109.85**	**16,314,852.33**

9. Financial instruments

Fair values €	2022 Assets	2022 Liabilities	Net position
Foreign currency derivatives	3,144,922.06	3,010,368.24	134,553.82
Interest rate derivatives	7,597,094.00	0.00	7,597,094.00
Commodity derivatives	311,537,121.63	313,989,513.23	-2,452,391.60
Total	**322,279,137.69**	**316,999,881.47**	**5,279,256.22**
Current portion of fair value	188,542,302.26	212,945,534.88	-24,403,232.62
Non-current portion of fair value	133,736,835.43	104,054,346.59	29,682,488.84

Fair values €	2021 Assets	2021 Liabilities	Net position
Foreign currency derivatives	1,896,875.08	2,271,195.82	-374,320.74
Interest rate derivatives	2,344,659.00	3,693,357.00	-1,348,698.00
Commodity derivatives	274,217,628.75	430,548,596.67	-156,330,967.92
Total	**278,459,162.83**	**436,513,149.49**	**-158,053,986.66**
Current portion of fair value	236,999,139.44	384,915,493.91	-147,916,354.47
Non-current portion of fair value	41,460,023.40	51,597,655.58	-10,137,632.19

Fair value maturities 2022 €	Total	Less than 1 year	1–2 years	2–5 years	5+ years
Foreign currency derivatives	134,553.82	134,553.82	0.00	0.00	0.00
Interest rate derivatives	7,597,094.00	3,122,939.00	2,418,800.00	2,055,355.00	0.00
Commodity derivatives	-2,452,391.60	-27,660,725.43	1,996,002.83	13,026,479.85	10,185,851.15
Total cash flow	**5,279,256.22**	**-24,403,232.61**	**4,414,802.83**	**15,081,834.85**	**10,185,851.15**

Fair value maturities 2021 €	Total	Less than 1 year	1–2 years	2–5 years	5+ years
Foreign currency derivatives	-374,320.74	-374,320.74	0.00	0.00	0.00
Interest rate derivatives	-1,348,698.00	0.00	-1,348,698.00	0.00	0.00
Commodity derivatives	-156,330,967.58	-147,060,214.25	-21,884,258.00	4,277,600.94	8,335,903.73
Total cash flow	**-158,053,986.32**	**-147,434,534.99**	**-23,232,956.00**	**4,277,600.94**	**8,335,903.73**

Financial instruments valued at fair value are classified according to the valuation method. The hierarchy levels used have been determined as follows:

- Level 1: quoted prices (unadjusted) in active markets for identical assets and liabilities
- Level 2: inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices)
- Level 3: inputs for assets or liabilities that are not based on observable market data (that is, unobservable inputs)

Fair values by hierarchy level €	31.12.2022		31.12.2021	
	Assets	Liabilities	Assets	Liabilities
Commodity derivatives (hierarchy level 1)	19,463,286.77	3,039,373.34	129,577,265.17	194,825,899.25
Commodity derivatives (hierarchy level 2)	153,942,784.91	210,851,749.86	114,853,603.43	220,622,948.02
Commodity derivatives (hierarchy level 3)	138,131,049.96	100,098,390.03	29,756,760.56	15,099,749.40
Foreign currency derivatives (hierarchy level 2)	3,144,922.06	3,010,368.24	1,896,875.08	2,271,195.82
Interest rate derivatives (hierarchy level 2)	7,597,094.00	0.00	2,344,659.00	3,693,357.00
Total	**322,279,137.69**	**316,999,881.47**	**278,459,163.24**	**436,513,149.35**
Non-current portion				
Commodity derivatives (hierarchy level 1)	2,107,495.23	406,453.34	1,087,137.03	118,904.26
Commodity derivatives (hierarchy level 2)	24,850,703.18	26,709,508.31	7,904,338.86	34,448,942.38
Commodity derivatives (hierarchy level 3)	102,222,443.91	76,856,346.83	26,161,408.44	12,639,712.48
Foreign currency derivatives (hierarchy level 2)	82,038.11	82,038.11	3,323.53	3,323.53
Interest rate derivatives (hierarchy level 2)	4,474,155.00	0.00	2,344,659.00	3,693,357.00
Total non-current portion	**133,736,835.43**	**104,054,346.59**	**37,500,866.86**	**50,904,239.65**
Total current portion	**188,542,302.26**	**212,945,534.88**	**240,958,296.38**	**385,608,909.70**

10. Appropriations

Appropriations €	2022	2021
Depreciation difference (increase -, decrease +)	0.00	14,934.13
Group contribution received	1,950,000.00	950,000.00
Total	**1,950,000.00**	**964,934.13**

11. Taxes

Taxes €	2022	2021
Taxes for previous periods	117.76	13,074.31
Total	**117.76**	**13,074.31**

Gasum Ltd has utilised the company's historical losses which has resulted in low payable tax in 2022.

