2021

GASUM FINANCIAL REVIEW

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Information about Annual Reporting for 2021
Gasum's Annual Reporting for 2021 comprise Gasum Financial Review, Governance and Remuneration Report and Corporate Responsibility Report, which is available on the Gasum webpage, Publications and Key figures.

THE CHANGE TOWARDS SUSTAINABLE ENERGY SOLUTIONS IS ACCELERATING

Gasum managed to grow volumes in all its business segments during the second full pandemic year. In 2021, the company expanded its geographic operating area and promoted its strategy in the Maritime, Industry, and Traffic business segments. Market developments in late 2021 also featured an unusual increase in natural gas prices.

For Gasum and much of the world, the year 2021 was a year of challenges and changes. The COVID-19 pandemic continued to affect our entire operating environment, and turmoil in the energy market pushed natural gas prices to an exceptionally high level which required major risk reduction measures from us. Despite the challenges, we achieved growth in volume throughout all three of our major business segments: Industry, Traffic, and Maritime.

Biogas will play a significant role as an energy solution of the future and in our company's growth. In accordance with our sustainability targets adopted at the start of the year, we are aiming for a cumulative carbon dioxide emission reduction of one million tons by increasing the availability of biogas. By 2025, we intend to make 4 TWh of biogas available to the market from our own production and that of our certified European partners. Our biogas production volume increased by 25% in 2021 when compared to the previous year. Also during 2021, we opened two new biogas plants. Our Lohja biogas plant in Finland opened in January and produces around 40 GWh of biogas annually as well as recycled fertilizers suitable for organic farming. In April, we opened a biogas plant with Stora Enso on their pulp and paper mill site in Nymölla, Sweden. The plant uses Stora Enso's process water to produce around 80 GWh of liquefied biogas annually.

In November, we finalized the sale of our gas liquefaction plant located in Risavika, Norway, to North Sea Midstream Partners (NSMP). We also signed a long-term tolling agreement with NSMP concerning the Risavika plant. This will ensure deliveries of liquefied natural gas (LNG) and liquefied biogas (LBG) to our customers in the future. The transaction is also in line with Gasum's growth strategy, as owning a liquefaction plant like the one in Risavika is no longer at the core of our strategy.

In February, we obtained an LNG distribution license for French ports and waters. The license enabled us to bunker LNG to the cruise ship operator PONANT's polar explorer in Le Havre, France, which serves as a strong indication of our geographical expansion into Central Europe. Towards the end of 2021, we entered yet another new operating area as we moved the location of our bunkering vessel Kairos to the Antwerp-Rotterdam-Amsterdam (ARA) area. In the future, our aim is to further expand the geographical coverage of our maritime fuel supply.

Demand for gas continued to grow in road transport. In June, the Finnish Government included biogas in the distribution obligation of transport fuels effective from the beginning of 2022. We believe this will speed up especially the transition of road transport logistics to cleaner fuel solutions. 2021 also saw us open seven new gas filling stations and implement expansion projects to upgrade our existing gas filling station network in the Nordic countries.

Gasum is a one-stop-shop for its customers in the energy market. During the year we increased our role in managing our industrial customers' energy portfolios as planned, as the industrial interest in the use of gas and in renewable energy continued to grow. We are also working actively towards sustainable development goals together with our customers. We strengthened our role, for example, by concluding wind power agreements with Borealis AB, Kerava Energy, K Group, Outokumpu, Uponor, and Nokian Tyres and we also began delivering renewable biogas to the hygiene and health company Essity and to Uddeholm, the world's leading manufacturer of tool steel.

The beginning of September saw our long-serving CEO Johanna Lamminen move towards new challenges, and at the end of the year the Gasum Board of Directors appointed Mika Wiljanen as the new CEO, effective from March 1, 2022.

We are entering into 2022 following another full year of dealing with the COVID-19 pandemic. During 2021, the impacts of the pandemic were reflected more in people's everyday lives than in our business. I am very proud to say that Gasum's activities have been performed normally throughout the pandemic. Thanks for this belong to our professional and highly competent personnel.

Change towards sustainable energy solutions does not happen overnight. It requires a period of transition during which a variety of energy solutions are employed. They are not competing with the solutions of the future. Instead, they are enabling new solutions thanks to assets such as existing infrastructure. Our task is to guide our customers to sustainable energy solutions and help them to reduce their greenhouse gas emissions – today and tomorrow.

Kai Laitinen
CFO, (Interim CEO, September 1, 2021 to February 28, 2022)

FINANCIAL STATEMENTS AND BOARD OF DIRECTORS' REPORT 2021

BOARD OF DIRECTORS' REPORT

FINANCIAL DEVELOPMENT OF GASUM GROUP'S BUSINESS IN 2021

Year 2021 was characterized by uncertainty created by the COVID-19 pandemic and price fluctuations in energy markets. Energy market price development was exceptional throughout the year and was reflected in late 2021 in the unprecedentedly high natural gas price levels in particular.

Despite the challenging operating environment and the turmoil in the energy markets, Gasum invested in the continuous development of products, services and operations. Company continued the development of the Nordic gas market and expanded its geographic operating area as well as promoted its strategy in the various business areas in Industry, Maritime, and Traffic.

As part of its strategy, in November 2021, Gasum sold the Risavika LNG liquefaction plant to North Sea Midstream Partners (NSMP) and in that context also entered into a long-term tolling agreement with NSMP concerning the plant, which will ensure deliveries of liquefied natural gas (LNG) and liquefied biogas (LBG) to customers from the Risavika plant also in the future.

In the Industry business, volumes delivered to customers increased by 11% year on year. During 2021, Gasum executed its plan to increase its role in energy portfolio management for industrial customers. Gasum is working actively towards sustainable development goals together with its customers. The company concluded long-term wind power agreements with Borealis, Nokian Tyres, Outokumpu, Stena Renewable, and Uponor. Gasum also signed a contract with Nynäs AB on deliveries of natural gas to a refinery in Gothenburg, Sweden.

In the Maritime business, volumes delivered to customers increased by 32% year on year. Gasum is continuously developing the supply of fuels and services in response to the growing needs of maritime transport.

Volumes sold in the Traffic business increased by 61% 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 12 gas filling stations around the Nordic countries during the year.

Gasum is aiming for a cumulative reduction of a million tons in carbon dioxide emissions to curb climate change. During the year, Gasum brought 1 TWh of biogas to market and increased the production volumes of its biogas plant network by around 25% by opening plants in locations including Lohja, Finland, and Nymölla, Sweden, for commercial use during the year. Gasum also agreed on cooperation with Metsä Fibre in biogas processing at the biogas plant operating as part of Metsä Fibre's Äänekoski bioproduct mill in Finland. Target is to increase the availability of biogas by bringing to market by 2025 a total of 4 TWh of biogas from its own production and that of its certified European partners.

The Gasum Group's revenue for the period under review totaled €1,571.0 million, up 136% on the corresponding period a year earlier (2020: €664.3 million). The increase in revenue was affected by the high market price of gas especially during the third and fourth quarters of the year and by volume growth in almost all of Gasum's segments year on year. Natural gas sales volumes remained at the same level year on year.

The Group's operating result was €238.5 million (2020: €5.7 million) and the operating result margin was -15.2% (2020: 0.9%). The Group's balance sheet total was €2,420.7 million (December 31, 2020: €1,362.0 million) on December 31, 2021. High gas prices resulted in a negative market value for hedge derivatives hedging future cash flows and prices, which had a decreasing effect on the company's result and equity. Increased need for working capital and cash collaterals related to derivative positions tied up capital. However, the capital loan issued and divestment of Risavika liquefaction plant improved cash position and decreased the net interest-bearing debt. The Group's net interest-bearing debt at the reporting date totaled €473.1 million (December 31, 2020: €597.6 million), including borrowings from financial institutions as well as finance lease liabilities.

The Group's equity ratio was 18.0% (December 31, 2020: 36.0%). The reduction in equity ratio resulted primarily from the increase in working capital items and fair values of derivative contracts in the balance sheet. To strengthen the financial position and prepare for consequences from the general market situation and uncertainty, Gasum agreed in September 2021 on a €210 million short-term loan maturing in March 2022. In addition, Gasum and Governia Oy agreed in December 2021 on a capital loan of €199 million treated as equity of Gasum. The capital loan agreement and the arrangements strengthened the Group's and parent company's equity and liquidity.

KEY FINANCIAL INDICATORS*

€ thousand	2021	2020
Revenue	1,571,031	664,313
Adjusted operating result*	-84,391	33,828
Operating result	-238,516	5,682
Adjusted operating result (%)*	-5.4%	5.1%
Operating result (%)	-15.2%	0.9%
Equity ratio (%)	18.0%	36.0%
Adjusted return on equity (%)*	-28.4%	2.7%
Return on equity (%)*	-55.1%	-1.8%
Adjusted return on investment (%)*	-8.5%	2.8%
Return on investment (%)	-21.4%	0.6%
Balance sheet total	2,420,708	1,362,026
Net interest-bearing debt	473,095	597,643
Gearing ratio (%)	109.1%	121.9%
Gearing ratio (%) excluding the impact of IFRS 16 leases	61.4%	108.0%
Personnel at the end of period	356	384

*Calculated without unrealized gains and losses from derivatives relating to operative business.

OPERATING ENVIRONMENT

Energy market – Industry and power market

The prices of gas and emission allowances started to increase in the beginning of 2021 and accelerated in the second half of the year. Several factors contributed to the rise in prices. However, the main contributing factor was the uncertainty related to the gas supply.

European gas storage levels were historically low ahead of the winter season, which continued to bring market imbalances as supply remained unchanged or even declined when Russian gas producers were mainly filling up their domestic storage. The La Niña weather pattern appeared for a second consecutive winter, bringing cold air to Asia in particular, which increased demand for LNG shipments in North-east Asia.

On a single day in early October, the price of natural gas in Europe rose close to €160/MWh, which at that point was clearly the highest price level ever seen in the market. At the same time, power prices also rose to record high levels with, for example, German power price climbing as high as €330/MWh. Prices were seen to hit new all-time highs again just before the turn of the year, as the price of gas in Europe rose to €185/MWh.

The emission allowance price also rose to new record levels, reaching almost €92/t. Likewise, the price of quarterly power contracts in Germany rose to €435/MWh, the highest ever recorded. The surge in energy prices has also contributed to the strong increase in inflation pressure around the world.

Year 2021 started with very cold, low wind, and dry weather conditions, which drove the Nordic power prices well above the historical average price level. The Nordic hydro balance was not able to climb at normal level until summer, keeping the Nordic power prices at high level throughout the whole year. In the beginning of last quarter some relief was experienced on the Nordic hydro balance as weather pattern changed to mild, rainy, and windy.

Nordic power prices were at exceptionally high level in 2021. The Nordic hydro balance was at a reasonably good level but the cold weather and, in particular, the record-high Central European power and other energy product prices kept power prices at very high level also in the Nordic countries. Especially the end of fourth quarter of 2021 will go down in history for its exceptionally high gas and power prices.

Maritime and road transport

The global economy has grown since the third and fourth waves of COVID-19, but the uncertainty especially related to energy market increased.

Despite the current uncertainties, in longer term the number of LNG-fueled vessels is expected to increase. According to the LNG vessel orderbook published by DNV, during the next three years more than 350 new LNG tankers will be delivered. Companies regard environmental friendliness as a competitive advantage when moving towards the stricter emission reduction targets.

The global shortage of components caused major difficulties in the delivery of gas-fueled trucks and cars, with the numbers delivered clearly below potential levels. Alongside the growing number of vehicles, the strong expansion of the gas filling station network continued in the Nordic countries, making it easier to reach the stricter transport emission targets. A similar trend was also seen in Central Europe, where new actors have entered the distribution market.

Orders for new gas-fueled vehicles continued to grow over the year in the Nordic countries. More than 2,100 gas-fueled vehicles, of which more than 220 were vans and trucks, were registered in Finland during 2021. In Sweden, the corresponding figures were more than 2,200 and more than 500 and in Norway more than 1,500 and 750 respectively. The number of gas-fueled vehicles already totals almost 16,000 in Finland, more than 50,000 in Sweden and almost 5,000 in Norway.

Circular economy – Biowaste and biogas

An efficient way of curbing climate change is to use biowaste and biodegradable side streams in biogas production. Biogas production promotes the circular economy in the form of energy and through recycling of nutrients to for example fertilizer use. Growth in biogas production and use is supported and encouraged in the Nordic countries. New competitors have entered the market which has increased competition for raw materials.

Swedish Government announced in autumn 2021 that it will increase its support for biogas production. Gasum has prepared plans to step-up biogas production by multiple new biogas plant projects in Sweden. Raw materials used in this context will mainly comprise animal-based side streams, such as manure.

In Finland, the inclusion of biogas in the distribution obligation of transport fuels effective from the beginning of January 2022 provides an incentive for increased transport use of biogas and speeds up the phasing out of fossil fuels in road transport as cost-effectively as possible. The inclusion of biogas in the distribution obligation also seeks to boost economic growth and job creation.

The distribution obligation resulted in a tax on the transport use of biogas, equaling the energy component of the tax on natural gas, around €10/MWh. In other (heating and work machinery) use, biogas is tax free, provided that sustainability targets set in the Renewable Energy Directive are met. The tax changes pose challenges for the sector due to the tight phasing-in schedule. Amendments made to the taxation of electricity did not take account of applying a lower tax bracket on electricity used in biogas production, as is the case in other production of transport fuels.

Additions to the separate collection obligation following the entry into force of the new Finnish Waste Act and the opening up of the market will increase the availability of biowaste for biogas production, which will facilitate growth in biogas production. No progress has been made in a production support package for manure-based biogas, and the deployment of manure-based biogas production on a large scale appears unlikely in Finland.

STRATEGY

In recent years, Gasum has increased efforts in expanding its' business especially in liquefied natural gas, biogas, and wind power.

Year 2021 was characterized by uncertainties in European energy markets. Gasum continued implementation of its strategy by taking steps together with customers and partners in industry and in road and maritime transport. Gasum is developing gas distribution logistics, infrastructure and its production and procurement portfolios on land and at sea by acting as a one-stop-shop partner for its customers in the energy market. Gasum aims to create value by developing a low-carbon society and helping its customers to reduce their own carbon footprint as well as that of their customers. Renewal and agile management and leadership are also key components of the Gasum strategy.

Gasum increased its role in the management of industrial customers' energy portfolios as planned during the year. Industrial interest in the use of gas and in renewable energy continued to grow. Gasum concluded long-term wind power agreements with Borealis, Nokian Tyres, Outokumpu, Stena Renewable, and Uponor. Gasum also delivered biogas for a longer-term testing period to replace natural gas at the Swedish Essity's tissue production facility and entered a contract on the delivery of natural gas to the refinery of the oil and bitumen company Nynäs AB in Gothenburg, Sweden.

Gasum is focusing on developing environmentally friendly products for maritime transport. In shipping, interest in an environmentally friendly fuel that is regarded as a competitive advantage when moving towards stricter emission reduction targets has grown. However, the steep increase in gas prices especially in the second half of 2021 has somewhat slowed down the development. During the year, Gasum entered into a framework agreement on the delivery of LNG in 2021–2022 to the Finnish Transport Infrastructure Agency and the Finnish Border Guard. Gasum also entered into an agreement with the City of Vaasa, NLC Ferry Oy and Wärtsilä Finland Oy on the supply of LNG to a Wasaline passenger ferry operating between Vaasa, Finland, and Umeå, Sweden, and for use in Wärtsilä's new Smart Technology Hub. In February, Gasum expanded the delivery of LNG and obtained an LNG distribution license covering French ports and waters. During the period under review, Gasum bunkered the cruise ship operator PONANT's polar explorer in France. Towards the end of the year, the company expanded its operating area further to the Amsterdam-Rotterdam-Antwerp (ARA) area.

Gasum has 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 12 gas filling stations in Finland and Sweden during the year. The year also saw Gasum enter into a cooperation agreement with Eurowag, thanks to which the Eurowag card can now be used at Gasum gas filling stations in Finland and Sweden. The partnership supports Gasum's goal to connect the Nordic and Central European transport gas markets.

PostNord introduced biogas-fueled vehicles for deliveries of Tamro medicines and health and wellbeing products, and DACHSER Finland procured biogas-fueled trucks for its short-distance deliveries in the Helsinki Region. In addition, Gasum delivered biogas for the Flixbus bus service between Stockholm and Oslo and for Green L Equipment Ab for deliveries for the food company HKScan. Six Finnish cities – Hanko, Hyvinkää, Lohja, Loviisa, Porvoo and Raasepori – and waste management company Rosk'n Roll now use biogas-fueled vehicles to transport wastewater plant sewage sludge as well as biowaste for use as raw material in the Gasum biogas plant network.

CAPITAL EXPENDITURE AND DIVESTMENT

The Gasum Group's capital expenditure before government grants in 2021 totaled €59.1 million (2020: €185 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 €8.3 million in investment support in Finland and Sweden during the financial year (2020: €9 million).

On 16 November 2021, Gasum and North Sea Midstream Partners (NSMP) closed a transaction where Gasum sold a gas liquefaction plant located in Norway to NSMP. The parties also signed a long-term tolling agreement under which Gasum will be a major off-taker of the liquefied natural gas (LNG) and liquefied biogas (LBG) produced at the plant.