12. Intangible assets

2022 €	Intangible rights	Other long-term expenditure	Total
Cost at January 1	2,009,082.54	54,821,349.42	56,830,431.96
Additions	0.00	65,113,877.08	65,113,877.08
Disposals	-8,950.00	-252,337.37	-261,287.37
Reclassifications	0.00	2,524,041.48	2,524,041.48
Cost at December 31	**2,000,132.54**	**122,206,930.61**	**124,207,063.15**
Accumulated amortization at January 1	1,820,359.77	27,388,870.37	29,209,230.14
Amortization	129,125.24	18,414,702.70	18,543,827.94
Accumulated amortization of disposals	-8,950.00	-252,337.37	-261,287.37
Accumulated amortization at December 31	**1,940,535.01**	**45,551,235.70**	**47,491,770.71**
Net book value at January 1, 2022	188,722.77	27,432,479.05	27,621,201.82
Net book value at December 31, 2022	59,597.53	76,655,694.91	76,715,292.44

2021 €	Intangible rights	Other long-term expenditure	Total
Cost at January 1	1,978,452.14	47,177,425.90	49,155,878.04
Additions	30,630.40	5,405,032.11	5,435,662.51
Disposals	0.00	-79,233.30	-79,233.30
Effect of demerger	0.00	-162,308.26	-162,308.26
Reclassifications	0.00	2,480,432.97	2,480,432.97
Cost at December 31	**2,009,082.54**	**54,821,349.42**	**56,830,431.96**
Accumulated amortization at January 1	1,666,170.42	22,661,216.72	24,327,387.14
Amortization	154,189.35	4,766,686.95	4,920,876.30
Accumulated amortization on disposals	0.00	-39,033.30	-39,033.30
Accumulated amortization at December 31	**1,820,359.77**	**27,388,870.37**	**29,209,230.14**
Net book value at January 1, 2021	312,281.72	24,516,209.18	24,828,490.90
Net book value at December 31, 2021	188,722.77	27,432,479.05	27,621,201.82

13. Tangible assets

2022 €	Land and water	Buildings and structures	Machinery and equipment	Other tangible assets	Construction in progress	Total
Cost at January 1	440,759.08	392,427,201.39	171,407,112.02	9,164,147.59	31,055,704.48	604,494,924.56
Additions	0.00	6,699,788.35	1,077,064.03	262,458.00	3,877,879.91	11,917,190.29
Disposals	0.00	-411,171.55	-547,248.43	0.00	0.00	-958,419.98
Reclassifications	0.00	12,562,772.62	16,611,495.36	3,419,001.57	-30,519,877.89	2,073,391.66
Investment subsidies received	0.00	-2,959,293.70	-3,550,652.68	-769,308.08	0.00	-7,279,254.46
Cost at December 31	**440,759.08**	**408,319,297.11**	**184,997,770,30**	**12,076,299.08**	**4,413,706.50**	**610,247,832.07**
Accumulated amortization at January 1	0.00	334,795,068.20	124,720,853.33	5,670,622.16	0.00	465,186,543.69
Depreciations	0.00	4,119,635.08	6,980,423.11	360,084.63	0.00	11,460,142.82
Amortizations	0.00	192,205.77	205,901.03	0.00	0.00	398,106.80
Accumulated amortization of disposals	0.00	-411,171.55	-542,305.55	0.00	0.00	-953,477.10
Accumulated depreciations at December 31	**0.00**	**338,695,737.50**	**131,364,871.92**	**6,030,706.79**	**0.00**	**476,091,316.21**
Net book value at January 1, 2022	440,759.08	57,632,133.19	46,686,258.69	3,493,525.43	31,055,704.48	139,308,380.87
Net book value at December 31, 2022	440,759.08	69,623,559.61	53,632,898.38	6,045,592.29	4,413,706.50	134,156,515.86

2021 €	Land and water	Buildings and structures	Machinery and equipment	Other tangible assets	Construction in progress	Total
Cost at January 1	440,759.08	382,070,232.82	167,781,766.35	9,082,605.07	34,217,488.35	593,592,851.67
Additions	0.00	5,842,876.73	2,149,169.37	45,945.00	12,567,756.45	20,605,747.55
Transferred through merger	0.00	0.00	92,751.88	4,405.74	69,069.52	166,227.14
Disposals	0.00	-266,669.65	-67,303.28	0.00	0.00	-333,972.93
Reclassifications	0.00	5,220,061.61	1,450,727.70	39,191.78	-9,880,855.38	-3,178,874.64
Investment subsidies received	0	-439,299.77	0.00	0.00	-5,917,754.46	-6,357,054.23
Cost at December 31	**440,759.08**	**392,427,201.39**	**171,407,112.02**	**9,164,147.59**	**31,055,704.48**	**604,494,924.56**
Accumulated depreciation at January 1	0.00	331,419,143.00	118,979,383.16	5,450,303.20	0.00	455,848,829.36
Depreciation	0.00	3,642,594.85	5,730,403.20	218,336.37	0.00	9,591,334.42
Accumulated depreciation on disposals	0.00	-266,669.65	-15,038.54	0.00	0.00	-279,725.60
Transferred through merger	0.00	0.00	26,105.51	1,982.59	0.00	26,105.51
Accumulated depreciation at December 31	**0.00**	**334,795,068.20**	**124,720,853.33**	**5,670,622.16**	**0.00**	**465,186,543.69**
Net book value at January 1, 2021	440,759.08	50,651,089.82	48,802,383.19	3,632,301.87	34,217,488.35	137,744,022.31
Net book value at December 31, 2021	440,759.08	57,632,133.19	46,686,258.69	3,493,525.43	31,055,704.48	139,308,380.87

14. Investments

2022 €	Shares in Group companies	Shares in Associated companies	Other investments	Receivables from Group companies	Total
Cost at January 1	339,786,886.26	0.00	49,853.40	232,913 159.22	572,749,898.88
Additions	0.00	99,500.20	0.00	39,105,165.68	39,204,665.88
Disposals	0.00	0.00		-36,747,433.50	-36,747,433.50
Net book value at December 31	**339,786,886.26**	**99,500.20**	**49,853.40**	**235,270 891.40**	**575,207,131.26**

2021 €	Shares in Group companies	Other investments	Receivables from Group companies	Total
Cost at January 1	435,597,281.22	49,853.40	290,479,016.63	726,126,151.25
Additions	0.00		617,488.48	617,488.48
Disposals	-86,073,090.49		-55,900,000.00	-141,973,090.49
Merger	-9,737,304.47		-2,283,345.89	-12,020,650.36
Net book value at December 31	**339,786,886.26**	**49,853.40**	**232,913,159.22**	**572,749,898.88**

15. Inventories

Inventories

€	2022	2021
Product inventories	7,111,044.66	7,932,072.96
Other inventories	0.00	216,960.00
Prepayments*	171,276,398.17	172,971,781.81
Total	**178,387,442.83**	**181,120,814.77**

* Mainly consists of supply contract prepayments relating to LNG and natural gas.

16. Non-current receivables

Non-current receivables

€	2022	2021
Other non-current receivables	211,881.48	211,881.48
Non-current receivables from Group companies	133,737,533.20	38,182,266.94
Total	**133,949,414.68**	**38,394,148.42**

17. Current receivables

Current receivables, external

€	2022	2021
Trade receivables	111,134,943.58	280,876,804.00
Other receivables	18,256,772.43	146,992,241.41
Advance payments	1,188,819.43	490,513.50
Short-term given collaterals	17,067,953.00	68,432,182.76
Other receivables	0.00	78,069,545.15
Accrued income	19,941,950.55	14,387,914.35
Derivative financial instruments	186,635,707.17	232,629,791.61
Total	**335,969,373.73**	**674,886,751.37**

Accrued income

€	2022	2021
Balance power accrual	14,614,857.61	8,915,104.87
Service sales accruals	263,910.00	216,160.00
Power derivatives Dec/2021	0.00	3,352,461.00
Energy authority	1,631,000.00	0.00
Financing costs	667,500.00	0.00
Bioticket accruals	467,500.00	0.00
Other accrued income	2,297,183.14	1,904,188.48
Total	**19,941,950.75**	**14,387,914.35**

Current receivables, Group companies

€	2022	2021
Trade receivables	59,385,728.65	27,711,090.24
Group bank account receivable	2,815,161.64	71,047,463.22
Other receivables	217,301,541.21	75,288,373.05
Accrued income	4,109,260.99	2,539,202.92
Derivate financial instruments	1,906,640.21	7,647,104.48
Total	**285,518,332.70**	**184,233,233.91**

Current receivables from participating interest undertakings

€	2022	2021
Trade receivables	5,490,241.24	27,499.55
Other receivables	345,793.73	753,100.96
Total	**5,836,034.97**	**780,600.51**

18. Cash and cash equivalents

Cash and cash equivalents

€	2022	2021
Cash and cash equivalents	203,178,032.06	386,146,239.34
Total	**203,178,032.06**	**386,146,239.34**

19. Equity

Equity €	Share capital	Reserve for invested unrestricted equity	Capital loan	Retained earnings	Total
Equity at January 1	10,000,000.00	124,303,645.75	200,000,000.00	148,011,734.54	482,315,380.29
Result for the period	0.00	0.00	0.00	112,644,526.53	112,644,526.53
Net book value at December 31	**10,000,000.00**	**124,303,645.75**	**200,000,000.00**	**260,656,261.07**	**594,959,906.82**

In December 2021, Gasum Ltd issued a capital loan of EUR 200.0 million treated as an equity instrument targeted at Governia Oy which The Prime Minister's Office acquired during financial year 2022. The loan has no maturity date. The loan's annual interest rate is 10% for the first three years and after that increases to 15% per year. The recognition principle for the interest rate is the same as for dividends. The interest rate is recognized when a decision to pay the interest has been made and the obligation of Gasum Ltd to pay the interest arises. The time of interest payment is decided by the company at its discretion.

On 31 December 2022 cumulative interest for capital loan EUR 20 million accrued.

Statement of distributable equity €	2022	2021
Reserve for invested unrestricted equity	124,303,645.75	124,303,645.75
Retained earnings	148,011,734.54	353,457,610.65
Impact of change in accounting policy Jan 1*	0.00	57,038,729.83
Result for the period	112,644,526.53	-262,484,605.94
Total	**384,959,906.82**	**272,315,380.29**

* In 2021 Gasum Ltd has adopted the principle of fair value under chapter 5, section 2a of the Accounting Act regarding the recognition of derivative financial instruments.

20. Accumulated appropriations

Accumulated appropriations €	2022	2021
Accumulated depreciation difference at January 1	0.00	0.00
Transferred through merger	0.00	-14,934.13
Depreciation difference (increase -, decrease +)	0.00	14,934.13
Accumulated depreciation difference at December 31	**0.00**	**0.00**

21. Provisions for liabilities and charges

Provisions for liabilities and charges €	2022	2021
Provisions for daily minimum natural gas purchase obligation	0.00	15,685,359.00
Total	**0.00**	**15,685,359.00**

22. Non-current liabilities

Non-current liabilities €	2022	2021
Loans from financial institutions	345,000,000.00	445,000,000.00
Other non-current liabilities	104,054,345.42	51,160,734.68
Total	**449,054,345.42**	**496,160,734.68**

All financial loans expire in less than 5 years.

23. Current liabilities

Short-term loans from financial institutions

€	2022	2021
Loans from financial institutions	0.00	210,000,000.00
Total	**0.00**	**210,000,000.00**

Current liabilities to others

€	2022	2021
Loans from financial institutions	0.00	210,000,000.00
Trade payables	202,783,919.67	283,237,450.08
Advances paid	29,188,413.19	16,162,133.19
Other liabilities*	253,558,620.48	446,868,670.29
Accruals and deferred expenses	127,320,319.56	112,889,289.37
Total	**612,851,272.90**	**1,069,157,542.93**

* Consist primarily of a derivative instrument liability of EUR 211.9 million and a value-added tax liability of EUR 31.0 million (2021: derivative instrument liability of EUR 385.3 million and bank overdraft liability of EUR 60.8 million).