QUALITY, THE ENVIRONMENT, SAFETY AND SECURITY AND RESPONSIBILITY

The basic principles guiding sustainability and responsibility at Gasum are the Code of Conduct, the integrated management system (IMS) and the Corporate Responsibility Program. The Code of Conduct helps to ensure there is a shared view in the company of the values and principles that everyone complies with when working with customers, partners and together as an organization.

The Gasum IMS aligns the company's approaches and enables continuous improvement of the company's performance capacity relating to quality, environmental and energy management as well as occupational health and safety and the verification of biogas sustainability. In 2021, the coverage of the certified systems was expanded regarding Finnish biogas plants in particular.

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. During the period under review Gasum committed to the UN Global Compact initiative on corporate sustainability, which sets ten principles relating to human rights, labor, the environment and anti-corruption. The focus areas of the Gasum Corporate Responsibility Program are safety and security, climate change mitigation, circular economy, access to energy, people, and responsible business.

The company has set responsibility targets and monitors their achievement for each focus area. Gasum aims at zero injuries, increasing low-carbon energy solutions, enabling climate change mitigation through reductions in customers' greenhouse gas emission, and increasing energy efficiency. In addition, Gasum aims at ensuring compliance in its own operations and with business partnerships and at promoting leadership and competence among employees.

The company aims for cumulative carbon emission reductions of a million tons by increasing biogas availability by 2025. To achieve this, Gasum intends to make 4 TWh of biogas available on the market from its own production and that of certified European partners. Gasum increased the production volumes of biogas plants by around 25% by opening plants in locations such as Lohja, Finland, and Nymölla, Sweden, for commercial use during the year. Gasum also agreed on cooperation with the Metsä Group company Metsä Fibre in biogas processing at the biogas plant operating as part of Metsä Fibre's Äänekoski bioproduct mill in Finland. Gasum will buy the biogas produced at Metsä Fibre's plant for use as a road transport fuel in the Gasum filling station network. The year also saw Gasum promote its biogas plant projects in Götene and the planned Skåne biogas project in southern Sweden, as well as to develop the functions of the Turku biogas plant in Finland to increase the efficiency of odor management. Gasum progressed towards its target throughout the year and produced 1 TWh of biogas for the market.

Positive development in demand for cleaner energy enabled emission reductions for customers in industrial production processes as well as in maritime and road transport logistics solutions. Customers' climate commitments were strengthened through wind power purchase agreements. Gasum is also investing in developing the production of other renewable gases, such as synthetic methane and green hydrogen, in the Nordic countries.

Gasum strengthened circular economy cooperation with its partners and took part in projects on themes including the development of centralized recycling of nutrients from wastewater sludge. The company also entered into cooperation in a project coordinated by the Baltic Sea Action Group where sewage wastewater from cargo ships is discharged at the port and used to produce biogas. The cooperation speeds up the circular operating model, develops the waste management value chain between the various actors and reduces the nutrient load of the Baltic Sea.

The development of Gasum's safety and security culture continued through the promotion of safety and security awareness among employees, contractors and transport service providers. In 2021, the Lost Time Injury Frequency (LTIF) declined by around 4% year on year. There were zero environmental breaches and other environmental nonconformities with significant environmental impacts in 2021.

Health and safety measures to prevent the spread of COVID-19 infections were continued in accordance with national recommendations. Gasum also surveyed employee experiences and adaptation to the new digital remote working methods of the pandemic period. The company continued to develop employee wellbeing and an agile work and feedback culture through training. The recruitment process was developed to ensure the right kind of competence in the future, too.

RESEARCH AND PRODUCT DEVELOPMENT

The circular economy and recycled nutrients as well as the opportunities arising from renewable gases are at the core of Gasum's research and product development. Gasum is involved e.g., in Hydrogen and Carbon Value Chains in Green Electrification (HYGCEL) research and consortium project including the public research part. Gasum supports research and development in the gas sector through the Gasum Gas Fund. In 2021, six research grants, amounting to a total of €63,000 (2020: €75,000), were given out from the Gasum Gas Fund administered by the Finnish Foundation for Technology Promotion.

PERSONNEL

On December 31, 2021, the Gasum Group had a total of 356 employees (December 31, 2020: 384). Of these, 60% were employed in Finland, 26% in Sweden, 13% in Norway and 1% in Germany.

One of Gasum's strategic focus areas is agile management and leadership. Agile ways of working, active cooperation and feedback using the Gasum Pulse Survey have been company-wide tools used to respond to the challenges caused by the COVID-19 pandemic and the changing operating environment. Gasum also continued the anchoring of the Gasum leadership principles into the company's practices and everyday work. During the year, Gasum launched work to develop the Leading for Impact culture for leadership development and for measuring the business impacts of leadership.

CHANGES IN MANAGEMENT

On 1 September 2021, Chief Financial Officer Kai Laitinen was appointed Interim CEO of the company as Johanna Lamminen left the CEO position. Mika Wiljanen was appointed as the new CEO of Gasum Group effect from 1 March 2022 and Kai Laitinen continues as CFO.

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. Gasum Consulting Oy has merged with parent company Gasum Ltd on March 31, 2021.

The ordinary general meeting of Gasum Ltd on March 26, 2021 confirmed the number of members of the Board of Directors as being seven. Elina Engman was re-elected as the Chair of the Board of Directors and the current members of the Board of Directors Elisabet Salander Björklund, Stein Dale, Torbjörn Holmström, Minna Pajumaa, Päivi Pesola and Ari Vanhanen were re-elected for the next term of office. The Board's work is supported by the Audit and Risk Committee and the HR Committee.

RISK FACTORS AFFECTING FINANCIAL PERFORMANCE

As regards to the possible impacts of the war in Ukraine on Gasum's business, see 'Events after the reporting period' in the Board of Directors' Report and Note 5.6 Events after the reporting period.

Gas market price development was unprecedented and market volatility increased significantly during 2021. The market development has increased the collateral requirements for hedge derivatives and the cash flow risk. The company has taken mitigating measures to manage the cash flow risk both by adjusting positions requiring cash collateral in particular, and by increasing current liabilities and issuing a capital loan treated as equity.

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 demand for natural gas and liquefied natural gas (LNG). 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, such as changes in business caused by the COVID-19 pandemic and geopolitical factors.

Geopolitical factors affect Gasum's business through international supply chains. A significant share of deliveries for Gasum as well as other European gas sellers comes from Russia. Gasum procures liquefied natural gas also from Norway and globally through terminals in Central Europe. Majority of the LNG directly sourced by Gasum is coming from outside of Russia. Company is the largest producer of renewable biogas in the Nordics, and it also procures biogas from its partners.

Trade sanctions against the Russian energy sector would have significant impacts on Gasum's operating environment, the surrounding markets and the company's supply capability. Gasum is continuously monitoring geopolitical risk development and conducting active dialogue with the relevant national authorities and stakeholders regarding the situation. Company does not have operations or assets in Russia.

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, 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.

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.

Cybersecurity-related risks are growing, and Gasum is investing continuously in employee training and in technical solutions to improve cybersecurity.

Financial

Gasum's business involves risks relating to the market price development of gas products, which the company hedge with derivative products. Highly volatile market environment has resulted in special cash flow risks related to derivatives, which have been elaborated in both Board of Director's report and the 'Financial risk' note to the financial statements. Other financial risks include interest rate risk, price risk, foreign currency risk, credit 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 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 growth 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 business unit and Group function 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.

FUTURE OUTLOOK

In the energy markets, the start of 2022 has been challenging due to increased geopolitical risks and high price fluctuations in the markets. Gasum has closely monitored the development of geopolitical tensions and the development of the war in Ukraine and made preparations by analyzing alternative scenarios and by developing capability to react e.g. to changes in energy markets. We expect uncertainty to continue in the energy market.

The importance of gas as a low-emission energy source over the longer term will increase as the Nordic countries move towards carbon-neutral energy production. Combating climate change also requires a shift to cleaner solutions.

Liquefied natural gas (LNG) is the most environmentally friendly fuel in maritime transport and meets all current and upcoming, known IMO environmental requirements. In heavy-duty transport, LNG can help to cut greenhouse gas emissions by more than 20% compared with fossil diesel, and the lifecycle greenhouse gas emissions of liquefied biogas (LBG) are up to 90% less than those of conventional fossil fuels.

The use of gas and renewable electricity is projected to grow in the years ahead, particularly in industry as well as in road and maritime transport. Gasum has been preparing for the growth in demand by investing purposefully in the development of the Nordic gas infrastructure for several years already. The expanding gas infrastructure creates a good foundation for the increased production and use of biogas, too. So far, only a fraction of the biogas production potential is in use.

Gasum's investments in the Nordic gas ecosystem and in new business functions facilitate future growth. The capacity to operate more broadly in the energy market strengthens Gasum's position comprehensively as an energy company of the future. The company is involved in a number of different projects and cooperation bodies which are also planning to develop the production of other renewable gases, such as synthetic methane and green hydrogen, in the Nordic countries.

EVENTS AFTER REPORTING PERIOD

Russia attacked Ukraine in February 2022. Gasum has been monitoring closely the development of the war in Ukraine and its impacts on the energy sector. Gas imports from Russia to Europe have continued normally so far, but the geopolitical situation and related sanctions imposed as well as any additional sanctions and countersanctions and their consequences, result in uncertainty regarding the company's operations, demand for gas and gas deliveries. The Russian supplier of natural gas has demanded payments for gas to be made in rubles and stated that it may restrict supply if the contractual amendments are not accepted. Contractual obligations in the event of the discontinuation of deliveries of natural gas and liquefied natural gas could be significant. The company is mitigating the risk of supply cuts e.g. by exploring alternative supply methods.

The geopolitical situation also affects the surge in gas price as well as price fluctuations. The company has contractual Take or Pay obligations which, in the event of major decrease in gas demand and increase in price, could have a significant impact on the financial statements of the company. Price movements may also result in changes in the company's assets and the fair value of derivatives, which may also affect the related cash collateral required. The company has continued measures to adjust derivative hedge positions especially for which cash collaterals are required.

The company is monitoring the situation actively and continues active dialogue with relevant national authorities and stakeholders to ensure compliance with both EU policies as well as legislation and regulations in force, including sanctions. To prepare for the situation and any changes, Gasum is continuously preparing mitigating measures to reduce the impacts of any escalation. The Group has also had exceptionally high cash holdings and liquidity in early 2022 due to the situation. After the reporting date, the company has extended the short-term finance loan of €210 million drawn in September to June 2022.

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 capability to react to possible challenges in the energy markets.

BOARD OF DIRECTORS' PROPOSAL FOR DISTRIBUTION OF PROFITS

On December 31, 2021, the parent company had distributable funds of €272,315,380.29. 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, 2021.

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CONSOLIDATED FINANCIAL STATEMENTS

CONSOLIDATED STATEMENT OF INCOME

€ thousand

	Note	Jan 1–Dec 31, 2021	Jan 1–Dec 31, 2020
Revenue	2.1	1,571,031	664,313
Other operating income	2.2	**383,693**	**107,657**
Materials and services	2.3	-1,377,289	-542,505
Personnel expenses	2.4	-39,338	-34,388
Depreciation, amortization and impairment	2.5	-68,792	-56,384
Other operating expenses	2.6	-706,925	-133,973
Share of profit/loss of investments accounted for using the equity method		-897	964
Operating result		**-238,517**	**5,682**
Finance income		26,936	26,883
Finance expenses		-44,222	-41,515
Total finance income and expenses	2.8	-17,286	-14,633
Result before taxes		**-255,804**	**-8,950**
Current income tax expense	2.9	-3,061	-3,196
Change in deferred taxes	3.9	4,220	3,178
Result for the period		**-254,645**	**-8,968**
Result for the period attributable to:			
Owners of the parent		-254,641	-8,973
Non-controlling interest		-4	5

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

€ thousand

	Note	Jan 1–Dec 31, 2021	Jan 1–Dec 31, 2020
Result for the period		**-254,645**	**-8,968**
Other items in comprehensive income			
Items that will not be reclassified to profit or loss			
Remeasurements of post-employment benefit obligations	3.11	-2,446	328
Taxes related to items that will not be reclassified to profit or loss		489	-66
Total		-1,957	262
Items that may be reclassified subsequently to profit or loss			
Translation differences		808	2,378
Cash flow hedges		423	-8,523
Taxes related to items that may be reclassified subsequently to profit and loss		-85	1,526
Total		1,148	-4,620
Total comprehensive result for the period		**-255,454**	**-13,325**
Total comprehensive income for the period attributable to:			
Owners of the parent		-255,448	-13,330
Non-controlling interest		-6	5

CONSOLIDATED BALANCE SHEET

€ thousand

	Note	Dec 31, 2021	Dec 31, 2020
ASSETS			
Non-current assets			
Intangible assets	3.1	192,788	213,412
Property, plant and equipment	3.2	691,937	849,521
Equity-accounted investments	3.3	11,021	11,266
Other investments at fair value through profit or loss		50	50
Derivative financial instruments	4.3	37,501	11,277
Deferred tax assets	3.8	2,252	0
Other non-current assets		212	207
Total non-current assets		**935,760**	**1,085,733**
Current assets			
Inventories	3.5	247,451	55,859
Derivative financial instruments	4.3	233,316	39,595
Trade and other receivables	3.4	616,817	171,176
Current tax assets		0	135
Assets held for sale	3.7	0	1,561
Cash and cash equivalents*	3.8	387,364	7,967
Total current assets		**1,484,948**	**276,293**
Total assets		**2,420,708**	**1,362,026**

*Cash and cash equivalents have been reclassified in relation to deposits required for negative net positions of derivative instruments at reporting date.

CONSOLIDATED BALANCE SHEET

€ thousand

	Note	Dec 31, 2021	Dec 31, 2020
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	-338
Translation differences		-1,596	-2,406
Retained earnings		66,527	323,125
Capital loan		199,000	0
Total equity attributable to owners of the parent		**433,670**	**490,120**
Non-controlling interest		18	24
Equity		**433,688**	**490,144**
Liabilities			
Non-current liabilities			
Loans	4.6	445,656	344,833
Non-current lease liabilities	4.7	169,972	192,090
Derivative financial instruments	4.3	50,901	11,115
Deferred tax liabilities	3.9	7,050	31,009
Provisions	3.10	27,329	19,817
Post-employment benefits	3.11	5,600	3,457
Total non-current liabilities		**706,508**	**602,321**
Current liabilities			
Loans	4.6	207,911	0
Derivative financial instruments	4.3	383,438	51,641
Trade and other payables	3.6	684,766	216,905
Current income tax liabilities		4,396	1,015
Total current liabilities		**1,280,512**	**269,561**
Total liabilities		**1,987,020**	**871,882**
Total equity and liabilities		**2,420,708**	**1,362,026**

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

€ thousand	Attributable to owners of the parent Share capital	Reserve for invested unrestricted equity	Fair value reserve	Retained result	Translation differences	Capital loan	Total	Non-controlling interest	Total shareholders' equity
Equity at January 1, 2021	**10,000**	**159,739**	**-338**	**323,125**	**-2,406**		**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**

€ thousand	Attributable to owners of the parent Share capital	Reserve for invested unrestricted equity	Fair value reserve	Retained result	Translation differences	Total	Non-controlling interest	Total shareholders' equity
Equity at January 1, 2020	**178,279**	**26,280**	**6,660**	**530,465**	**-4,784**	**736,900**	**19**	**736,919**
Result for the period				-8,973		-8,973	5	-8,968
Other items in comprehensive income								
Remeasurement of post-employment benefits				262		262		262
Translation differences					2,378	2,378		2,378
Cash flow hedges			-6,998			-6,998		-6,998
Total comprehensive income for the period			**-6,998**	**-8,711**	**2,378**	**-13,330**	**5**	**-13,325**
Transactions with owners								
Profit distribution				-20,002		-20,002		-20,002
Effect of demerger*	-10,000	-26,280		-182,657		-218,937		-218,937
Reduction of share capital	-158,279	158,279						
Other changes		1,460		4,030		5,489**		5,489
Equity at December 31, 2020	**10,000**	**159,739**	**-338**	**323,125**	**-2,406**	**490,120**	**24**	**490,144**

*For more information see 5.1 Business acquisitions and disposals
**Due to change of functional currency of Gasum AB, Sweden. For more information see 'FOREIGN CURRENCY ITEMS' under General accounting principles.