Accrued liabilities

€	2022	2021
Accrued interest liabilities	1,812,054.86	2,585,355.56
Salary related items	4,847,526.96	3,558,081.90
Natural gas related liabilities	116,319,857.67	104,689,094.04
MakeUp 2022 liabilities	896,971.80	0.00
Gas transmission liabilities	830,000.00	0.00
Other accruals and deferred income	2,613,908.27	2,056,757.87
Total	**127,320,319.56**	**112,889,289.37**

Current liabilities to group companies

€	2022	2021
Trade payables to Group companies	3,969,556.15	1,795,907.65
Accrued accounts payable to group companies	0.00	5,004,165.24
Group bank account payable	199,042,401.82	92,539,104.21
Other accrued liabilities to group companies	765,976.64	2,971,837.95
Other short-term liabilities to Group companies	67,777,056.81	37,929,000.00
Total	**271,554,991.42**	**140,240,015.05**

Current liabilities to participating interest undertakings

€	2022	2021
Liabilities to participating interest undertakings	497,053.97	1,682,237.94
Total	**497,053.97**	**1,682,237.94**

24. Guarantees and commitments

Guarantees given and contingent liabilities

€	2022	2021
On own behalf:		
Commitments and other liabilities	39,141,618.79	32,662,977.34
Pledges	179,535.40	179,535.40
On behalf of Group companies:		
Commitments and other liabilities	243,266,503.28	253,881,653.96
Total	**282,587,657.47**	**286,724,166.70**

Operating lease commitments

€	2022	2021
Expiry no later than 1 year	518,274.43	327,775.05
Expiry later than 1 year and no later than 5 years	559,035.06	273,787.03
Total	**1,077,309.49**	**601,562.08**

Rental commitments

€	2022	2021
Expiry no later than 1 year	789,193.27	801,800.99
Expiry later than 1 year and no later than 5 years	4,578,561.37	4,512,104.95
Total	**5,367,754.64**	**5,313,905.94**

Derivative financial instruments

€	2022	2021
Fair value of derivative financial instruments		
Currency derivatives	-3,010,368.24	-2,271,195.82
Commodity derivatives	-313,989,513.23	-430,548,590.67
Interest rate derivatives	0.00	-3,693,357.00
Total fair value of derivative financial instruments	**-316,999,881.47**	**-436,513,143.49**
Nominal value of derivative financial instruments		
Currency derivatives	139,909,476.29	162,430,153.56
Commodity derivatives	418,813,779.31	532,927,308.86
Interest rate derivatives	0.00	258,750,000.00
Total nominal value of derivative financial instruments	**558,723,255.60**	**954,107,462.42**

* The net fair value of the parent company's derivative financial instruments totaled EUR 5,279,256.22 (2021: EUR –158,053,986.66). The parent company had derivative financial instruments with a positive fair value and their nominal value totaled EUR 1,206,747.5 (2021: EUR 906,601,861.49).

Unbundling of natural gas operations

Provisions concerning the unbundling of natural gas operations in accounting from each other and from non-natural gas operations are laid down in chapter 13 of the Finnish Natural Gas Market Act (587/2017). In addition, provisions on calculated unbundling are laid down in the Decree of the Ministry of Economic Affairs and Employment on the unbundling of natural gas operations (1306/2019).

Accounting policies

Under the Natural Gas Market Act, transactions and balance sheet items are recognized in the income statements and balance sheets of the business units in accordance with the matching principle. Furthermore, under the Act, shared income and expenditure and balance sheet items must in conjunction with the unbundling be allocated mathematically to the various activities so that the matching principle is realized where possible. Income statement and balance sheet items which cannot be directly allocated to business activities in accordance with the matching principle are allocated using a method based on the scope of business activities. Following the allocation of all the balance sheet items allocated under the matching principle and the allocation principles based on the scope of business activities, the remaining balance sheet difference is balanced out under the balance sheet item ‘Cash and cash equivalents’.

The company has appealed against the decisions taken by the Energy Authority related to the company's unbundled 2020 financial statements. For more information see 5.5. Legal proceedings and claims.

Gasum Ltd, sales activities

Income statement €	Jan 1–Dec 31, 2022	Jan 1–Dec 31, 2021
REVENUE	**899,406,536.77**	**613,062,049.66**
Other operating income	127,852,447.56	24,187,356.41
Materials and services		
Purchases during the financial year	-817,300,254.60	-635,336,426.56
External services	-101.22	-602.90
	-817,300,355.82	-635,337,029.46
Personnel expenses		
Salaries and remunerations	-1,659,463.98	-1,315,029.24
Employer's contributions	-183,624.73	-132,762.55
	-1,843,088.71	-1,447,791.78
Depreciation, amortization and impairment		
Depreciation and amortization according to plan	-1,108,663.91	-1,887,714.00
	-1,108,663.91	-1,887,714.00
Other operating expenses	-12,911,854.05	-36,899,657.10

Income statement €	Jan 1–Dec 31, 2022	Jan 1–Dec 31, 2021
OPERATING PROFIT/LOSS	**194,095,021.84**	**-38,322,786.27**
Finance income and expenses		
Other interest and finance income from Group companies	0.00	0.00
Other interest and finance income from others	0.00	0.00
	0.00	0.00
Other interest and finance expenses	0.00	0.00
	0.00	0.00
PROFIT/LOSS BEFORE APPROPRIATIONS AND TAXES	**194,095,021.84**	**-38,322,786.27**
Appropriations		
Depreciation difference (increase -, decrease +)	0.00	0.00
Group contributions (given -, received +)	195,000.00	95,000.00
Income taxes	-38,819,004.37	0.00
PROFIT/LOSS FOR THE FINANCIAL YEAR	**155,471,017.48**	**-38,227,786.27**

Gasum Ltd, sales activities

Balance sheet €	Dec 31, 2022	Dec 31, 2021
ASSETS		
NON-CURRENT ASSETS		
Intangible assets		
Intangible rights	1,799.60	2,729.81
Other long-term expenditure	2,747,313.14	3,507,218.14
	2,749,112.74	3,509,947.95
Property, plant and equipment		
Machinery and equipment	60,388.92	21,388.92
Advances paid and construction in progress	0.00	6,345.20
	60,388.92	27,734.12
TOTAL NON-CURRENT ASSETS	**2,809,501.66**	**3,537,682.07**

Balance sheet €	Dec 31, 2022	Dec 31, 2021
CURRENT ASSETS		
Inventories *	171,276,398.17	172,665,591.31
Non-Current receivables		
Derivative financial receivable	3,457,400.93	666,590.00
Current receivables		
Derivative financial receivable	52,607,914.15	10,253,624.00
Trade receivables	90,905,260.50	258,688,473.18
Current receivables from Group companies	61,605,971.07	13,717,550.22
Other current receivables	0.00	2,930,034.56
Short-term accruals	62,440.02	708,214.85
	205,181,585.74	286,297,896.81
Cash and cash equivalents	86,328,440.49	-56,101,214.86
TOTAL CURRENT ASSETS	**466,243,825.33**	**403,528,863.26**
TOTAL ASSETS	**469,053,326.99**	**407,066,545.33**

Balance sheet €	Dec 31, 2022	Dec 31, 2021
EQUITY AND LIABILITIES		
SHAREHOLDERS' EQUITY		
Share capital	58,042.31	58,042.31
Retained earnings	6,149,493.61	44,377,279.88
Profit (loss) for the period	155,471,017.48	-38,227,786.27
	161,620,511.08	6,149,493.61
TOTAL EQUITY	**161,678,553.39**	**6,207,535.92**
PROVISIONS	**0.00**	**15,685,359.00**
LIABILITIES		
Non-Current liabilities		
Derivative financial liability	0.00	5,210.00
Current liabilities		
Derivative financial liability	3,274,154.02	18,128,813.00
Received advances	0.00	0.00
Trade payables	170,064,465.83	225,168,407.11
Liabilities to Group companies	0.00	0.00
Other liabilities	15,314,068.66	36,628,237.52
Accruals and deferred income	118,722,085.10	105,242,982.79
	307,374,773.60	385,168,440.41
TOTAL LIABILITIES	**307,374,773.60**	**385,173,650.41**
TOTAL EQUITY AND LIABILITIES	**469,053,326.99**	**407,066,545.33**

* Inventories include a minimum annual Take or Pay obligation under the gas supply contract, amounting to EUR 171,276,398.17.

Financial instruments related to sales activities in Gasum Ltd.

The parent company's Enterprise Risk Management Policy is included in Group-level risk management documentation. Risk management aims to use derivatives to hedge the outstanding commodity position, the interest rate risk of borrowings based on variable interest rates as well as the foreign currency risk between foreign currencies and the euro. For more detailed information on risk management, see the Group's Notes 4.2 and 4.3.

Realized gains and losses on commodity derivatives related to natural gas and unrealized gains and losses on changes in fair values are recognized in other operating income and expenses presented for the unbundling activities.

Financial instruments in the income statement €	2022	2021
Other operating income		
Realized gains	57,139,497.72	24,185,935.07
Unrealized gains	58,246,073.26	0.00
Other operating income		
Unrealized losses	0.00	-11,149,033.52

Fair values €	2022 Assets	2022 Liabilities	Net position
Commodity derivatives	56,065,315.08	3,274,154.02	52,791,161.06
Total	**56,065,315.08**	**3,274,154.02**	**52,791,161.06**
Current portion of fair value	52,607,914.15	3,274,154.02	49,333,760.13
Non-current portion of fair value	3,457,400.93	0	3,457,400.93

Fair values €	2021 Assets	2021 Liabilities	Net position
Commodity derivatives	10,920,214.00	18,134,023.00	-7,213,809.00
Total	**10,920,214.00**	**18,134,023.00**	**-7,213,809.00**
Current portion of fair value	10,253,624.00	18,128,813.00	-7,875,189.00
Non-current portion of fair value	666,590.00	5,210.00	661,380.00

Fair value maturities 2022 €	Total	Less than 1 year	1–2 years	2–5 years	Over 5 years
Commodity derivatives	52,791,161.06	49,333,760.13	3,457,400.93	0.00	0.00
Total cash flow	**52,791,161.06**	**49,333,760.13**	**3,457,400.93**	**0.00**	**0.00**

Fair value maturities 2021 €	Total	Less than 1 year	1–2 years	2–5 years	Over 5 years
Commodity derivatives	-7,213,809.00	-7,875,189.00	661,380.00	0.00	0.00
Total cash flow	**-7,213,809.00**	**-7,875,189.00**	**661,380.00**	**0.00**	**0.00**

Financial instruments valued at fair value are classified according to the valuation method. The hierarchy levels used have been determined as follows:

- Level 1: quoted prices (unadjusted) in active markets for identical assets and liabilities
- Level 2: inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices)
- Level 3: inputs for assets or liabilities that are not based on observable market data (that is, unobservable inputs)

Fair values by hierarchy level €	31.12.2022		31.12.2021	
	Assets	Liabilities	Assets	Liabilities
Commodity derivatives (hierarchy level 2)	56,065,315.08	3,274,154.02	10,920,214.00	18,134,023.00
Total	**56,065,315.08**	**3,274,154.02**	**10,920,214.00**	**18,134,023.00**
Non-current portion				
Commodity derivatives (hierarchy level 2)	3,457,400.93	0	666,590.00	5,210.00
Total non-current portion	**3,457,400.93**	**0**	**666,590.00**	**5,210.00**
Total current portion	**52,607,914.15**	**3,274,154.02**	**10,253,624.00**	**18,128,813.00**

Unbundling of electricity operations

According to Section 77.1 of the Electricity Market Act (588/2013), a company operating in the electricity market must separate electricity network operations from other electricity business operations and electricity business operations from other business operations conducted by the company.