CONSOLIDATED STATEMENT OF CASH FLOWS

€ thousand

	Note	Jan 1–Dec 31, 2021	Jan 1–Dec 31, 2020
Cash flows from operating activities			
Result before income tax		-255,801	-8,950
Adjustments			
Depreciation, amortization and impairment	2.5	68,792	56,384
Finance items - net	2.8	17,286	14,964
Unrealized gains/losses on financial instruments		154,085	9,718
Gains and losses on the divestment of fixed assets		-1,971	
Other non-cash adjustments		40,038	31,859
Change in working capital		-114,671	-34,874
Cash inflow from operating activities before financial items and taxes		-92,242	69,101
Interest paid, leasing interest and other financial items		-24,181	-25,149
Received financial income		4,688	5,090
Taxes paid		1,300	1,882
Cash flow from financial items and taxes		-18,193	-18,177
Net cash flows from operating activities		**-110,434**	**50,924**
Cash flows from investing activities			
Investments in tangible assets		-54,934	-77,540
Investments in intangible assets		446	-1,921
Investment grants received		8,305	
Proceeds from sale of tangible assets		347	9,717
Business acquisitions		0	-119,996
Divestments of subsidiaries		145,435	
Increase/Decrease in non-current receivables		-47,658	
Net cash flows from investing activities		**51,940**	**-189,740**
Cash flows from financing activities			
Proceeds from capital loans		199,000	
Proceeds from non-current borrowings		100,835	122,104
Proceeds from current borrowings		207,900	60,469
Repayments of current borrowings		-60,469	-841
Payment of leasing liabilities		- 10,468	-12,316
Dividends paid			-20,002
Net cash flows from financing activities		**436,798**	**149,414**
Net decrease (-)/increase (+) in cash and cash equivalents		**378,303**	**10,597**
Cash and cash equivalents at the beginning of the period*		7,967	10,057
Cash outflow from demerger			-12,686
Exchange rate differences/Losses on cash and cash equivalents		1,094	
Cash and cash equivalents at the end of the period	3.8	**387,364**	**7,967**

The Net debt reconciliation is presented under 4.1 Capital management.

*Cash and cash equivalents have been reclassified under change in working capital in relation to deposits required for negative net positions of derivative instruments at reporting date.

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 380 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 April 13, 2022.

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, 2021. 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 functional currency of Gasum Ab was changed to euro in 2020. The management of the Group has analyzed Gasum AB's incoming and outgoing cash flows (primary indicators) in accordance with IAS 21. The analysis was conducted when Gasum LNG AB merged with Gasum AB. The functional currency of Gasum LNG AB was the euro. The analysis found that these cash flows were mainly in euros following the merger. Gasum AB operates in the gas market and gas market prices are determined according to world market prices in euros, whereby the company's revenue and sourcing are based on euros. This is why the management of the company changed the functional currency of Gasum AB to the euro.

The Group also has a company operating in Norway with the euro determined as its functional currency.

1.4 New and revised standards

The consolidated financial statements have been prepared in compliance with the same accounting policies as in 2020. Other new standards, interpretations and amendments to existing standards effective from 2021 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, 2021 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. 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.

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 3.10.

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.

Gasum's CGUs until March 1, 2021 were the LNG, Energy Market Services and Biogas businesses. Gasum adopted a new structure for its business functions effective from March 1, 2021 and classified the Group functions into three business units and two business support units. 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 Portfolio Management and Trading unit. No goodwill is allocated to the natural gas sales business. The intangible and tangible assets of the Portfolio Management and Trading unit have been allocated to the Industry and Maritime business units for impairment testing. Following the organizational change, the goodwill allocated to the LNG and Energy Market Services business functions has been allocated to the new Industry and Maritime business units in proportion to their fair values. Goodwill relating to Biogas in turn has been allocated to the Traffic business unit as it primarily serves Traffic customers.

At December 31, 2021, goodwill on the Gasum balance sheet amounted to €107.4 million (2020: €122.7 million). €16.6 million of the goodwill was allocated to the divested LNG liquefaction plant located in Norway, reducing the goodwill of the Industry and Maritime business units on the basis of relative fair values. 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, 2021 includes a deferred income tax asset of €16.8 million recognized for adopted losses (2020: €15.8 million). Further information regarding taxes is presented under Note 2.9 Income tax expenses and Note 3.9 Deferred taxes.

GEOPOLITICAL UNCERTAINTY

As regards to the possible impacts of the war in Ukraine on Gasum, see additional information in Note 5.6 Events after the reporting period.

2 Notes to the income statement

2.1. Revenue

Business structure

The Gasum Group's functions are grouped into three business units and two units supporting business activities. The business units are Industry, Maritime and Traffic. The supporting units are Portfolio Management & Trading (PMT) and Biogas.

The **Industry business unit** markets and sells gas, power and energy solutions as well as energy market services to industry in the Nordic countries. The business unit sells to 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 business unit's sales constitute external sales.

The **Maritime business 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 business unit's sales constitute external sales.

The **Traffic business 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 business unit's sales constitute external sales.

The **Portfolio Management and Trading (PMT) unit** sources, supplies and produces services mainly for the business units. PMT sales are divided into internal sales to business units and external sales to customers outside the Group. External sales comprise mainly natural gas sales. PMT is divided into four functions: Portfolio Management, Trading, Energy Market Services, and Supply Chain. PMT functions are described in more detail below:

- The **Portfolio Management 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.
- The **Trading function** in turn is responsible for the 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 Trading 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.
- The **Energy Market Services function** provides energy market services that include Guarantees of Origin for electricity, power market portfolio management and trading services, price optimization, expert services in emissions trading and demand-side management services for electricity consumption optimization, and control room services for electricity.
- The **Supply Chain function** is responsible for the gas supply chain, which consists of 1 terminal through a joint venture, 5 import terminals, 2 bunkering vessels, 3 carrier vessels and dozens of road tankers and gas containers.

The **Biogas unit** produces biogas from wastewater sludge, industrial side streams, animal-based side streams and biowaste in Finland and Sweden and also 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 PMT to business units. Fertilizers and waste processing constitute external sales of the unit.

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 (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 which 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 2020. As regards 2021 and 2020, Gasum did not have any 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.

€ thousand

Revenue by business unit	2021	2020
Industry	352,413	145,098
Maritime	115,540	37,075
Traffic	76,102	41,222
Portfolio Management and Trading	1,456,345	565,243
Biogas	61,232	50,752
Other and internal sales	-490,602	-175,077
Total	**1,571,031**	**664,313**

€ thousand

Revenue by region	2021	2020
Finland	939,345	445,940
Other countries	631,686	218,373
Total	**1,571,031**	**664,313**

The large change in revenue from 2020 to 2021 is due to a surge in natural gas market price. Volumes have also increased from 2020 to 2021.

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.

Hedge accounting

During the 2021 financial year, Gasum discontinued the application of hedge accounting according to IFRS 9 Financial instruments. This has increased items under other income and expenses. 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.

€ thousand

Other operating income	2021	2020
Gains from sale of fixed assets	347	1,477
Proceeds from sale and leaseback arrangement	1,624	
Gains from realized derivative financial instruments	156,214	71,589
Gains from unrealized derivative financial instruments	220,859	23,177
Other income	4,649	11,413
Total	**383,693**	**107,657**

2.3. Materials and services

€ thousand

Materials and services	2021	2020
Materials and supplies	-1,361,986	-527,003
External services	-15,303	-15,502
Total	**-1,377,289**	**-542,505**

The large change in materials and services from 2020 to 2021 is due to a surge in natural gas market price. Volumes have also increased from 2020 to 2021.

2.4. Personnel

€ thousand

Personnel expenses	2021	2020
Salaries and remunerations	-30,612	-27,295
Pension expenses – defined contribution pension plans	-4,514	-3,898
Pension expenses – defined benefit pension plans	143	-74
Statutory employer contributions	-4,355	-3,122
Total	**-39,338**	**-34,388**

€ thousand

Salaries and remunerations of CEO and Members of the Board of Directors	2021	2020
CEO	-577	-570
Members of the Board of Directors	-257	-200
Total short-term employee benefits	**-834**	**-770**

PERSONNEL ON AVERAGE

Personnel on average	2021	2020
Finland	219	214
Sweden	99	89
Norway	65	61
Germany	3	1
Personnel on average	**386**	**365**

TOTAL PERSONNEL AT THE END OF PERIOD

Total personnel at the end of period	2021	2020
Finland	212	216
Sweden	94	99
Norway	46	66
Germany	4	3
Personnel at the end of the period	**356**	**384**

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

€ thousand

Depreciation, amortization and impairment	2021	2020
Depreciation of land*	-2,972	-2,660
Depreciation of buildings and structures	-23,635	-19,876
Depreciation of machinery and equipment	-32,623	-26,267
Depreciations of other tangible assets	-760	-868
Depreciation of tangible assets	-59,990	-49,671
Amortization of intangible assets	-7,350	-6,713
Impairment**	-1,451	0
Total	**-68,792**	**-56,384**

*Right-of-use assets in accordance with IFRS 16.

**The impairment relates to a land area of Gasum LNG Oy in Porvoo, Finland.

2.6. Other operating expense

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

€ thousand

Other operating expenses	2021	2020
Rents	-1,264	-1,300
Maintenance expenses	-16,915	-13,692
External services	-19,832	-16,427
Loss from realized derivate financial instruments	-252,418	-40,516
Loss from unrealized derivative financial instruments	-374,984	-51,323
Personnel-related expenses other than salary expenses	-2,129	-2,317
Fixed operating expenses	-2,183	-2,161
Administrative expenses	-8,856	-2,916
Marketing and entertainment expenses	-2,551	-1,869
Insurance policies	-1,156	-924
Compensation for daily minimum purchase obligation of natural gas	-15,685	0
Other	-8,951	-529
Total	**-706,925**	**-133,973**

The high price of gas and larger hedge positions resulted in an increased market value of hedge derivatives, which is why realized and unrealized gains from derivative financial instruments increased comparing to previous year. For more information on derivative financial instruments see Notes 4.2 and 4.3. The provision of €15.7 million for a daily minimum purchase obligation of natural gas is based on management judgment. For more information see Note 5.5. The item 'Other' contains a 2021 ruling by the Supreme Court of Norway relating to a dispute concerning energy consumption taxes. Expenses at €7.4 million have been recorded for this. For more information see Note 5.5.

2.7. Audit fees

€ thousand

Audit fees	2021	2020
Statutory audit fees	-772	-420
Audit opinions	-55	-59
Tax services	-163	-113
Other services	-220	-63
Total	**-1,210**	**-655**

2.8. Finance income and finance expenses

€ thousand

Finance income	2019	2018
Foreign exchange gains	26,310	20,062
Realized and unrealized gains on interest rate derivatives	506	6,387
Other finance income	120	433
Total	**26,936**	**26,883**

€ thousand

Finance expenses	2019	2018
Interest expenses on finance loans	-6,699	-2,568
Foreign exchange losses	-24,684	-13,746
Interests on lease liabilities	-11,114	-11,300
Realized and unrealized losses on interest rate derivatives	-590	-12,033
Other finance expenses	-1,135	-1,869
Total	**-44,222**	**-41,515**
Total finance income and finance expenses	**-17,286**	**-14,633**

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

2.9. Income tax expenses

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.

€ thousand

Taxes	2021	2020
Current tax	-3,068	-3,244
Taxes for previous periods	7	48
Change in deferred taxes	4,220	3,178
Total	**1,160**	**-18**

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

€ thousand

Taxes	2021	2020
Result before income tax	-255,804	-8,950
Mathematical tax based on Finland's corporate tax rate	51,161	1,790
Effect of different tax rates applied to foreign subsidiaries	242	213
Tax exempt income	465	13
Non-deductible expenses	-1,765	-969
Previously unrecognized deferred tax assets	0	1,080
Unrecognized deferred tax receivables on losses	-50,055	-474
Utilization of previously unrecognized tax losses	487	39
Taxes for previous periods	359	-467
Permanent differences	-3	0
Translation differences*	1,488	-259
Other items	-1,219	-784
Total	**1,160**	**-18**

*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:

€ thousand	2021			2020		
Tax effects relating to components of other comprehensive income	Before tax	Tax effect	After tax	Before tax	Tax effect	After tax
Remeasurement of post-employment benefits	-2,446	489	-1,957	328	-66	262
Cash flow hedges	423	-85	338	-8,523	1,526	-6,997
Other comprehensive income	**-2,023**	**404**	**-1,6619**	**-8,195**	**1,460**	**-6,735**

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 ASSETS

€ thousand 2021	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
Business acquired	0	0	0	0
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
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

€ thousand 2020	Goodwill	Intangible rights	Other intangible assets	Total
Cost at January 1	117,712	113,680	6,047	237,439
Additions	0	0	1,921	1,921
Business acquired	1,683	1	0	1,684
Disposals	0	-8	-98	-107
Reclassifications	0	0	5,880	5,880
Adjustments	0	-205	-1,030	-1,234
Changes in exchange rates	3,329	29	0	3,358
Cost at December 31	**122,724**	**113,496**	**12,719**	**248,940**
Accumulated amortization at January 1	0	26,175	2,752	28,928
Amortization for the period	0	5,094	1,619	6,713
Disposals	0	-8	-98	-107
Changes in exchange rates	0	0	0	0
Accumulated amortization at December 31	**0**	**21,261**	**4,273**	**35,534**
Net book value at January 1, 2020	117,712	87,505	3,295	208,510
Net book value at December 31, 2020	122,724	82,236	8,447	213,412

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.

Gasum's CGUs until March 1, 2021 were the LNG, Energy Market Services and Biogas businesses. Gasum adopted a new structure for its business functions effective from March 1, 2021 and classified the Group functions into three business units and two business support units. 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 Portfolio Management and Trading unit. No goodwill is allocated to the natural gas sales business. The intangible and tangible assets of the Portfolio Management and Trading unit have been allocated to the Industry and Maritime business units for impairment testing. Following the organizational reform, 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.

On November 16, 2021, Gasum sold an LNG liquefaction plant located in Norway to North Sea Midstream Partners (NSMP). 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. Gasum allocated part of the goodwill to the company divested in conjunction with the transaction in accordance with IAS 36. The divested company served the Industry and Marine business units.

€ thousand

Goodwill	2021	2020
CGU: Industry business	67,134	0
CGU: Maritime business	39,418	0
CGU: Traffic business	864	0
Total	**107,416**	**0**

€ thousand

Goodwill	2021	2020
CGU: LNG business	0	119,491
CGU: Energy Market Services business	0	2,479
CGU: Biogas business	0	754
Total	**0**	**122,724**

RECONCILIATION OF GOODWILL

€ thousand

Reconciliation of Goodwill	2021	2020
Net book value at January 1	122,724	117,712
Additions	1,553	1,683
Disposals	-16,182	0
Changes in exchange rates	-679	3,329
Book value at December 31	**107,416**	**122,724**

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.

Future cash flows have been discounted by using Weighted Average Cost of Capital (WACC), a reflection of the market view of the time value of money and the risks associated with the sector. The parameters used to determine the discount rate (risk-free interest rate, risk factor, risk premium and capital structure) are based on observed factors of energy-sector businesses engaging in equivalent or rival business operations and on the market, conditions prevailing at the end of 2021. The pre-tax discount rate used in the calculations for the CGUs is 6.73% (2020: 5.76% for LNG and Energy Market Services).

Any impairment is recognized as an expense in the income statement. Goodwill impairment losses are not reversed. There were no impairments of goodwill during the 2021 and 2020 reporting periods. The recoverable amounts in the testing model exceeded the carrying amounts of the assets of the CGUs by several tens of percent or more.

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 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.

3.2. Tangible assets

Accounting policies

Tangible assets

Tangible assets mainly consist of LNG distribution terminals and liquefaction plant, 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

€ thousand 2021	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	-207,954
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

€ thousand 2020	Land and water	Buildings and structures	Machinery and equipment	Other tangible assets	Construction in progress	Total
Cost at January 1	53,267	371,746	376,177	36,196	70,903	908,289
Additions	5,475	4,937	4,545	133	48,422	63,513
Business acquisitions	5,747	108,401	28,914	0	3,512	146,573
Disposals	-1,884	-12,792	-1,161	0	0	-15,838
Reclassifications	-27	31,425	19,573	-698	-43,681	6,591
Adjustments	38	0	-8	0	0	30
Changes in exchange rates	212	1,857	0	0	0	2,069
Cost at December 31	**62,828**	**505,573**	**428,040**	**35,631**	**79,156**	**1,111,228**
Accumulated depreciation at January 1	2,463	115,329	78,944	6,840	7,720	211,295
Depreciations for the period	2,660	19,867	26,267	863	0	49,667
Accumulated depreciation on disposals	0	-18	-1,079	0	0	-1,097
Reclassifications	0	-399	2,041	0	0	1,642
Adjustments	212	0	0	0	0	212
Changes in exchange rates	0	-13	0	0	0	-13
Accumulated depreciation at December 31	**5,335**	**134,775**	**106,173**	**7,703**	**7,720**	**261,707**
Net book value at January 1, 2020	50,805	256,417	297,233	29,356	63,183	696,994
Net book value at December 31, 2020	57,493	370,798	321,866	27,928	71,436	849,521

The impairment amounting to €1,451 thousand in 2021 relates to a land area of Gasum LNG Oy in Porvoo, 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, 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

€ thousand 2021	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**

€ thousand 2020	Land and water	Buildings and structures	Machinery and equipment	Other tangible assets	Total
Net book value at January 1, 2020	**48,793**	**2,582**	**124,937**	**15**	**176,327**
Additions	8,492	2,351	16,740	0	27,583
Disposals	-3,303	0	-16	0	-3 319
Depreciation	-2,660	-1,307	-10,629	-11	-14,606
Changes in exchange rates	0	0	0	0	0
Net book value at December 31, 2020	**51,323**	**3,626**	**131,032**	**4**	**185,985**

LEASE LIABILITIES

€ thousand	2021	2020
Non-current lease liability	169,972	192,090
Current lease liability	36,919	13,289
Total	**206,891**	**205,379**

CASH FLOW FROM LEASES

€ thousand	2021	2020
Interest expenses of lease liabilities	11,114	11,300
Repayments of lease liabilities	10,468	12,316
Rents remaining in income statement	1,326	1,367
Total	**22,908**	**24,984**

3.3. Share of investments consolidated using the equity method

Accounting policies

Joint ventures and associated companies

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 associated companies December 31, 2021	Country of corporation	% 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

€ thousand

Interests in joint ventures	2021	2020
Net book value at January 1	11,266	11,652
Share of result for the period	-244	964
Disposals	0	-1,363
Changes in exchange rates	-1	14
Net book value at December 31	**11,022**	**11,266**

€ thousand

Reconciliation of book value of joint ventures	2021	2021
	Manga Group Oy*	Vadsbo Biogas AB
Net assets of joint ventures	42,016	1,035
Group's ownership interest in net assets	10,504	517
Book value of joint ventures	**10,504**	**517**

SUMMARIZED FINANCIAL INFORMATION FOR JOINT VENTURES

€ thousand	Non-current		Current		Revenue	Profit/Loss	Ownership interest
Summarized financial information of joint ventures	Assets	Liabilities	Assets	Liabilities			
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**	

€ thousand	Non-current		Current		Revenue	Profit/Loss	Ownership interest
Summarized financial information of joint ventures	Assets	Liabilities	Assets	Liabilities			
2020							
Manga LNG Oy*	83,518	50,669	21,087	21,705	46,041	2,095	25%
Hirtshals LNG A/S**					0	-46	
Vadsbo Biogas AB	2,512	1,083	1,140	643	1,338	296	50%
Total	**86,029**	**51,752**	**22,227**	**22,348**	**47,379**	**2,345**	

*Manga LNG Oy forms a group together with its subsidiary. The figures presented are group figures.
**Gasum sold its share in the company in May 2020. The revenue and result of the company until the sale are presented in the table.

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 applies the simplified approach to measuring expected credit losses, according to which credit losses are measured at an amount equal to lifetime expected credit losses on trade receivables.

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. Credit losses incurred from trade receivables have been immaterial at Gasum.

Gasum Ltd has entered into a trade receivables factoring arrangement with two Nordic banks. This cost-efficient arrangement enables Gasum to enhance its working capital circulation. In this arrangement, Gasum sells selected clients' trade receivables borne by most recent natural gas sales transactions to the bank and receives cash on immediate basis. The bank carries the credit risk of these sold trade receivables and is not able to return these to Gasum except when the performance obligations are not satisfied against clients. Gasum is responsible for satisfying these performance obligations, i.e., that the client receives the promised goods or services in the agreed manner.

€ thousand

Trade and other receivables	2021	2020
Trade receivables	421,380	117,539
Accrued income	12,957	11,724
Energy tax receivables	93	7,144
Other receivables	182,387	29,698
Total	**616,817**	**166,105**

Other receivables include deposits relating to the company's derivatives operations.
The ageing analysis of trade receivables after impairment is as follows:

€ thousand

Ageing analysis of trade receivables after impairment	2021	2020
Not due	362,097	102,281
Overdue by		
Less than 3 months	59,111	14,884
Over 3 months	171	374
Total	**421,380**	**117,539**

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.

€ thousand

Inventories	2021	2020
Product inventories	68,451	26,373
Other inventories	715	1,183
Prepayments	178,285	28,304
Total	**247,451**	**55,859**

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 contact, 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 under the terms of the gas supply contract, amounting to €178.3 million (2020: €28.3 million), which are estimated to be used in the years ahead. There is no time limit for the reception of the gas. In the 2021 financial statements, the increase in gas-related prepayments recognized under inventories was €158.0 million. Of this, €53.3 million was recognized in balance sheet liabilities under trade payables and €104,7 million under accruals and deferred income.

3.6. Trade and other current payables

€ thousand

Current liabilities to others	2021	2020
Trade payables	367,897	82,389
Contract liabilities	16,162	668
Participation fee revenue recognition liability	125	171
Other liabilities	77,575	30,649
Accruals and deferred income	186,089	29,270
Bank overdraft facility	0	60,469
Lease liabilities	36,919	13,289
Total	**684,766**	**216,905**

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 totaling €53 million. Other liabilities include a value-added tax liability (€70 million). Accruals and deferred income include liabilities under Take-or-Pay contracts (€104.7 million) and investment support received in advance relating to the Biogas business unit's investing activities in Sweden. Contract liabilities include advance payments related to transfers of goods taking place in the future.

3.7. Assets held for sale

Accounting policies

The Group has classified assets as held for sale if their carrying amount will be recovered principally through a sale transaction rather than through continuing use. Assets held for sale are measured at the lower of their carrying amount and fair value less costs to sell. There are no liabilities related to the assets classified as held for sale.

A land area owned by the company in Porvoo, Finland, was classified as an asset held for sale in 2020, but the asset currently no longer meets the criteria for assets held for sale.

€ thousand

Assets held for sale	2021	2020
Assets held for sale	0	1,561
Total	**0**	**1,561**

3.8. Cash and cash equivalents

Accounting policies

Cash and cash equivalents

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

€ thousand

Cash and cash equivalents	2021	2020
Cash and cash equivalents*	387,364	7,967
Total	**387,364**	**7,967**

*Cash and cash equivalents have been reclassified in relation to deposits required for negative net positions of derivative instruments at reporting date.

3.9. Deferred taxes

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.

€ thousand

Deferred tax	2021	2020
Deferred tax assets:		
Financial instruments	1,151	5,341
Pensions and employee Benefits.	1,120	691
Adopted losses	16,820	15,753
Provisions	1,445	1,836
Fixed assets	719	2,351
Lease liabilities	4,984	4,451
Other temporary differences	197	1,075
Total	**26,434**	**31,498**
At January 1	31,498	25,188
Netted from deferred tax liability January 1, 2021	-31,498	
Business acquisitions and disposals		476
Recognized in income statement	24,872	4,595
Recognized in other comprehensive income	489	1,240
Other changes	1,073	
Translation differences	0	0
Book value at December 31	**26,434**	**31,498**
Netted from deferred tax liability	24,183	31,498
Total, net	**2,251**	**0**
Deferred tax liabilities		
Tangible assets	10,174	33,484
Intangible assets	17,442	18,827
Provisions	225	2,464
Financial instruments	869	2,876
Other temporary differences	2,523	4,856
Total	**31,233**	**62,507**
At January 1	62,507	55,873
Netted from deferred tax assets January 1, 2021	-31,498	
Business acquisitions and disposals	0	7,065
Business disposals	-20,427	0
Recognized in income statement	20,652	-392
Recognized in other comprehensive income	0	-39
Book value at December 31	**31,233**	**62,507**
Netted from deferred tax assets	24 183	31,498
Total, net	**7,050**	**31,009**
Deferred tax assets and liabilities, net	**-4,799**	**-31,009**

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, 2021 the Group had unused tax losses of €323,145 thousand, of which €69,852 thousand are not due and €3,692 thousand are due in 2029 and €249,600 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.

3.10. 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.

€ thousand

Provisions	2019	2018
Provisions at the beginning of period	**19,817**	**10,463**
Increase in provisions	17,687	595
Decrease in provisions	-6,713	0
Business acquisitions	0	8,706
Business disposals	-2,039	0
Provision used	-1,375	0
Unwinding of discount	9	32
Translation differences	-58	23
Provisions at the end of period	**27,329**	**19,817**
Of which current provisions	0	0
Of which non-current provisions	27,329	19,817

The provisions primarily include contractual terminal and plant dismantling obligations as well as a provision for natural gas daily minimum purchase obligations amounting to €15.7 million, which is based on management estimates.

3.11. 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 the 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.

€ thousand

Post-employment benefits	2021	2020
Balance sheet obligations for:		
Post-employment benefits	5,600	3,457
Liability in the balance sheet	**5,600**	**3,457**

€ thousand

Income statement charge included in operating profit for*	2021	2020
Defined pension benefits	-143	74
Total	**-143**	**74**

*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 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.

€ thousand

Defined benefit pension plans	2021	2020
Present value of funded obligations	20,699	20,769
Fair value of plan assets	-15,099	-17,312
Deficit of funded plans	5,600	3,457
Liability in the balance sheet	**5,600**	**3,457**

The opening balance at January 1, 2021 has been adjusted. The opening defined benefit obligation has been adjusted from €20,769 thousand to €22,162 thousand (increase of €1,393 thousand). The opening fair value of plan assets has been adjusted from €17,312 thousand to €18,429 thousand (increase of €1,117 thousand). As a consequence, the net defined benefit liability is adjusted from €3,457 thousand to €3,733 thousand (increase of €276 thousand). The adjustment is a correction to the division of €515 thousand (gain) reported on December 31, 2020. When reporting, the information of implementation of the division has been that benefits earned will be transferred to the new employer. However, it came out that benefits earned of transferred employees have remained in Gasum Ltd and have not been transferred to the new employer. The weighted average of the duration of the defined benefit liability is 14 years at the end of the reporting period.

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

€ thousand	Present value of defined benefit obligation	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**

€ thousand	Present value of defined benefit obligation	Fair value of plan assets	Net defined benefit obligation
January 1, 2020	**20,987**	**17,070**	**3,917**
Current service cost	52		52
Interest expense or income (-)	123	101	22
	21,162	17,171	3,991
Remeasurements:			
Gain (-)/ loss from change in demographic assumptions			
Gain (-)/ loss from change in financial assumptions	676		676
Experience gains (-) / losses			
Return on plan assets, excluding amounts included in interest expense or income		1,004	-1,004
Contributions:			
Employers		206	-206
Plan participants			
Payments from plans:			
Benefit payments	-1,069	-1,069	0
December 31, 2020	**20,769**	**17,312**	**3,457**

The discount rate used to calculate the situation at December 31, 2021 was 0.9%, while for the year before it had been 0.3%. The change of discount rate created a gain of €0.917 million for the defined benefit pension liability.

Significant actuarial assumptions	2021	2020
Discount rate	0.9%	0.3%
Inflation	2.0%	1.0%
Pension growth rate	2.3%	1.3%
Wage coefficient	3.2%	2.2%

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 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 0.30%	20,699	15,099	5,600	55	49
Discount rate +0.50%	19,323	14,253	5,070	51	70
Discount rate 0.50%	22,233	16,033	6,200	61	24
Impact in percentage terms					
Discount rate 0.30%	0.0%	0.0%	0.0%	0.0%	0.0%
Discount rate +0.50%	-6.6%	-5.6%	-9.5%	-8.3%	40.6%
Discount rate 0.50%	7.4%	6.2%	10.7%	9.4%	-50.7%

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.

€ thousand

Capital management	2021	2020
Interest-bearing liabilities	860,459	610,681
Cash and cash equivalents	-387,364	-13,038
Net debt	**473,095**	**597,643**
Total equity	433,688	490,144
Total capital	906,783	1,087,787
Gearing ratio	**109%**	**122%**

€ thousand

Interest-bearing liabilities	2021	2020
Loans from financial institutions	653,568	344,833
Lease liabilities	206,891	205,379
Bank overdraft facility	0	60,469
Interest-bearing liabilities	**860,459**	**610,681**

NET DEBT RECONCILIATION

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

€ thousand

Net debt	2021	2020
Cash and cash equivalents	-387,364	-13,038
Current interest-bearing liabilities	244,831	73,758
Non-current interest-bearing liabilities	615,628	536,924
Net debt	**473,095**	**597,643**

€ 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, 2019	**-1,852**	**8,216**	**186,005**	**4,484**	**229,411**	**426,265**
Cash flows	-5,268	-11,780		55,985	116,540	155,476
Acquisitions	-5,918	5,235	14,243			13,560
Foreign exchange adjustments		-591	-3,287		18	-3,860
Other non-cash movements*		12,209	-4,871		-1,136	6,202
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**

*Mainly includes transfers between non-current and current borrowings in 2020 and 2021 as well as in 2020 and 2021 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, Credit Risk and Treasury Policies adopted 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. The Group's commodity risks (including price risk) are managed by the Portfolio Management & Trading business unit. The Group's interest rate, foreign currency, credit and liquidity risks are managed by the Group Treasury. The Group Risk Management unit is responsible for the monitoring of the 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 gas, the open commodity position for the following 12 months at the reporting date was €31.1 million (2020: €58.1 million) and for power €1.9 million (2020: €0.9 million). The nominal value of the commodity derivatives totaled €1,016.7 million at the reporting date (2020: €577.2 million). The fair values of commodity derivatives are based on available market quotes at the reporting date. For more information see Note 4.3.

The commodity risks have significantly increased due to higher market volatility as well as larger positions. In 2021, the TTF index for gas fluctuated between €15.6 and €180.7 per megawatt hour (2020: €3.5–€19.2 /MWh). For power, the Nord Pool power day ahead price moved between €15.7 and €309.7 per megawatt hour (2020: €1.4–€30.7 /MWh). Hedging has been performed according to plan and in line with the Risk Policy. The Risk Policy was updated during the financial year.

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 and hedge them with commodity derivatives. In cases where the same index linkages are applied to procurement and sales and where projected volumes are highly probable, the risks may be netted and the remaining risk position hedged. In other cases, the position is treated separately.

The Portfolio Management and Trading unit aims to cost-effectively hedge the Group's open commodity risk position within the Commodity Risk Policy mandate and, consequently, ensure the achievement of Gasum's financial targets and competitive pricing. 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. Risk metrics calculation was transferred under a new system at the start of the year.

For commodity hedging, Portfolio Management & Trading executes forwards, futures and option derivatives in both OTC and organized exchange markets, and the Trading unit is mandated to execute the Group's external commodity transactions in both physical and commodity derivatives markets. Furthermore, the Trading unit has a mandate to execute derivatives in other than hedging purpose and this mandate is measured with a Value-at-Risk method. The Group applied hedge accounting to commodity derivatives from the 2018 financial year until the start of the 2021 financial year in hedging against commodity risks relating to procurement and sales contacts of the LNG business and in hedging the Group's power sourcing. The Group recognized the effects of derivative financial instruments applied in hedge accounting in the fair value reserve and disclosed the changes in comprehensive income statement. Realized gains and losses were disclosed in accordance with the hedged item in the income statement. Hedge effectiveness is examined by the company at the inception of the hedge relationship and continuously during the hedge relationship. Since hedges have matched the hedged procurement and sales contracts in terms of their market risk component as well as their maturity, ineffectiveness has not as a rule been expected to occur. The nominal value of the derivative financial instruments included in hedge accounting totaled €18.9 million at the end of the 2020 comparative period. Gasum has not applied hedge accounting to commodity derivatives in accordance with IFRS since the beginning of the 2021 financial year.

Gas and propane

As a general rule, the pricing of the Group's gas sourcing contracts reflects developments in the international market prices of gas. The supply price of natural gas is linked to European gas price indeces and on energy and cost development indices. During the 2021 reporting period, same indices were partly used for natural gas sales prices and gas sourcing. During the 2021 reporting period, the sourcing of liquefied natural gas (LNG) is mainly linked to European gas indices and partly to propane. LNG sales are mainly linked to European gas indices. Projected sales and purchase volumes may change, which may reduce hedge effectiveness.

Gas hedging is steered using the Profit-at-Risk method and hedge target levels. The mandate is monitored by the Group Risk Management on a daily basis.

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.

Gasum has entered into long-term Power Purchase Agreements (PPA) for wind power, which are treated as derivate contracts in accordance with IFRS 9 on the balance sheet. A natural hedge is sought with PPA sales and purchases, and open position is also hedged with financial derivatives. The open net position of the PPAs at year-end was 2.1 TWh. Risk-taking relating to PPAs is guided and monitored on the basis of net open position.

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	Dec 31, 2021	Dec 31, 2020
Impact of 10% increase in gas and propane prices on result for the period	-15.8	-8.5
Impact of 10% decrease in gas and propane prices on result for the period	15.8	8.5
Impact of a 10% increase in power prices on result for the period	6.6	6.7
Impact of a 10% decrease in power prices on result for the period	-6.6	-6.7
Impact of a 10% increase in oil prices on result for the period	0	0.7
Impact of a 10% decrease in oil prices on result for the period	0	-0.7

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 papers 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 (2020: 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 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 in order to find an optimal ratio between risks and hedging expenses. The funding has been raised only for 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, 2021 the nominal values of the outstanding interest rate derivatives were €517.5 million (2020: €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 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 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 (3–24 months).).

As of December 31, 2021 the Group's interest-bearing liabilities totaled €623.5 million (2020: €530.8 million). Interest-bearing liabilities include loans from financial institutions and lease liabilities. The average duration of Gasum's debt portfolio at the end of 2021 was 1.7 years (2020: 1.5 years). The average duration of Gasum's interest-rate hedge portfolio was 4.7 months (2020: 9.0 months).