In accordance with the interpretation confirmed by the Energy Agency's unbundling recommendation (Energy Agency's recommendation Dnro 2449/421/2015), the unbundling calculations of other (non-electricity) businesses do not have to be published by law in connection with the official financial statements. However, the company must also prepare and document calculations for other business operations.

Gasum's obligation to separate the electricity business from other (non-electricity businesses) is based on Section 77 of the Electricity Market Act (588/2013) and Section 2 of the Decree of the Ministry of Labor and Economy on the separation of electricity businesses (1305/2019). According to Section 77.1 of the Electricity Market Act (588/2013), a company operating in the electricity market must separate electricity network operations from other electricity business operations and electricity business operations from other business operations conducted by the company.

In the government's proposal to parliament on amending the Electricity Market Act and the Market Rights Act (HE 127/2004 vp. p. 50) it is stated that other electricity business activities mean electricity production and electricity sales. In the Energy Agency's recommendation on the computational and legal separation of electricity and natural gas businesses (Dnr. 2449/421/2015), it is stated that retail sales of electricity (sales through the distribution network directly to end consumers), trading activities and other similar sales of electricity are part of the electricity sales activity. The sale of electricity typically also includes the purchase of electricity, i.e. the purchase of wholesale electricity from sellers or from one's own production plant.

As a result of the subsidiary merger of Gasum Consulting Oy, which took place on 31 March 2021, Gasum Oy has transferred business that has included services and trading activities related to the physical electricity market. The Energy Agency considers that the business related to the electricity market and Gasum Oy's PPA and electricity block brokering business transferred to Gasum Oy following the merger of Gasum Consulting Oy are electricity business activities referred to in Section 77 of the Electricity Market Act. Gasum's share of the electricity business is not small, so the obligation to separate the electricity sales business applies to Gasum. n (10% of turnover and less than 500,000 euros per year) Electricity business must be separated from other businesses in accordance with Section 77 of the Electricity Market Act. The separation obligation has started from the financial year in which electricity businesses have exceeded the limit of minor business. The separation must be corrected by separating the electricity business from other businesses in the 2022 financial statements, which must also include comparative balances from 2021.

Accounting policies

Under the Electricity Market Act, transactions and balance sheet items are recognized in the income statements and balance sheets of the business units in accordance with the matching principle. Furthermore under the Act, shared income and expenditure and balance sheet items must in conjunction with the unbundling be allocated mathematically to the various activities so that the matching principle is realized where possible. Income statement and balance sheet items which cannot be directly allocated to business activities in accordance with the matching principle are allocated using a method based on the scope of business activities. Following the allocation of all of the balance sheet items allocated under the matching principle and the allocation principles based on the scope of business activities, the remaining balance sheet difference is balanced out under the balance sheet item ‘Cash and cash equivalents’.

Income statement €	Jan 1–Dec 31, 2022	Jan 1–Dec 31, 2021
REVENUE	**519,284,244.25**	**175,878,056.21**
Other operating income	108,345,027.65	27,180,982.56
Materials and services		
Purchases during the financial year	-516,140,127.44	-174,429,713.55
External services	-28,043.92	-55,709.74
	-516,168,171.36	-174,485,423.29
Personnel expenses		
Salaries and remunerations	-1,782,204.34	-1,117,263.29
Employer's contributions	-253,205.33	-124,411.48
	-2,035,409.68	-1,241,674.77
Depreciation, amortization and impairment		
Depreciation and amortization according to plan	-18,639.15	-10,857.63
	-18,639.15	-10,857.63
Other operating expenses	-92,022,364.35	-16,564,835.20

Income statement €	Jan 1–Dec 31, 2022	Jan 1–Dec 31, 2021
OPERATING PROFIT/LOSS	**17,384,687.36**	**10,756,247.88**
Finance income and expenses		
Other interest and finance income from Group companies	0.00	0.00
Other interest and finance income from others	0.00	0.00
	0.00	0.00
Other interest and finance expenses	-15,815.01	-1,907.06
	-15,815.01	-1,907.06
PROFIT/LOSS BEFORE APPROPRIATIONS AND TAXES	**17,368,872.35**	**10,754,340.82**
Appropriations		
Depreciation difference (- increase, + decrease)	0.00	0.00
Group contributions (given -, received +)	175,192.93	87,321.24
Income taxes	-3,473,774.47	-2,150,868.16
PROFIT/LOSS FOR THE FINANCIAL YEAR	**14,070,290.81**	**8,690,793.90**

Balance Sheet €	Dec 31, 2022	Dec 31, 2021
ASSETS		
NON-CURRENT ASSETS		
Intangible assets		
Intangible rights	1,315.60	1,995.63
Other long-term expenditure	175,084.34	91,250.41
	176,399.94	93,246.04
Property, plant and equipment		
Machinery and equipment	9,991.52	15,330.25
Advances paid and construction in progress	0.00	4,638.67
	9,991.52	19,968.92
TOTAL NON-CURRENT ASSETS	**186,391.46**	**113,214.96**