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

€ thousand Nominal value	Loans from financial institutions	Floating rate debt	Derivative financial instruments
December 31, 2021	653,568	653,568	517,500
December 31, 2020	405,302	405,302	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	Dec 31, 2021	Dec 31, 2020
Impact on profit/loss of increase of 1 percentage point in market interest rates	-3.1	0.1
Of which the impact of interest expenses of borrowings	-5.4	-4.4
Of which changes in the market value of interest rate derivatives	2.3	4.5
Impact on profit/loss of decrease of 1 percentage point in market interest rates	1.0	0.0
Of which the impact of interest expenses of borrowings	1.2	0.2
Of which changes in the market value of interest rate derivatives	-0.2	-0.1

CURRENCY DERIVATIVES AND FOREIGN CURRENCY RISKS

The Group's foreign currency risk is managed in accordance with the 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 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. In principle, translation risk hedging does not take place.

The Group's operating cash flows are primarily denominated in euro. In addition, in 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, 2021 the nominal values of the outstanding currency derivatives totaled €198.5 million (2020: €124.1 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 2021. The nominal value of commodity derivatives included in hedge accounting was €0.0 million at the date of the financial statements (2020: €11.2 million). 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 give rise to 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 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, 2021	6,842	23,600	22	12,462	-106	42,820
December 31, 2020	13,074	2,116	191	3,238	32	18,651

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	Dec 31, 2021	Dec 31, 2020
Appreciation of NOK by 10%	0.5	1.3
Of which impact on the hedge reserve for the period		0.9
Depreciation of NOK by 10%	-0.8	-1.3
Of which impact on the hedge reserve for the period		-0.7
Appreciation of SEK by 10%	2.1	-0.8
Of which impact on the hedge reserve for the period		0.4
Depreciation of SEK by 10%	-3.0	-0.7
Of which impact on the hedge reserve for the period		-0.3
Appreciation of USD by 10%	0.5	0.3
Depreciation of USD by 10%	-0.2	-0.3

CREDIT RISK

The Gasum Group's credit risk management process and division of responsibilities are determined in the Gasum credit risk policy, according to which the examination and control of credit risks is centralized under the Group Risk Management unit. According to the credit risk policy, the credit rating of all new counterparties is checked prior to commencing business with them and monitored regularly. Credit loss risk has been analyzed in accordance with IFRS 9. Credit losses incurred from trade receivables have been immaterial and no expected credit losses have been recognized for trade receivables. As a rule, the Group's customers have a high credit rating.

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 company aims for a dispersed debt structure in terms of both maturity and sources of finance. Therefore, a significant proportion of the company's loans mature within 2–5 years. The company also had exceptionally high cash holdings at the reporting date as well as unused liquidity reserve by means of which the company seeks to ensure the performance of future obligations also in the prevailing situation. At the date of the financial statements on December 31, 2021, the company had a liquidity reserve with the committed overdraft limit remaining undrawn amounting to a total of €120 million (2020: €160 million).

The Group's borrowings are subject to a financial covenant of a borrowing facility concerning the gearing ratio, which is reported to providers of finance on a quarterly basis. Due to exceptional price developments in the markets, a release of the covenant was agreed for a fixed period with the financial institutions. Regardless of this, the company has still reported the covenant in accordance with the original borrowing facility.

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:

€ thousand

Dec 31, 2021	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
Derivative financial instruments (included in hedge accounting)	0	0	0	0	0
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**

€ thousand

Dec 31, 2020	Less than 1 year	1–2 years	2–5 years	5+ years	Total
Loans from financial institutions		344,833			344,833
Trade payables	82,389				82,389
Derivative financial instruments (no hedge accounting)	147,843	6,041	6,064	145	160,093
Derivative financial instruments (included in hedge accounting)	11,712	1,751	248	0	13,711
Lease liabilities*	13,289	7,045	23,927	161,119	205,379
Used overdraft facilities	60,469				60,469
Interest payments on loans	2,546	2,532			5,078
Total	**318,248**	**362,202**	**30,239**	**161,264**	**871,953**

*Includes interest effect

Maturity of derivative financial assets:

€ thousand

Dec 31, 2021	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
Derivative financial instruments (included in hedge accounting)	0	0	0	0	0
Total	**233,311**	**12,294**	**8,293**	**16,234**	**270,812**

€ thousand

Dec 31, 2020	Less than 1 year	1–2 years	2–5 years	5+ years	Total
Derivative financial instruments (no hedge accounting)	133,086	6,756	5,132	1,517	147,213
Derivative financial instruments (included in hedge accounting)	**13,058**	1,623	8	0	14,688
Total	**146,864**	**8,379**	**5,14**	**1,517**	**161,902**

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 includes 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 simplified 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 circumstances. Credit losses incurred from trade receivables have been immaterial at Gasum, whereby no expected credit losses have been recognized for trade receivables.

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

€ thousand December 31, 2021	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	174,52			
Oil				
Power	91,474			
Interest rate	2,344			
Foreign exchange	1,204			
EUA	1,269			
Derivative financial instruments (included in hedge accounting)		0		0
Gas		0		
Power		0		
Foreign exchange				
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**

€ thousand December 31, 2020	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)	47,434			47,434
Gas	30,794			
Oil	664			
Power	11,059			
Interest rate	3,866			
Foreign exchange	738			
EUA	313			
Derivative financial instruments (included in hedge accounting)		3,438		3,438
Gas		2,462		
Power		268		
Foreign exchange		708		
Trade and other receivables			159,317	159,317
Other non-current assets			207	207
Cash and cash equivalents			7,967	7,967
Total	**47,484**	**3,438**	**167,491**	**218,412**

€ thousand December 31, 2021	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			
Derivative financial instruments (included in hedge accounting)		0		0
Gas		0		
Oil				
Power		0		
Foreign exchange				
Trade and other current payables			566,509	566,509
Other non-current liabilities			5,6	5,6
Total	**434,340**	**0**	**1,432,567**	**1,866,906**

€ thousand December 31, 2020	At fair value through profit or loss	At fair value through other comprehensive income	At amortized cost	Total
Liabilities as per balance sheet:				
Loans			344,833	344,833
Lease liabilities			202,653	202,653
Derivative financial instruments (no hedge accounting)	60,247			60,247
Gas	40,718			
Oil	289			
Power	10,2			
Interest rate	6,065			
Foreign exchange	2,814			
EUA	161			
Derivative financial instruments (included in hedge accounting)		2,509		2,509
Gas		1,296		
Oil				
Power		1,204		
Foreign exchange		9		
Trade and other current payables			176,86	176,86
Other non-current liabilities			3,457	3,457
Total	**60,247**	**2,509**	**727,803**	**790,559**

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

Volume and maturity of commodity derivatives December 31, 2021	Volume 2022 MWh	Volume 2022 MT	Volume 2022 Bbl	Fair value 2022 Net, € thousand	Volume 2023 MWh	Volume 2023 MT	Volume 2023 Bbl	Fair value 2023 Net, € thousand
Sales agreements – Gas								
No hedge accounting	-7,648,659	-31,5	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**	**-31,5**	**0**	**-326,764**	**-1,888,719**	**0**	**0**	**-34,066**
Purchase agreements – Gas								
No hedge accounting	4,618,614	190,5		123,013	173,37	43,5		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
Total	**6,422,122**	**190,5**	**0**	**176,324**	**838,161**	**43,5**	**0**	**9,398**

Commodity derivatives	Volume 2021	Volume 2021	Volume 2021	Fair value 2021	Volume 2022	Volume 2022	Volume 2022	Fair value 2022
December 31, 2020	**MWh**	**MT**	**Bbl**	**Net, € thousand**	**MWh**	**MT**	**Bbl**	**Net, € thousand**
Sales agreements – Gas								
No hedge accounting	-12,427,780	-7,500		-35,915	-2,360,240	0		-1,913
Included in hedge accounting:	-180,000	0	0	-1,296	0	0	0	0
Cash flow hedging	-180,000			-14,554	0	0		0
Fair value hedging								
Sales agreements – Oil								
No hedge accounting	0	0	-50,000	-289	0	0	0	0
Included in hedge accounting:	0	0	0	0	0	0	0	0
Cash flow hedging								
Fair value hedging								
Sales agreements – Power								
No hedge accounting	-1,407,089	0	0	-4,191	-430,930	0		-937
Included in hedge accounting:	0	0	0	0	0	0	0	0
Cash flow hedging								
Fair value hedging								
Total	-14,014,869	-7,500	-50,000	-41,691	-2,791,170	0	0	-2,850
Purchase agreements – Gas								
No hedge accounting	5,902,845	108,000	0	25,702	522,525	67,500	0	2,202
Included in hedge accounting:	508,995	0	0	2,463	0	0	0	0
Cash flow hedging	459,000			2,256		0		0
Fair value hedging	49,995			206	0	0		0
Purchase agreements – Oil								
No hedge accounting			84,000	504			144,000	160
Included in hedge accounting:	0	0	0	0	0	0	0	0
Cash flow hedging								
Fair value hedging				0			0	0
Purchase agreements – Power								
No hedge accounting	1,311,437	0	0	2,720	515,032	0	0	626
Included in hedge accounting:	122,640	0	0	-487	132,451	0	0	-209
Cash flow hedging	122,640			-487	132,451			-209
Fair value hedging								
Total	7,845,917	108,000	84,000	30,902	1,170,009	67,500	144,000	2,779

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)

€ thousand	At December 31,2021		At December 31,2020	
Derivative financial instruments	**Assets**	**Liabilities**	**Assets**	**Liabilities**
Commodity derivatives (hierarchy level 1)	129,577	194,826	14,336	26,821
Commodity derivatives (hierarchy level 2)	107,899	219,236	28,614	26,723
Commodity derivatives (hierarchy level 3)	29,787	15,1	2,61	323
Interest rate derivatives (hierarchy level 2)	2,345	3,693	3,866	6,065
Currency derivatives (hierarchy level 2)	1,204	1,484	1,446	2,824
Total	**270,812**	**434,339**	**50,872**	**62,756**
Non-current portion:				
Commodity derivatives (hierarchy level 1)	1,087	119	1,456	1,866
Commodity derivatives (hierarchy level 2)	7,904	34,449	3,270	2,818
Commodity derivatives (hierarchy level 3)	26,161	12,640	2,605	322
Interest rate derivatives (hierarchy level 2)	2,345	3,693	3,866	6,065
Currency derivatives (hierarchy level 2)	3	0	80	44
Total non-current portion	**37,500**	**50,901**	**11,277**	**11,115**
Total current portion	**233,312**	**383,438**	**39,595**	**51,641**

Commodity derivatives classified to hierarchy level 3 are presented in the table below. Power Purchase Agreements (PPA) are long-term supply contracts of electricity and are recognized as commodity derivatives.

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

€ thousand **Commodity derivatives level 3**	**At December 31, 2019**	**Losses**	**Gains**	**At December 31, 2020**
PPAs	-	-323	2,610	2,287
Total	**-**	**-323**	**2,610**	**2,287**

Power Purchase Agreements (PPA) are recognized at fair values by calculating the discounted difference of the selling price defined in the contract and the forecasted electricity price. A discount rate amounting to 3% has been used in determining the fair values of PPAs. The forecast for the purchase price of electricity for 2021–2024 is based on reference prices in EPAD contracts, for 2025–2030 on system price predictions and for 2031–2032 on Gasum management view on price development. The fair values of PPAs are prone to both changes in price forecasts and price forecasts becoming available for a period where previously an internal forecast was used instead.

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.

€ thousand

December 31, 2021 Offsetting of derivative financial instruments	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**

€ thousand

December 31, 2020 Offsetting of derivative financial instruments	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	3,866	3,866	0
Commodity derivatives	45,56	37,066	8,494
Currency derivatives	1,446	1,312	135
Total	**50,872**	**42,444**	**8,629**
Financial liabilities			
Derivative financial instruments			
Interest rate derivatives	6,065	3,866	2,199
Commodity derivatives	53,867	37,066	16,801
Currency derivatives	2,824	1,312	1,512
Total	**62,756**	**42,244**	**20,512**

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, 2021	50,200,000	2,800,001	53,000,001	10,000
December 31, 2020	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 €199 million treated as an equity instrument targeted at Governia Oy. 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.

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 2020 financial year.

4.5. Fair value reserve

Accounting policies

The fair value reserve contains the changes in fair value for instruments used in cash flow hedging that are effective and met the conditions for hedge accounting. Changes in the fair values of items are recognized in comprehensive income and any ineffective portion is recognized immediately in profit or loss. Any cumulative change in the fair value of cash flows is recognized in the income statement when the corresponding estimated future cash flow is recognized in profit or loss. Changes in fair values moved to the income statement pertain in the balance sheet to other operating income and expenses and, as regards the Group's electricity position, materials and purchases.

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

€ thousand Fair value reserve	Gas derivatives	Power derivatives	Currency derivatives	Total
December 31, 2019	**6,916**	**-257**		**6,66**
Cash flow hedges in other comprehensive income	1,593	-2,85	483	-773
Cash flow hedges transferred to profit or loss	-9,279	1,314	215	-7,75
Deferred tax assets related to cash flow hedges	1,537	128	-140	1,526
December 31, 2020	**768**	**-1,665**	**559**	**-338**
Cash flow hedges transferred to profit or loss	-960	2,081	-699	423
Deferred tax assets related to cash flow hedges	192	-416	140	-85
December 31, 2021	**0**	**0**	**0**	**0**

Amounts for gas and electricity derivatives recognized through profit and loss:

€ thousand	2021	2020
Net profit/loss from derivatives included in Other operating income/expenses	0	-9,064
Reclassified net profit/loss from derivatives included in Other operating income/expenses	423	
Net profit/loss from derivatives included in Materials and services	0	1,314
At December 31	**423**	**-7,750**

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 2022–2024. Gasum had been granted a waiver valid until March 29, 2022 from the covenant concerning non-current loans. Relating to the gearing ratio, the covenant would not have been breached at the reporting date.

€ thousand Loans	2021	2020
Non-current:		
Loans from financial institutions	445,656	344,833
Total	**445,656**	**344,833**
Current:		
Loans from financial institutions	207,911	0
Total	0	0
Total loans	**653,568**	**344,833**

5 Other notes

5.1. Business acquisitions and disposals

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

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

ACQUISITIONS IN 2020

On April 30, 2020 Gasum closed the acquisition of Linde AG's Clean Energy business in Sweden and Norway as well as Nauticor's Marine Bunkering business in Germany following approval of the acquisition granted by the German competition authorities.

With the acquisition, Gasum aims to support its growth strategy through increased LNG logistics capacity and gas filling station network expansion in the Nordic countries. The acquired businesses employ around 35 persons and their annual revenue exceeds €100 million.

The following PPE items were acquired in the transaction:

- LNG terminals in Sweden and Norway
- Bunkering vessels Seagas in Sweden and Kairos in Germany
- 48 gas filling stations in Sweden and Norway

The final consideration paid or the balance sheet acquired are not published according to the agreement. The consideration was paid in cash on the closing date.

The costs at €6.5 million relating to the acquisition are included in other operating costs in the consolidated balance sheet and in operating cash flow in the cash flow statement.

On October 31, 2020 Gasum signed an agreement on the acquisition of the entire share capital of Skövde Biogas AB from Torran Gas Holding AB. Under the agreement concluded between Gasum and Torran Gas Holding AB, the Skövde biogas plant and its business, including agreements, were transferred to Gasum on October 31, 2020. The plant comprised the Skövde biogas plant building, including process equipment. The transaction enables significant increases in the plant's production capacity. The transaction was not of material significance to the financial result or position of the Gasum Group.

DISPOSALS IN 2020

There were no business disposals or discontinued operations during the 2020 financial year.

5.2. Guarantees and commitments

€ thousand

Guarantees and commitments	2021	2020
Pledges	193	188
Contingent liabilities and other commitments	286,784	279,216
Total	**286,977**	**279,404**

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.

€ thousand

Rental commitments	2021	2020
Expiry no later than 1 year	1,321	1,130
Expiry later than 1 year but no later than 5 years	1,864	1,297
Expiry later than 5 years	429	23
Total	**3,614**	**2,450**

5.3. Group companies

The following table presents the Group companies and the Group's associated companies and joint ventures at December 31, 2021.

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 ASSOCIATED COMPANIES

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	Swden	50.0	50.0

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

2021

€ thousand

Transactions with related parties	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**

2020

€ thousand

Transactions with related parties	Sales of goods and services	Purchases of goods and services	Finance income and costs	Receivables	Liabilities
Joint ventures	32,059	7,459	0	3,838	1,427
Total	**32,059**	**7,459**	**0**	**3,838**	**1,427**

€ thousand

Management's employee benefits	2021	2020
Salaries and other short-term employee benefits	2,919	2,596
Post-employment benefits	192	206
Total	**3,111**	**2,802**

5.5. Legal proceedings and claims

DISPUTE CONCERNING ENERGY CONSUMPTION TAXATION OF NORWEGIAN PRODUCTION PLANT ACTIVITIES

In July 2018, the company's Norwegian company Gasum AS, which carried out LNG production plant activities until 2021, initiated legal proceedings at Stavanger District Court against the Norwegian Ministry of Trade, Industry and Fisheries concerning the statistical classification made by Norwegian authorities which has had a negative impact on the company's energy consumption taxation. In the legal proceedings, the company made a claim for the refund of taxes paid, together with interest, in accordance with the higher classification in 2014–2018, as well as for compensation for legal costs. The District Court ruled in favor of the State of Norway in the matter on April 26, 2019. The company appealed against the judgement to a court of appeal, which in June 2020 ruled fully in favor of Gasum and obliged the State of Norway to compensate Gasum for taxes paid in excess at NOK 72,273,010 as well as interest and to compensate for the legal costs. The State of Norway was granted leave to appeal against the decision to the Supreme Court where the matter was considered in April 2021. On October 1, 2021, the Supreme Court of Norway ruled in favor of the State of Norway in the matter. Following the ruling, the company wrote off the taxes paid in excess for 2014–2018, including interest as well as legal costs, which had been recognized under receivables. Further information can be found in Note 2.6 Other operating expenses.