Balance Sheet €	Dec 31, 2022	Dec 31, 2021
CURRENT ASSETS		
Inventories*	0.00	0.00
Non-Current receivable		
Derivative financial receivable	102,223,142.42	26,161,408.44
	102,223,142.42	26,161,408.44
Current receivable		
Derivative financial receivable	35,908,645.79	3,625,352.12
Trade receivables	8,792,650.88	18,303,039.87
Current receivables from Group companies	175,061.66	182,550.18
Short-term accruals	14,850,414.11	9,122,065.96
	59,726,772.44	31,233,008.12
Cash and cash equivalents	6,696,716.45	-10,585,890.69
TOTAL CURRENT ASSETS	**168,646,631.30**	**46,808,525.87**
TOTAL ASSETS	**168,833,022.77**	**46,921,740.83**

Balance Sheet €	Dec 31, 2022	Dec 31, 2021
EQUITY AND LIABILITIES		
SHAREHOLDER'S EQUITY		
Share capital	1,455.07	1,455.07
Retained earnings	9,256,685.18	565,891.28
Profit (loss) for the period	14,070,290.81	8,690,793.90
	23,326,975.99	9,256,685.18
TOTAL EQUITY	**23,328,431.06**	**9,258,140.25**
PROVISIONS	**0.00**	**0.00**

Balance Sheet €	Dec 31, 2022	Dec 31, 2021
LIABILITIES		
Non-Current liabilities		
Derivative financial liability	76,856,346.83	12,639,712.48
	76,856,346.83	12,639,712.48
Current liabilities		
Derivative financial liability	23,242,043.20	2,460,036.93
Received advances	0.00	0.00
Trade payables	24,378,421.34	4,582,561.64
Liabilities to associated companies	2,477.57	0.00
Other liabilities	20,325,321.70	17,636,506.91
Accruals and deferred income	699,981.08	344,782.63
	68,648,244.88	25,023,888.10
TOTAL LIABILITIES	**145,504,591.71**	**37,663,600.58**
TOTAL EQUITY AND LIABILITIES	**168,833,022.77**	**46,921,740.83**

Financial instruments related to electricity activities in Gasum Ltd.

The parent company's Enterprise Risk Management Policy is included in Group-level risk management documentation. Risk management aims to use derivatives to hedge the outstanding commodity position, the interest rate risk of borrowings based on variable interest rates as well as the foreign currency risk between foreign currencies and the euro. For more detailed information on risk management, see the Group's Notes 4.2 and 4.3.

Unrealized gains and losses on changes in fair values related to commodities related to electricity are recognized in other operating income and expenses presented for the unbundling activities.

Financial instruments in the income statement €	2022	2021
Other operating income		
Unrealized gains	108,345,027.65	27,180,982.56
Other operating expenses		
Unrealized losses	-84,998,640.62	-14,777,607.41

Fair values €	2022 Assets	2022 Liabilities	Net position
Commodity derivatives	138,131,788.21	100,098,390.03	38 033.398.18
Total	**138,131,788.21**	**100,098,390.03**	**38 033.398.18**
Current portion of fair value	35,908,645.79	23,242,043.20	12,666,602.59
Non-current portion of fair value	102,223,142.42	76,856,346.83	25,366,795.59

Fair values €	2021 Assets	2021 Liabilities	Net position
Commodity derivatives	29,786,760.56	15,099,749.40	14,687,011.15
Total	**29,786,760.56**	**15,099,749.40**	**14,687,011.15**
Current portion of fair value	3,625,352.12	2,460,036.93	1,165,315.19
Non-current portion of fair value	26,161,408.44	12,639,712.48	13,521,695.96

Fair value maturities 2022 €	Total	Less than 1 year	1 –2 years	2–5 years	Over 5 years
Commodity derivatives	38,033,398.18	12,666,602.59	8,566,795.32	9,071,137.87	7,728,862.40
Total cash flow	**38,033,398.18**	**12,666,602.59**	**8,566,795.32**	**9,071,137.87**	**7,728,862.40**

Fair value maturities 2021 €	Total	Less than 1 year	1 –2 years	2–5 years	Over 5 years
Commodity derivatives	14,687,011.15	1,165,315.19	2,178,517.17	4,351,444.90	6,991,733.89
Total cash flow	**14,687,011.15**	**1,165,315.19**	**2,178,517.17**	**4,351,444.90**	**6,991,733.89**

Financial instruments valued at fair value are classified according to the valuation method. The hierarchy levels used have been determined as follows:

- Level 1: quoted prices (unadjusted) in active markets for identical assets and liabilities
- Level 2: inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices)
- Level 3: inputs for assets or liabilities that are not based on observable market data (that is, unobservable inputs)

Fair values by hierarchy level	31.12.2022		31.12.2021	
€	Assets	Liabilities	Assets	Liabilities
Commodity derivatives (hierarchy level 2)	138,131,788.21	100,098,390.03	29,786,760.56	15,099,749.40
Total	**138,131,788.21**	**100,098,390.03**	**29,786,760.56**	**15,099,749.40**
Non-current portion				
Commodity derivatives (hierarchy level 2)	102,223,142.42	76,856,346.83	26,161,408.44	12,639,712.48
Total non-current portion	**102,223,142.42**	**76,856,346.83**	**26,161,408.44**	**12,639,712.48**
Total current portion	**35,908,645.79**	**23,242,043.20**	**3,625,352.12**	**2,460,036.93**

Formulas for key financial indicators

$$\text{Equity ratio (\%)} = 100 \times \frac{\text{Total equity}}{\text{Balance sheet total - Advances received}}$$

$$\text{Return on equity (\%)} = 100 \times \frac{\text{Result for the period}}{\text{Total equity (average for the period)}}$$

$$\text{Return on investment (\%)} = 100 \times \frac{\text{Profit before tax}}{\text{Total equity + Interest-bearing debt (average for the period)}}$$

$$\text{Net interest-bearing debt} = \text{Interest-bearing debt - Cash and cash equivalents}$$

$$\text{Gearing ratio (\%)} = 100 \times \frac{\text{Interest-bearing debt - Cash and cash equivalents}}{\text{Total equity}}$$

$$\text{Gearing ratio (\%) excluding the impact of IFRS16 Leases} = 100 \times \frac{\text{Interest-bearing debt -IFRS16 leasing debt - Cash and cash equivalents}}{\text{Total equity}}$$

$$\text{Net debt/EBITDA} = 100 \times \frac{\text{Interest-bearing debt - Cash and cash equivalents}}{\text{EBITDA}}$$

Board of Directors' proposal for distribution of profits

On December 31, 2022, the parent company had distributable funds of EUR 384,959,906.82. The Board of Directors proposes to the general meeting of shareholders that no dividend to be paid for the financial year from January 1 to December 31, 2022.

Signatures to the financial statements and Board of Directors' report

Espoo, March 23, 2022

Elina Engman
Chair of the Board of Directors

Stein Dale
Vice Chair
Member of the Board of Directors

Ari Vanhanen
Member of the Board of Directors

Erkka Repo
Member of the Board of Directors

Päivi Pesola
Member of the Board of Directors

Minna Pajumaa
Member of the Board of Directors

Mika Wiljanen
Chief Executive Officer

Auditor’s note

A report of the audit performed has been issued today.

Helsinki, March 23, 2023

PricewaterhouseCoopers Oy
Authorized Public Accountants

Pasi Karppinen
Authorized Public Accountant (KHT)

Auditor's Report

(Translation of the Finnish Original)

To the Annual General Meeting of Gasum Oy

Report on the Audit of the Financial Statements

Opinion

In our opinion

- the consolidated financial statements give a true and fair view of the group's financial position and financial performance and cash flows in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU
- the financial statements give a true and fair view of the parent company's financial performance and financial position in accordance with the laws and regulations governing the preparation of financial statements in Finland and comply with statutory requirements.

What we have audited

We have audited the financial statements of Gasum Oy (business identity code 0969819-3) for the year ended 31 December, 2022. The financial statements comprise:

- the consolidated balance sheet, income statement, statement of comprehensive income, statement of changes in equity, statement of cash flows and notes, including a summary of significant accounting policies
- the parent company's balance sheet, income statement, statement of cash flows and notes.

Basis for Opinion

We conducted our audit in accordance with good auditing practice in Finland. Our responsibilities under good auditing practice are further described in the Auditor's Responsibilities for the Audit of Financial Statements section of our report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Independence

We are independent of the parent company and of the group companies in accordance with the ethical requirements that are applicable in Finland and are relevant to our audit, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

Emphasis of Matter – geopolitical situation

We draw your attention to the descriptions of the effects of the current geopolitical situation in the notes to the consolidated financial statements in section 1.5. Critical accounting estimates and judgmental items as well as in the board of directors' report sections Risk factors affecting financial performance and Geopolitical uncertainty. Our opinion is not modified in respect of this matter.

Emphasis of Matter – legal proceedings and claims

We draw your attention to the description of pending matters between the company and the Energy Authority in the notes to the consolidated financial statements in section 5.5. Legal proceeding and claims. Our opinion is not modified in respect of this matter.

Responsibilities of the Board of Directors and the Managing Director for the Financial Statements

The Board of Directors and the Managing Director are responsible for the preparation of consolidated financial statements that give a true and fair view in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU, and of financial statements that give a true and fair view in accordance with the laws and regulations governing the preparation of financial statements in Finland and comply with statutory requirements. 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 financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Board of Directors and the Managing Director are responsible for assessing the parent company's and the group's ability to continue as a going concern, disclosing, as applicable, matters relating to going concern and using the going concern basis of accounting. The financial statements are prepared using the going concern basis of accounting unless there is an intention to liquidate the parent company or the group or to cease operations, or there is no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with good auditing practice 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 financial statements.

As part of an audit in accordance with good auditing practice, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, 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 opinion. 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 internal control relevant to the 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 parent company's or the group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of the Board of Directors' and the Managing Director's use of the going concern basis of accounting and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the parent company's or 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 financial statements or, if such disclosures are inadequate, to modify our opinion. 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 the parent company or the group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events so that the financial statements give a true and fair view.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Other Reporting Requirements

Other Information

The Board of Directors and the Managing Director are responsible for the other information. The other information comprises the report of the Board of Directors.

Our opinion on the financial statements does not cover the other information.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. Our responsibility also includes considering whether the report of the Board of Directors has been prepared in accordance with the applicable laws and regulations.

In our opinion, the information in the report of the Board of Directors is consistent with the information in the financial statements and the report of the Board of Directors has been prepared in accordance with the applicable laws and regulations.

If, based on the work we have performed, we conclude that there is a material misstatement of the report of the Board of Directors, we are required to report that fact. We have nothing to report in this regard.

Other Opinions Based on Statutory Law

Based on our audit, it is our responsibility to express an opinion on the matters required by the Finnish Natural Gas Market Act Chapter 13, Section 64.

The unbundled income statements, balance sheets and notes are prepared in accordance with Finnish Natural Gas Market Act and with related rules and regulations.

Other Statements

We support that the financial statements and the consolidated financial statements should be adopted. The proposal by the Board of Directors regarding the use of the profit shown in the balance sheet is in compliance with the Limited Liability Companies Act. We support that the Board of Directors and the Managing Director of the parent company should be discharged from liability for the financial period audited by us.

Helsinki, March 23, 2023
PricewaterhouseCoopers Oy
Authorised Public Accountants

Pasi Karppinen
Authorised Public Accountant (KHT)

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