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 DECISION 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. In its claim lodged with the Market Court, Gasum sought the partial annulment of the decision of February 26, 2019 and the full annulment of the decision of March 15, 2019. The company further claimed that the Energy Authority be ordered to pay the company's legal costs. In its appeal, the company stated that the Energy Authority's decisions are unfounded and in part contrary to the applicable laws. The company submitted that the calculated unbundling principles applied by the company have been in compliance with the Natural Gas Market Act and there have been reasonable grounds for the amendment to the unbundling principles applied. The company further submitted that, in its decision, the Energy Authority has erroneously found that the unbundling calculations presented by the company and made in accordance with the unbundling principles applied by it concerning natural gas operations would cause cross-subsidization between natural gas operations. The company further submitted that the Energy Authority did not have any grounds for obliging the company to amend or correct financial statements information in the manner stated in the decisions nor the competence to prohibit the issue of the financial statements for January 1 to December 31, 2018 before the taking of the corrective measures. The above-mentioned decisions of the Energy Authority do not contain specific payment demands in euros against the company.

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 Ltd'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 Ltd. 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. In addition, the Energy Authority requested in its response that the Market Court refer 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.

In its response to the Market Court, Gasum has contested the Energy Authority's penalty fee submission and submitted that the penalty fee cannot be proposed concerning the entries of the demerger plan and that the company has complied with all legislation and provisions concerning unbundling in the preparation of the demerger plan and in the unbundling of the network operations. Furthermore, Gasum Ltd has considered as regards the alternative grounds for the penalty fee submission concerning the 2017–2019 financial statements that, among other things, the administrative decisions issued by the Energy Authority on February 26, 2019 and March 15, 2019 prevent the proposal and imposition of the penalty fee on the basis of the unbundled financial statements of the natural gas business activities presented in notes to the 2017–2019 financial statements of Gasum Ltd.

The Market Court is considering the pending appeal matters and the Energy Authority's penalty fee submission together and is anticipated to rule at the end of 2022 at the earliest if the matter is not referred to the CJEU for a preliminary ruling, which the company estimates would postpone the decision by around a year.

During the 2021 financial year, the Energy Authority has, in addition, commenced investigations into the compliance of the company's unbundled 2020 financial statements with the Natural Gas Market Act, on which the Authority issued a draft decision on November 19, 2021 and a decision on January 28, 2022. The Energy Authority has obliged Gasum Ltd to submit an account of the 2021 financial statements containing the said corrective measures to the Energy Authority. The decision must be complied with notwithstanding any appeal. The company appealed against the decision made by the Energy Market Authority to the Market Court on January 28, 2022 and submitted that the Market Court postpone the consideration of this matter until the Market Court has ruled on the above-described appeal matters pending at the Market Court as well as on the Energy Authority's the penalty fee submission. Consequently, no decision on the matter is expected during 2022. 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 late September 2021. The company has recognized the difference between the gas supplied and the minimum purchase obligation as a receivable under operating revenue (Note 2.1.).

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

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 Ltd'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, principally performed the measures in compliance with the Centre's administrative enforcement decision by December 31, 2021. In addition, a proposal for the amendment of the environmental permit of the Turku biogas plant is pending at the Regional State Administrative Agency of Southern Finland. Possible further measures and processes on the matter cannot be ruled out.

DISPUTE BETWEEN THE COMPANY AND A GAS SUPPLIER ON MINIMUM PURCHASE OBLIGATION

There is a dispute between the company and its foreign gas supplier on the amount of and contractual interpretation concerning the minimum purchase obligation based on the contract. The company has disputed the foreign gas supplier's contractual interpretation concerning penalties. Gasum is negotiating with the supplier concerning the dispute. Possible legal processes on the matter cannot be ruled out. Gasum does not disclose more information about the dispute and related risks and measures particularly for the reason that further information might affect the outcome of the procedures. The company has, however, recognized part of the proposed payment based on the daily minimum purchase obligation under current liabilities as a provision. For more information, see Notes 3.5 and 3.10.

5.6. Events after the reporting period

Russia attacked Ukraine in February 2022. Gasum has been monitoring closely the development of the war in Ukraine and its impacts on the energy sector. Gas imports from Russia to Europe have continued normally so far, but the geopolitical situation and related sanctions imposed as well as any additional sanctions and countersanctions and their consequences, result in uncertainty regarding the company's operations, demand for gas and gas deliveries. The Russian supplier of natural gas has demanded payments for gas to be made in rubles and stated that it may restrict supply if the contractual amendments are not accepted. Contractual obligations in the event of the discontinuation of deliveries of natural gas and liquefied natural gas could be significant. The company is mitigating the risk of supply cuts e.g. by exploring alternative supply methods.

The geopolitical situation also affects the surge in gas price as well as price fluctuations. The company has contractual Take or Pay obligations which, in the event of major decrease in gas demand and increase in price, could have a significant impact on the financial statements of the company. Price movements may also result in changes in the company's assets and the fair value of derivatives, which may also affect the related cash collateral required. The company has continued measures to adjust derivative hedge positions especially for which cash collaterals are required.

The company is monitoring the situation actively and continues active dialogue with relevant national authorities and stakeholders to ensure compliance with both EU policies as well as legislation and regulations in force, including sanctions. To prepare for the situation and any changes, Gasum is continuously preparing mitigating measures to reduce the impacts of any escalation. The Group has also had exceptionally high cash holdings and liquidity in early 2022 due to the situation. After the reporting date, the company has extended the short-term finance loan of €210 million drawn in September to June 2022.

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 capability to react to possible challenges in the energy markets.

PARENT COMPANY FINANCIAL STATEMENTS

PARENT COMPANY INCOME STATEMENT

€

	Note	Jan 1–Dec 31, 2021	Jan 1–Dec 31, 2020
Revenue	1	**1,040,894,322.74**	**412,705,033.64**
Other operating income	2	466,777,768.43	113,916,908.57
Materials and services	3		
Raw materials and consumables			
Purchases during the financial year		-991,589,442.52	-354,630,480.13
Change in stocks		-5,641,206.42	1,464,967.26
External services		-8,305,636.57	-8,428,120.81
		-1,005,536,285.51	-361,593,633.68
Personnel expenses	4		
Salaries and remunerations		-15,867,542.25	-13,616,046.99
Employer's contributions			
Pension costs		-2,697,125.57	-2,582,153.14
Other employer's contributions		-700,916.09	-225,110.74
		-19,265,583.91	-16,423,310.87
Depreciation, amortization and impairment	5		
Depreciation according to plan		-14,512,210.72	-11,658,658.98
		-14,512,210.72	-11,658,658.98
Other operating expenses	6	-731,207,393.49	-147,090,084.49
Operating result		**-262,849,382.46**	**-10,143,745.81**
Finance income and costs			
Other interest and finance income	8		
From Group companies		13,812,672.61	19,226,456.78
From others		1,888,947.80	2,935,523.13
		15,701,620.41	22,161,979.91
Other interest and finance costs	8		
To Group companies		-936,514.87	-2,075,248.52
To others		-15,378,337.46	-16,261,863.51
		-16,314,852.33	-18,337,112.03
Result before appropriations and taxes		**-263,462,614.38**	**-6,318,877.93**
Appropriations	10		
Depreciation difference (increase -, decrease +)		14,934.13	-5,508,210.55
Group contribution received		950,000.00	0.00
Group contribution given		0.00	-18,143,933.00
		964,934.13	-23,652,143.55
Income taxes	11	13,074.31	-1,137,035.08
Result for the financial year		**-262,484,605.94**	**-31,108,056.56**

PARENT COMPANY BALANCE SHEET

€	Note	December 31, 2021	Restated, December 31, 2020
Assets			
Non-current assets			
Intangible assets			
Intangible rights		188,722.77	312,281.72
Other long-term expenditure		27,432,479.05	24,516,209.18
		0.00	0.00
	12	27,621,201.82	24,828,490.90
Property, plant and equipment			
Land and water areas		440,759.08	440,759.08
Buildings and structures		57,632,133.19	50,651,089.82
Machinery and equipment		46,686,258.69	48,802,383.19
Other tangible assets		3,493,525.43	3,632,301.87
Advances paid and construction in progress		31,055,704.48	34,217,488.35
	13	139,308,380.87	137,744,022.31
Investments			
Shares in Group companies		339,786,886.26	435,597,281.22
Receivables from Group companies		232,913,159.22	290,479,016.63
Other shares and holdings		49,853.40	49,853.40
	14	572,749,898.88	726,126,151.25
Total non-current assets		**739,679,481.57**	**888,698,664.46**
Current assets			
Inventories	15	181,120,814.77	28,505,400.22
Receivables			
Non-current receivables			
Derivative financial instruments		38,182,266.94	0.00
Other non-current receivables		211,881.48	206,881.48
	16	38,394,148.42	206,881.48
Current receivables			
Trade receivables		280,876,804.00	67,403,398.62
Current receivables from Group companies		184,233,233.91	86,874,326.21
Current receivables from participating interest undertakings		780,600.51	3,152,020.06
Other current receivables		146,992,241.41	12,705,756.07
Short-term accruals		14,387,914.35	6,118,106.24
Derivative financial instruments		232,629,791.61	0.00
	17	859,900,585.79	176,253,607.20
Cash and cash equivalents	18	386,146,239.34	11,933,045.26
Total current assets		**1,465,561,788.32**	**216,898,934.16**
Total assets		**2,205,241,269.89**	**1,105,597,598.62**

€	Note	December 31, 2021	Restated, December 31, 2020
Shareholders' equity and liabilities			
Equity			
Share capital		10,000,000.00	10,000,000.00
Capital loan		200,000,000.00	0.00
Other reserves		124,303,645.75	124,303,645.75
Retained result		410,496,340.48	384,565,667.21
Result for the period		-262,484,605.94	-31,108,056.56
		148,011,734.54	353,457,610.65
Total equity	19	**482,315,380.29**	**487,761,256.40**
Provisions for liabilities and charges	21	**15,685,359.00**	**0.00**
Liabilities			
Non-current liabilities			
Non-current loans from financial institutions		445,000,000.00	345,000,000.00
Non-current loans from Group companies		0.00	62,482.48
Derivative financial instruments		51,160,734.68	10,792,433.37
	22	496,160,734.68	355,854,915.85
Current liabilities			
Short-term loans from financial institutions		210,000,000.00	
Advances received		16,162,133.19	8,060,143.93
Trade payables		283,237,450.08	61,857,923.16
Liabilities to Group companies		140,240,015.05	60,248,715.96
Other liabilities		59,345,570.37	68,008,354.85
Derivative financial instruments		385,352,414.67	56,980,818.63
Accruals and deferred income		112 889 289,37	6,328,415.87
Other current liabilities to participating interest undertakings		1,682,237.94	497,053.97
	23	**1,211,079,795.92**	**261,981,426.37**
Total liabilities		**1,707,240,530.60**	**617,836,342.22**
Total liabilities		**2,205,241,269.89**	**1,105,597,598.62**

PARENT COMPANY CASH FLOW STATEMENT

€

	Note	Jan 1–Dec 31, 2021	Jan 1–Dec 31, 2020
Cash flows from operating activities			
Result before appropriations and taxes		-263,462,614	-6,318,878
Adjustments:			
Depreciation and amortization according to plan	5	14,512,211	11,658,659
Unrealized gains/losses on financial instruments	8	147,802,058	32,834,490
Finance income and costs	8	613,232	-3,824,868
Other non-cash items		31,803,176	5,592,316
Net cash flow before change in working capital		-68,731,937	39,941,719
Change in working capital			
Increase (-)/Decrease (+) in current non-interest-bearing receivables		-389,770,385	-14,153,136
Increase (-)/Decrease (+) in inventories		-10,728,662	-23,498,840
Increase (-)/Decrease (+) in current non-interest-bearing liabilities		305,705,783	-4,546,609
Cash flow from operating activities before financial items and taxes		93,793,264	-42,198,585
Interest paid and other finance costs arising from operations		-13,830,429	-12,289,172
Interest received from operating activities		16,883,497	23,698,641
Direct taxes paid		2,119,689	1,309,763
Net cash flow from operating activities		**-157,352,445**	**10,462,366**
Cash flows from investing activities			
Capital expenditure on tangible and intangible assets		-19,958,241	-32,827,520
Proceeds from sale of tangible and intangible assets		202,508	2,025,866
Business acquisitions and disposals		30,173,090	-130,633,222
Loans given		63,524,779	25,244,612
Investment grants received		6,357,054	0
Net cash flow from investing activities		**80,299,191**	**-136,190,244**
Cash flows from financing activities			
Proceeds from current borrowings		212,060,688	60,513,641
Repayments of current borrowings		-60,424,601	0
Proceeds from non-current borrowings		100,000,000	115,000,000
Repayments of non-current borrowings			0
Proceeds from capital loans		200,000,000	
Group contributions received/given			-18,143,933
Dividends paid			-20,002,200
Net cash flow from financing activities		**451,636,087**	**137,367,508**
Net decrease (-)/increase (+) in cash and cash equivalents		**374,582,833**	**11,639,630**
Cash and cash equivalents at the beginning of the period		6,861,608	620,188
Foreign exchange gains and losses on cash and cash equivalents		-57,347	
Outgoing and incoming cash and cash equivalents in business acquisitions and divestments		4,759,145	-5,398,210
Cash and cash equivalents at the end of the period		386,146,239	6,861,608

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, 2021.

CHANGE IN ACCOUNTING POLICY REGARDING CHAPTER 5, SECTION 2A OF THE ACCOUNTING ACT

Gasum Ltd has changed its accounting policy concerning accounting for derivative financial instruments and adopted the principle of fair value under chapter 5, section 2a of the Accounting Act regarding the recognition of derivative financial instruments, whereby it records changes in the fair value of derivatives in other operating income or expenses in the income statement. A corresponding adjustment was also made during the comparative period to the closing balance sheet of the previous period. The income statement for the comparative period was not restated comparable. Since the income statement for the comparable period was not rendered comparable, Note 25 presents what the effect of the change in accounting policy would have been if the company had previously followed recognition in accordance with chapter 5, section 2a of the Accounting Act under which unrealized gains and losses arising from changes in the fair value of derivative financial instruments are recognized immediately in the income statement. Gasum does not apply hedge accounting to derivative financial instruments.

€	Note	Dec 31, 2020	Changes	Restated Dec 31, 2020
Assets				
Receivables				
Derivative financial instruments, non-current	9, 16	0.00	11,382,017.64	11,382,017.64
Derivative financial instruments, current	9, 17	0.00	45,978,854.19	45,978,854.19
Equity and liabilities				
Retained earnings	19	384,565,667.21	57,360,871.83	441,926,539.04

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.

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/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.

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	2021	2020
Finland	862,805,225.00	371,044, 925.10
Other countries	178,089,097.74	41, 907,091.36
Total	**1,040,894,322.74**	**412,705,033.64**

2. Other operating income

€

Other operating income	2021	2020
Rental income	17,997.67	0.00
Proceeds from sales of fixed assets	100,000.00	12,000.00
Gains from derivative financial instruments	385,941,933.29	92,159,133.21
Gain from merger	0.00	2,930,590.47
Other income*	80,717,837.47	18,815,184.89
Total	**466,777,768.43**	**113,916,908.57**

*Other income includes management fees included in the transmission price model amounting to €32,924,287.43 (€5,393,740.00) as well as transmission price income amounting to €48,092,000.00 (€11,751,379.64).

3. Materials and services

€

Materials and services	2021	2020
Materials and supplies		
Purchases during the financial year	999,264,187.40	354,630,480.13
Change in stocks	-2,033,538.46	-1,464,967.26
Total materials and supplies	997,230,648.94	353,165,512.87
External services	8,305,636.57	8,428,120.81
Total	**1,005,536,285.51**	**361,593,633.68**

4. Personnel expenses and number of personnel

€

Personnel expenses	2021	2020
Salaries and remunerations	15,867,542.25	13,616,046.99
Pension costs	2,697,125.57	2,697,125.57
Statutory employer contributions	700,916.09	225,110.74
Total	**19,265,583.91**	**16,423,310.87**

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

Personnel on average	2021	2020
White collar	167	151
Blue collar	28	25
Personnel on average	**195**	**176**

5. Depreciation, amortization and impairment

€

Depreciation, amortization and impairment	2021	2020
Amortization of intangible assets	154,189.35	54,884.35
Amortization of other long-term expenditure	4,767,347.81	3,511,293.84
Depreciation of buildings and structures	3,642,594.85	2,956,170.82
Depreciation of machinery and equipment	5,730,403.20	4,951,840.59
Depreciation of other tangible assets	217,675.51	184,469.38
Total	**14,512,210.72**	**11,658,658.98**

6. Other operating expenses

€

Other operating expenses	2021	2020
Rents	11,416,499.50	11,194,613.38
Maintenance costs	6,509,320.08	6,268,117.58
External services	14,380,063.34	8,797,797.26
Marketing costs	1,749,889.73	1,521,582.26
Realized losses on derivatives	267,231,459.14	66,777,587.66
Unrealized losses on derivatives	371,567,263.91	32,448,856.20
Other*	58,352,897.79	20,081,530.15
Total	**731,207,393.49**	**147,090,084.49**

*Item 'Other' includes transmission price adjustments to a subsidiary based on the Group's transmission pricing model at €34.0 million (2020: €16 million) and costs or provisions relating to the daily minimum purchase obligation under a supply contract at €15.7 million in 2021.

7. Audit fees

€

Audit fees	2021	2020
Statutory audit fees	478,600.00	180,000.00
Audit opinions	16,530.50	39,290.00
Tax services	61,905.60	101,366.52
Other services	20,522.40	62,594.10
Total	**577,558.50**	**383,250.62**

8. Finance income and costs

€

Finance income	2021	2020
Interest income on other non-current receivables	38,238.24	15,009.58
Interest and finance income from others	1,850,709.56	2,920,513.55
Interest and finance income from Group companies	13,812,672.61	19,226,456.78
Total	**15,701,620.41**	**22,161,979.91**

€

Finance costs	2021	2020
Interest expenses on finance loans	4,020,441.67	2,328,469.44
Fair value losses on derivative financial instruments	0.00	4,619,667.57
Other finance costs	12,294,410.66	8,490,120.63
Total	**16,314,852.33**	**18,337,112.03**

9. Financial instruments

€ 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 values	2020 Assets	2020 Liabilities	Net position
Foreign currency derivatives	4,255,334.39	4,144,506.31	110,828.08
Interest rate derivatives	3,865,884.00	6,065,348.00	-2,199,464.00
Commodity derivatives	49,239,654.02	57,948,021.73	-8,708,367.71
Total	**57,360,872.41**	**68,157,876.04**	**-10,797,003.63**
Current portion of fair value	41,817,260.87	53,171,557.47	-11,354,296.60
Non-current portion of fair value	15,543,611.33	14,986,319.02	557,292.32

€ 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**

€ Fair value maturities 2020	Total	Less than 1 year	1–2 years	2+–5 years	5+ years
Foreign currency derivatives	110,828.08	108,869.74	1,958.34	0.00	0.00
Interest rate derivatives	-2,199,464.00	0.00	-2,199,464.00	0.00	0.00
Commodity derivatives	-8,708,368.36	-11,679,544.61	538,672.56	682,159.38	1,750,344.30
Total cash flow	**-10,797,004.28**	**-11,570,674.87**	**-1,658,833.10**	**682,159.38**	**1,750,344.30**

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)

€		Dec 31, 2021		Dec 31, 2020
Fair values by hierarchy level	**Assets**	**Liabilities**	**Assets**	**Liabilities**
Commodity derivatives (hierarchy level 1)	129,577,265.17	194,825,899.25	14,336,000.00	26,542,370.75
Commodity derivatives (hierarchy level 2)	114,853,603.43	220,622,948.02	32,293,654.02	31,082,650.98
Commodity derivatives (hierarchy level 3)	29,756,760.56	15,099,749.40	2,610,000.00	323,000.00
Foreign currency derivatives (hierarchy level 2)	1,896,875.08	2,271,195.82	255,334.39	4 144 506.31
Interest rate derivatives (hierarchy level 2)	2,344,659.00	3,693,357.00	3,865,884.00	6 065 348.00
Total	**278,459,163.24**	**436,513,149.35**	**57,360,872.41**	**68,157,876.04**
Non-current portion				
Commodity derivatives (hierarchy level 1)	1,087,137.03	118,904.26	1,456,000.00	1,866,000.00
Commodity derivatives (hierarchy level 2)	7,904,338.86	34,448,942.38	6,245,730.14	5,147,553.89
Commodity derivatives (hierarchy level 3)	26,161,408.44	12,639,712.48	2,605,000.00	322,000.00
Foreign currency derivatives (hierarchy level 2)	3,323.53	3,323.53	108,090.80	106,132.46
Interest rate derivatives (hierarchy level 2)	2,344,659.00	3,693,357.00	3,865,884.00	6,065,348.00
Total non-current portion	**37,500,866.86**	**50,904,239.65**	**14,280,704.94**	**13,507,034.35**
Total current portion	**240,958,296.38**	**385,608,909.70**	**43,080,167.47**	**54,650,841.69**

10. Appropriations

€ **Appropriations**	**2021**	**2020**
Depreciation difference (increase -, decrease +)	14,934.13	-5,508,210.55
Group contribution received	950,000.00	0.00
Group contribution given	0.00	-18,143,933.00
Total	**964,934.13**	**-23,652,143.55**

11. Taxes

€ **Taxes**	**2021**	**2020**
Current tax	0.00	-1,151,077.53
Taxes for previous periods	13,074.31	14,042.45
Total	**13,074.31**	**-1,137,035.08**

12. Intangible assets

€ 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

€ 2020	Intangible rights	Other long-term expenditure	Total
Cost at January 1	1,260,417.33	45,827,432.50	47,087,849.83
Additions	0.00	1,920,887.51	1,920,887.51
Disposals	-8,300.00	-98,430.57	-106,730.57
Transferred through merger	726,334.81	217,679.77	944,014.58
Effect of demerger	0.00	-6,569,722.93	-6,569,722.93
Reclassifications	0.00	5,879,579.62	5,879,579.62
Cost at December 31	**1,978,452.14**	**47,177,425.90**	**49,155,878.04**
Accumulated amortization at January 1	1,233,508.31	19,125,480.23	20,358,988.54
Amortization	54,884.35	3,511,293.84	3,566,178.19
Transferred through merger	386,077.76	122,873.22	508,950.98
Accumulated amortization of disposals	-8,300.00	-98,430.57	-106,730.57
Accumulated amortization at December 31	**1,666,170.42**	**22,661,216.72**	**24,327,387.14**
Net book value at January 1, 2021	26,909.02	26,701,952.27	26,728,861.29
Net book value at December 31, 2021	312,281.72	24,516,209.18	24,828,490.90

13. Tangible assets

€ 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 deprecia-tion 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 deprecia-tion 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

€ 2020	Land and water	Buildings and structures	Machinery and equipment	Other tangible assets	Construction in progress	Total
Cost at January 1	2,673,000.74	654,394,418.36	162,053,075.45	12,789,192.70	38,713,536.62	870,623,223.87
Additions	0.00	4,698,523.99	2,429,599.42	133,451.01	24,124,440.77	31,386,015.19
Transferred through merger	0.00	7,156,498.53	4,714,096.26	128,406.54	1,090,998.26	13,089,999.59
Effect of demerger	-2,232,241.66	-285,454,289.66	-18,259,757.41	-4,678,903.56	-1,442,164.36	-312,067,356.65
Disposals	0.00	-1,976,034.42	-1,104,033.24	0.00	0.00	-3,080,067.66
Reclassifications	0.00	3,730,499.07	17,948,785.87	710,458.38	-28,269,322.94	-5,879,579.62
Investment subsidies received	0	-479,383.05	0.00	0.00	0.00	-479,383.05
Cost at December 31	**440,759.08**	**382,070,232.82**	**167,781,766.35**	**9,082,605.07**	**34,217,488.35**	**593,592,851.67**
Accumulated deprecia-tion at January 1	0.00	327,759,293.59	113,878,029.67	5,246,957.15	0.00	446,884,280.41
Depreciation	0.00	2,956,170.82	4,951,840.59	184,469.38	0.00	8,092,480.79
Accumulated deprecia-tion on disposals	0.00	-18,034.23	-1,036,147.52	0.00	0.00	-1,054,181.75
Transferred through merger	0.00	721,712.82	1,185,660.42	18,876.67	0.00	1,926,249.91
Accumulated depreciation at December 31	**0.00**	**331,419,143.00**	**118,979,383.16**	**5,450,303.20**	**0.00**	**455,848,829.36**
Net book value at January 1, 2020	2,673,000.74	326,635,124.77	48,175,045.78	7,542,235.55	38,713,536.62	423,738,943.46
Net book value at December 31, 2020	440,759.08	50,651,089.82	48,802,383.19	3,632,301.87	34,217,488.35	137,744,022.31

14. Investments

€ 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**

€ 2020	Shares in Group companies	Other investments	Receivables from Group companies	Total
Cost at January 1	349,112,708.97	49,853.40	324,892,650.00	674,055,212.37
Additions	115,610,255.43	0.00	132,921,576.75	248,531,832.18
Disposals	-26,793,321.52	0.00	-160,335,210.12	-187,128,531.64
Merger	-2,332,361.66	0.00	-7,000,000.00	-9,332,361.66
Net book value at 31 December	**435,597,281.22**	**49,853.40**	**290,479,016.63**	**726,126,151.25**

15. Inventories

€ Inventories	2021	2020
Product inventories	7,932,072.96	5,146,502.04
Other inventories	216,960.00	718,092.96
Prepayments*	172,971,781.81	22,640,805.22
Total	**181,120,814.77**	**28,505,400.22**

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

16. Non-current receivables

€ Non-current receivables	2021	Restated 2020	2020
Other non-current receivables	211,881.48	206,881.48	206,881.48
Financial securities	38,182,266.94	11,382,017.64	
Total	**38,394,148.42**	**11,588,899.12**	**206,881.48**

*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 and the comparative figures for 2020 have been adjusted accordingly.

17. Current receivables

€ Current receivables, external	2021	Restated 2020	2020
Trade receivables	280,876,804.00	67,403,398.62	67,403,398.62
Other receivables*	146,992,241.41	17,777,193.05	12,705,756.07
Accrued income	14,387,914.35	6,118,106.24	6,118,106.24
Financial securities**	232,629,791.61	45,978,854.19	
Total	**674,886,751.37**	**137,277,552.10**	**86,227,260.93**

*Reclassification concerning comparative figures for 2020, with €5,071,436,98 reclassified from Cash and cash equivalents to Other receivables.
**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 and the comparative figures for 2020 have been adjusted accordingly.

€ Current receivables, external	2021	Restated 2020	2020
Trade receivables	280,876,804.00	67,403,398.62	67,403,398.62
Other receivables	146,992,241.41	12,705,756.07	12,705,756.07
Prepayments	490,513.50	0.00	0.00
Collateral lodged	68,432,182.76	181,217.56	181,217.56
Other receivables*	78,069,545.15	17,595,975.49	12,524,538.51
Accrued income	14,387,914.35	6,118,106.24	6,118,106.24
Derivative financial instruments	232,629,791.61	45,978,854.19	0.00
Total	**674,886,751.37**	**132,206,115.12**	**86,227,260.93**

*Reclassification concerning comparative figures for 2020, with €5,071,436,98 reclassified from Cash and cash equivalents to Other receivables.

€ Accrued income	2021	2020
Balance power accrual	8,915,104.87	0.00
Service sales accruals	216,160.00	0.00
Power derivative December 2021	3,352,461.00	0.00
Annual rebate	0.00	135,000.00
Tax receivable	0.00	2,106,614.46
Other accrued income	1,904,188.48	3,876,491.78
Total	**14,387,914.35**	**6,118,106.24**

€ Current receivables, Group companies	2021	2020
Trade receivables	27,711,090.24	11,930,087.27
Group bank account receivables	71,047,463.22	59,466,503.86
Other receivables	75,288,373.05	12,464,404.47
Accrued income	2,539,202.92	3,013,330.61
Derivative financial instruments	7,647,104.48	0.00
Total	**184,233,233.91**	**86,874,326.21**

€ Current receivables from participating interest undertakings	2021	2020
Trade receivables	27,499.55	2,892,579.14
Other receivables	753,100.96	259,440.92
Total	**780,600.51**	**3,152,020.06**

18. Cash and cash equivalents

€

Cash and cash equivalents	2021	2020
Cash and cash equivalents	386,146,239.34	6,861,608.28
Total	**386,146,239.34**	**6,861,608.28**

Reclassification concerning comparative figures for 2020, with €5,071,436,98 reclassified from Cash and cash equivalents to Other receivables.

19. 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	0.00	353,457,610.65	544,799,986.23
Impact of change in accounting policy Jan 1	0.00	0.00	0.00	57,038,729.83	57,038,729.83
Capital loan	0.00	0.00	200,000,000.00	0.00	200,000,000.00
Result for the period	0.00	0.00	0.00	-262,484,605.94	-262,484,605.94
Net book value at December 31	**10,000,000.00**	**124,303,645.75**	**200,000,000.00**	**148,011,734.54**	**482,315,380.29**

In December 2021, Gasum Ltd issued a capital loan of €200 million treated as an equity instrument targeted at Governia Oy. 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.

€

Statement of distributable equity	2021	2020
Reserve for invested unrestricted equity	124,303,645.75	124,303,645.75
Retained earnings	353,457,610.65	384,565,667.21
Impact of change in accounting policy Jan 1*	57,038,729.83	0.00
Result for the period	-262,484,605.94	-31,108,056.56
Total	**272,315,380.29**	**477,761,256.40**

*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 and the comparative figures for 2020 have been adjusted accordingly.

20. Accumulated appropriations

€

Accumulated appropriations	2021	2020
Accumulated depreciation difference at January 1	0.00	132,405,365.81
Effect of demerger	0.00	-137,913,576.36
Transferred through merger	-14,934.13	0.00
Depreciation difference (increase -, decrease +)	14,934.13	5,508,210.55
Accumulated depreciation difference at December 31	**0.00**	**0.00**

21. Provisions for liabilities and charges

€

Provisions for liabilities and charges	2021	2020
Provisions for daily minimum natural gas purchase obligation	15,685,359.00	0.00
Total	**15,685,359.00**	**0.00**

22. Non-current liabilities

€

Non-current liabilities	2021	2020
Loans from financial institutions	445,000,000.00	345,000,000.00
Other non-current liabilities	51,160,734.68	11,177,057.85
Total	**496,160,734.68**	**356,177,057.85**

All financial loans expire in less than 5 years.

23. Current liabilities

€

Short-term loans from financial institutions	2021	2020
Loans from financial institutions	210,000,000.00	0.00
Total	**210,000,000.00**	**0.00**

€

Current liabilities to others	2021	2020
Loans from financial institutions	210,000,000.00	0.00
Trade payables	283,237,450.8	61,857,923.16
Prepayments	16,162,133.19	8,060,143.93
Other liabilities*	444 697 985,04	124,989,173.48
Accruals and deferred income	112,889,289.37	6,328,415.87
Total	**1,066,986,857.68**	**201,235,656.44**

*Consist primarily of a derivative instrument liability of €385.3 million and a value-added tax liability of €60.8 million (2020: derivative instrument liability of €52.8 million and bank overdraft liability of €60.5 million).

€

Accruals and deferred income	2021	2020
Accrued interest liabilities	2,585,355.56	1,192,962.50
Salary-related items	3,558,081.90	3,009,709.89
Items related to natural gas	104,689,094.04	0.00
Other accruals and deferred income	2,056,757.87	2,125,743.48
Total	**112,889,289.37**	**6,328,415.87**

€

Current liabilities to Group companies	2021	2020
Trade payables to Group companies	1,795,907.65	1,488,940.08
Accrued accounts payable to Group companies	5,004,165.24	4,557,375.17
Group bank account liabilities	92,539,104.21	14,290,879.90
Other accrued liabilities to Group companies	2,971,837.95	792,149.41
Other short-term liabilities to Group companies	40,099,685.25	39,119,371.40
Total	**142,410,700.30**	**60,248,715.96**

€

Current liabilities to participating interest undertakings	2021	2020
Liabilities to participating interest undertakings	1,682,237.94	497,053.97
Total	**1,682,237.94**	**497,053.97**

24. Guarantees and commitments

€

Guarantees given and contingent liabilities	2021	2020
On own behalf:		
Commitments and other liabilities	32,662,977.34	31,457,340.87
Pledges	179,535.40	174,535.40
On behalf of Group companies:		
Commitments and other liabilities	253,881,653.96	240,944,533.45
Total	**286,724,166.70**	**272,576,409.73**

€

Operating lease commitments	2021	2020
Expiry no later than 1 year	327,775.05	321,044.94
Expiry later than 1 year and no later than 5 years	273,787.03	198,016.62
Total	**601,562.08**	**519,061.56**

€

Rental commitments	2021	2020
Expiry no later than 1 year	801,800.99	956,843.87
Expiry later than 1 year and no later than 5 years	4,512,104.95	4,667,962.31
Total	**5,313,905.94**	**5,624,806.18**

€

Derivative financial instruments	2021	2020
Fair value of derivative financial instruments		
Currency derivatives	-2,271,195.82	-4,144,506.31
Commodity derivatives	-430,548,590.67	-57,625,880.28
Interest rate derivatives	-3,693,357.00	-6,065,348.00
Total fair value of derivative financial instruments	**-436,513,143.49**	**-67,835.734.59**
Nominal value of derivative financial instruments		
Currency derivatives	162,430,153.56	133,847,227.67
Commodity derivatives	532,927,308.86	271,644,440.98
Interest rate derivatives	258,750,000.00	258,750,000.00
Total nominal value of derivative financial instruments	**954,107,462.42**	**664,241,668.65**

*The net fair value of the parent company's derivative financial instruments totaled -€158,053,979.66 (2020: -€10,837,975.68). The parent company had derivative financial instruments with a positive fair value and their nominal value totaled €906,601,861.49 (2020: €699,539,225.98).

25. Comparable income statement 2020

The income statement of Gasum Ltd for the comparable period was not rendered comparable. Below presented what the effect of the change in accounting policy on the result for the comparable period would have been if the company had previously followed recognition in accordance with chapter 5, section 2a of the Accounting Act under which unrealized gains and losses arising from changes in the fair value of derivative financial instruments are recognized immediately in the income statement.

Unrealized gains of €20,622,730.92 from commodity derivatives have been added under other operating income and unrealized gains of €3,839,116.50 from currency and interest rate derivatives have been added under finance income in accordance with chapter 5, section 2a of the Accounting Act.

€	Comparable Jan 1–Dec 31, 2020	Jan 1–Dec 31, 2020
Revenue	**412,705,033.64**	**412,705,033.64**
Other operating income	134,539,639.49	113,916,908.57
Materials and services		
Raw materials and consumables		
Purchases during the financial year	-354,630,480.13	-354,630,480.13
Change in stocks	1,464,967.26	1,464,967.26
External services	-8,428,120.81	-8,428,120.81
	-361,593,633.68	-361,593,633.68
Personnel expenses		
Salaries and remunerations	-13,616,046.99	-13,616,046.99
Employer's contributions		
Pension costs	-2,582,153.14	-2,582,153.14
Other employer's contributions	-225,110.74	-225,110.74
	-16,423,310.87	-16,423,310.87
Depreciation, amortization and impairment		
Depreciation according to plan	-11,658,658.98	-11,658,658.98
	-11,658,658.98	-11,658,658.98
Other operating expenses	-147,090,084.49	-147,090,084.49
Operating result	**10,478,985.11**	**-10,143,745.81**
Finance income and expenses		
Other interest and finance income		
From Group companies	23,106,321.69	19,226,456.78
From others	2,935,523.13	2,935,523.13
	26,041,844.82	22,161,979.91
Other interest and finance expenses		
To Group companies	-2,075,248.52	-2,075,248.52
To others	-16,261,863.51	-16,261,863.51
	-18,337,112.03	-18,337,112.03
Result before appropriations and taxes	**18,183,717.90**	**-6,318,877.93**
Appropriations		
Depreciation difference (increase -, decrease +)	-5,508,210.55	-5,508,210.55
Group contribution received	0.00	0.00
Group contribution given	-18,143,933.00	-18,143,933.00
	-23,652,143.55	-23,652,143.55
Income taxes	-6,037,554.25	-1,137,035.08
Result for the financial year	**-11,505,979.90**	**-31,108,056.56**

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 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'.

The company has changed the accounting policies for the unbundling of natural gas business activities in accounting for the financial statements for the year ending at December 31, 2021 and adjusted the comparative data for the financial statements for the period ending at December 31, 2020 accordingly in accordance with the decision issued to the company by the Energy Market Authority on January 28, 2022. In addition, the company's accounting policies for the financial statements have been changed and the company has adopted the principle of fair value under chapter 5, section 2a of the Accounting Act regarding the recognition of derivative financial instruments. The data for the comparative period has been adjusted accordingly. Due to the change in accounting policies for the company's financial statements, the accounting policies relating to the unbundling of natural gas business activities in accounting have also been changed accordingly. The effects of the changes in accounting policies are described in more detail below. The company has appealed against the grounds on which the decision taken by the Energy Authority is based, and the appeal is pending at the Market Court. The Energy Authority's decision of January 28, 2022 must, however, be complied with regardless of appeal. For more information see 5.5. Legal proceedings and claims.

Changes in accounting policies – derecognition of an internal item

In the unbundled 2020 financial statements for natural gas sales activities, Gasum Ltd disclosed a calculated internal item concerning the previous financial period under other current receivables to comply with the new balance sheet format under the Decree of Ministry of the Economic Affairs and Employment on the unbundling of natural gas operations (1306/2019) that entered into force from the beginning of the 2020 financial period. The calculated internal item under other current receivables complied with the decisions issued by Energy Authority on February 26, 2019 and March 15, 2019 against which company has lodged an appeal to the Market Court and which the company must comply with regardless of any appeal. Additional information in Note 5.5 Legal proceedings and claims. Details of this change were provided in conjunction with the 2020 financial statements. In accordance with the decision issued to the company by the Energy Authority on January 28, 2022, these calculated internal items disclosed under other current receivables have been derecognized, and the change in accounting policy has been treated as a correction of error in accordance with the guidelines provided by the Finnish Accounting Board by means of a retroactive adjustment of equity. The change had a reducing effect of €69 million on the equity item 'Profit (loss) from previous periods' disclosed as comparative data in the 2021 financial statements. For more information see 5.5. Legal proceedings and claims.

Changes in accounting policy – retained earnings

Ownership of the natural gas transmission network activities was unbundled from the company through a partial demerger on January 1, 2020, whereby starting from the financial period ending at December 31, 2020, the natural gas business activities of Gasum Ltd subject to calculated unbundling from the company's other activities have only comprised natural gas sales activities, including the share of gas energy charges. In accordance with the Energy Authority's decision of January 28, 2022, the balance sheet item 'Retained earnings' has been adjusted so that the balance sheet item has been reallocated in proportion to the net assets of the sales activities and of non-natural gas activities. The balance sheet difference remaining after the reallocation has been balanced out in accordance with the Energy Authority's recommendation by means of the balance sheet item 'Cash and cash equivalents'. The change had a reducing impact of €14.1 million on equity as well as cash and cash equivalents disclosed as comparative data for 2020 in the 2021 financial statements.

Change in accounting policy in financial statements of Gasum Ltd – impact on the unbundling of accounts concerning natural gas business activities

Gasum Ltd has changed its financial statements accounting policies in the 2021 financial statements and adopted the principle of fair value under chapter 5, section 2a of the Accounting Act regarding the recognition of financial instruments. The change in accounting policy was made retroactively in the financial statements of Gasum Ltd in accordance with the guidelines of the Finnish Accounting Board, whereby the change also affected the 2020 comparative data on the unbundling of accounts concerning natural gas business activities. In the unbundling, the impact of the change in the accounting policy of Gasum Ltd was allocated to business activities by means of the matching principle. The change had an increasing impact of €3.9 million on equity and other current receivables of the sales activities for the 2020 financial period disclosed as comparative data in the 2021 financial statements.

Correction of data for comparative period correction of error in financial items and in other liabilities

In the unbundling of natural gas operations in accounting in the 2020 financial statements, financial income of €4.4 million in the income statement and interest receivable €1.9 million in the balance sheet was erroneously presented for sales activities. In accordance with the matching principle, the financial income and the interest receivable in question pertains to non-natural gas operations, and the income and receivable has been reallocated in accordance with the corrected matching in the comparative data for 2020. Taking the tax effect into account, the correction has had a reducing effect of €4.4 million on financial items of sales activities and a reducing effect of €3.5 million on retained earnings under equity of sales activities. The correction has had a reducing effect of €1.9 million on current receivables from Group companies. In addition, an error in presenting salary related liabilities has been corrected in the comparative data for 2020. The correction has had a reducing effect of €0.8 million on the other liabilities.

Gasum Ltd, sales activities

€ Income statement	Jan 1–Dec 31, 2021	Restated Jan 1–Dec 31, 2020	Jan 1–Dec 31, 2020
REVENUE	**613,062,049.66**	**267,557,359.27**	**267,557,359.27**
Other operating income	24,187,356.41	8, 201.16	8,201.16
Materials and services			
Purchases during the financial year	-635,336,426.56	-244,075,880.32	-244,075,880.32
External services	-602.90	-485.20	-485.20
	-635,337,029.46	-244,076,365.52	-244,076,365.52
Personnel expenses			
Salaries and remunerations	-1,315,029.24	-531,820.94	-531,820.94
Employer's contributions	-132,762.55	-106,920.92	-106,920.92
	-1,447,791.78	-638,741.86	-638,741.86
Depreciation, amortization and impairment			
Depreciation and amortization according to plan	-1,887,714.00	-92,433.64	-92,433.64
	-1,887,714.00	-92,433.64	-92,433.64
Other operating expenses	-36,899,657.10	-3,404,060.46	-3,404,060.46
OPERATING PROFIT/LOSS	**-38,322,786.27**	**19,353,958.95**	**19,353,958.95**
Finance income and expenses*			
Other interest and finance income from Group companies	0.00	0.00	3,824,920.67
Other interest and finance income from others	0.00	0.00	582,136.08
	0.00	0.00	4,407,056.74
Other interest and finance expenses	0.00	-0.97	-0.97
	0.00	-0.97	4,407,055.77
PROFIT/LOSS BEFORE APPROPRIATIONS AND TAXES	**-38,322,786.27**	**19,353,957.98**	**23,761,014.72**
Appropriations			
Depreciation difference (increase -, decrease +)	0.00	-11,239.45	-11,239.45
Group contributions (given -, received +)	95,000.00	-18,143,933.00	-18,143,933.00
Income taxes	0.00	-239,757.11	-1,121,168.45
PROFIT/LOSS FOR THE FINANCIAL YEAR	**-38,227,786.27**	**959,028.42**	**4,484,673.82**

*Finance income has been adjusted for the comparative period January 1 to December 31, 2020. There were no interest-bearing receivables allocated to sales activities at period ending December 31, 2020. The adjustment has a reducing effect of €3.5 million on result and equity for the comparative period, with the income tax effect taken into account.

Gasum Ltd, sales activities

€

Balance sheet	Dec 31, 2021	Restated Dec 31, 2020	Dec 31, 2020
ASSETS			
NON-CURRENT ASSETS			
Intangible assets			
Intangible rights	2,729.81	0.00	0.00
Other long-term expenditure	3,507,218.14	99,773.97	99,773.97
	3,509,947.95	99,773.97	99,773.97
Property, plant and equipment			
Machinery and equipment	21,388.92	580.91	580.91
Advances paid and construction in progress	6,345.20	5,059,058.11	5,059,058.11
	27,734.12	5,059,639.02	5,059,639.02
TOTAL NON-CURRENT ASSETS	**3,537,682.07**	**5,159,412.99**	**5,159,412.99**
CURRENT ASSETS			
Inventories*	**172,665,591.31**	**15,808,821.60**	**15,808,821.60**
Non-Current receivables			
Derivative financial receivable	666,590.00	0.00	0.00
Current receivables			
Derivative financial receivable	10,253,624.00	3,935,224.91	0.00
Trade receivables	258,688,473.18	60,625,895.56	60,625,895.56
Current receivables from Group companies	13,717,550.22	837,109.67	2,790,651.90
Current receivables from associated companies**	0.00	6,672.10	6,672.10
Other current receivables	2,930,034.56	1,083,927.11	70,094,710.11
Short-term accruals	708,214.85	2,687,677.83	2,687,677.83
	286,297,896.81	69,176,507.17	136,205,607.50
Cash and cash equivalents	-56,101,214.86	-7,174,185.34	9,291,239.42
TOTAL CURRENT ASSETS	**403,528,863.26**	**77,811,143.43**	**161,305,668.52**
TOTAL ASSETS	**407,066,545.33**	**82,970,556.42**	**166,465,081.51**
EQUITY AND LIABILITIES			
SHAREHOLDERS' EQUITY			
Share capital	58,042.31	58,042.31	58,042.31
Retained earnings	44,377,279.88	43,418,251.45	122,612,179.,79
Profit (loss) for the period	-38,227,786.27	959,02842	4,484,673.82
	6,149,493.61	44,377,279.88	127, 096,853.61
TOTAL EQUITY	**6,207,535.92**	**44,435,322.18**	**127,154,895.92**
PROVISIONS	**15,685,359.00**	**0.00**	**0.00**

LIABILITIES			
Non-Current liabilities			
Derivative financial liability	5,210.00	0.00	0.00
Current liabilities			
Derivative financial liability	18,128,813.00	0.00	0.00
Received advances	0.00	0.00	0.00
Trade payables	225,168,407.11	29,674,863.89	29,674,863.89
Liabilities to Group companies	0.00	132,377.95	132,377.95
Other liabilities	36,628,237.52	7,208,682.36	7,208,682.36
Accruals and deferred income	105,242,982.79	1,519,310.04	2,294,261.39
	385,168,440.41	38,535,234.24	39,310,185.59
TOTAL LIABILITIES	**385,173,650.41**	**38,535,234.24**	**39,310,185.59**
TOTAL EQUITY AND LIABILITIES	**407,066,545.33**	**82,970,556.42**	**166,465,081.51**

*Inventories include a minimum annual Take or Pay obligation under the gas supply contract, amounting to €171,276,398.17.
**€6,672.10 of current receivables from associated companies was not included in the balance sheet specifications for the financial period ending December 31, 2020 but had been taken into account in total current receivables and balance sheet total.

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.

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Financial instruments in the income statement	2021	2020
Other operating income		
Realized gains	24,185,935.07	0.00
Other operating expenses		
Unrealized losses	-11,149,033.52	0.00

€

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 values	2020 Assets	2020 Liabilities	Net position
Commodity derivatives	3,935,224.91	0.00	3,935,224.91
Total	**3,935,224.91**	**0.00**	**3,935,224.91**
Current portion of fair value	3,935,224.91	0.00	3,935,224.91
Non-current portion of fair value	0.00	0.00	0.00

€

Fair value maturities 2021	Total	Less than 1 year	over 1 –2 years	over 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**

€

Fair value maturities 2020	Total	Less than 1 year	over 1 –2 years	over 2–5 years	Over 5 years
Commodity derivatives	3,935,224.91	3,935,224.91	0.00	0.00	0.00
Total cash flow	3,935,224.91	3,935,224.91	0.00	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)

€

		Dec 31, 2021		Dec 31, 2020
Fair values by hierarchy level	Assets	Liabilities	Assets	Liabilities
Commodity derivatives (hierarchy level 2)	10,920,214.00	18,134,023.00	3,935,224.91	0
Total	**10,920,214.00**	**18,134,023.00**	3,935,224.91	0
Non-current portion				
Commodity derivatives (hierarchy level 2)	666,590.00	5,210.00	0	0
Total non-current portion	**666,590.00**	**5,210.00**	0	0
Total current portion	**10,253,624.00**	**18,128,813.00**	3,935,224.91	0

FORMULAS FOR KEY FINANCIAL INDICATORS

Equity ratio (%) = $100 \times \dfrac{\text{Total equity}}{\text{Balance sheet total – advances received}}$

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

Return on investment (%) = $100 \times \dfrac{\text{Result for the period + Finance expenses}}{\text{Total equity + Interest-bearing debt (average for the period)}}$

Net interest-bearing debt = Interest-bearing debt - Cash and cash equivalents

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

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

BOARD OF DIRECTORS' PROPOSAL FOR DISTRIBUTION OF PROFITS

On December 31, 2021 the parent company had distributable funds of €272,315,380.29. 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, 2021.

SIGNATURES TO THE FINANCIAL STATEMENTS AND BOARD OF DIRECTORS' REPORT

Espoo, April 13, 2022

Elina Engman
Chair of the Board of Directors

Stein Dale
Member of the Board of Directors

Torbjörn Holmström
Member of the Board of Directors

Minna Pajumaa
Member of the Board of Directors

Päivi Pesola
Member of the Board of Directors

Elisabet Salander Björklund
Member of the Board of Directors

Ari Vanhanen
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, April 13, 2022
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, 2021.

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 – Events after the reporting period

We pay attention to the descriptions of the uncertainties and risks caused by the geopolitical situation in the notes to the consolidated financial statements in section 5.6 Events after the reporting period and in the section Events after the reporting period in the board of directors' report. Our opinion is not modified in respect of this matter.

Emphasis of Matter – The company's appeals to the Market Court and the Energy Authority's decision on 2020 unbundled financial statements

We pay attention to the note 5.5 of the consolidated financial statements and to the section Unbundling of the natural gas operations in the notes of the parent company's financial statements, describing the company's appeals to the Market Court regarding the decisions made by the Energy Authority on 26 February 2019 and 15 March 2019, Energy Authority's proposal to the Market Court on 17 July 2020 to impose a penalty payment of EUR 79.7 million on the company and the decision made by the Energy Authority on 28 January 2022, which is based on the investigation initiated by the Energy Authority in the financial year 2021 into the company's unbundled financial statements for 2020. 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, April 13 2022
PricewaterhouseCoopers Oy
Authorised Public Accountants

Pasi Karppinen
Authorised Public Accountant (KHT)

Gasum

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