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HALDOR TOPSØE

Annual Report for 2017

Haldor Topsøe Holding A/S
CVR no. 30 82 67 52

The Annual Report has been presented and adopted at the Annual General Meeting on March 22, 2018

Chair of the meeting,
Lene Ramm

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Letter from the Chairman

2017 was a year of consolidation and preparing our companies for a changing future.

Haldor Topsoe
For Haldor Topsoe Group 2017 was a year characterized by consolidation and building the foundation for the future. The single biggest event was undoubtedly the divestment of the emissions control businesses. The related asset impairment had a material negative effect on the financial performance of the company which consequently did not live up to our ambitions. Given the changed market dynamics in the emissions control segment the sale was carried out very successfully and should be seen as yet another big step towards securing the value of Topsoe's product and technology platform, as it gives some financial headroom to develop the catalysts, technology, and service offerings to the refining and chemical industries, while also developing new sustainable solutions.

IGM Biosciences
IGM experienced another very busy year in 2017 with significant progress. On the technical side the internal programs had very positive developments moving several projects closer to an IND filing. Furthermore, IGM successfully secured significant IP, strengthening the company´s position as the undisputed leader in the field of IgM antibodies. Regarding research and/or commercial partnerships there continues to be significant interest from the pharma- and biotech industry. The strategic discussions that were initiated in 2016 were accelerated in 2017 and the many options that appear open for IGM, will be carefully evaluated in the coming year.

Frydenlund Ejendomsselskab
The project of renovating the manor house at Frydenlund expanded in scope and thus has been delayed. This is what could be expected when renovating such an old building and the process has been very smooth after the changed scope. It will be finished and fully operational as a conference center for Haldor Topsoe in the spring of 2018. The rest of the operations had a more normal year.

. . . .

I want to thank the family and my fellow board members for their support and look forward to some very interesting years as all of our companies have exciting and defining times ahead. I can´t thank the employees in our group companies enough for the dedicated work and their commitment. It is something that neither I or the Topsøe family take for granted.

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Five-year summary

DKK million

Income statement 1)	2017	2016	2015 3)	2014 3)	2013 3)
Revenue	5,013	5,150	5,785	5,685	5,348
Gross profit	2,338	2,565	2,452	2,521	2,400
EBITDA	772	1,006	748	898	866
Depreciation and amortization	-259	-262	-293	-366	-175
EBIT	513	744	455	532	691
Net financial expenses etc.	-44	-41	-64	-31	-79
Profit from continuing operations	314	462	251	381	513
Loss from discontinuing operations	-422	-53	-	-	-
Net profit	-108	409	251	381	513
Balance sheet					
Balance sheet total	9,331	10,136	10,075	9,225	8,687
Equity (excl. minority)	4,782	5,218	4,808	4,534	4,113
Net working capital	658	574	438	485	371
Net indebtedness	975	1,429	1,524	1,419	1,497
Cash flow					
Cash flow from operating activities	29	663	716	614	427
- Of which continuing operations	313	700	-	-	-
Cash flow from investing activities	681	-404	-701	-585	-667
- Of which invest. in property, plant and equip.	-221	-410	-651	-600	-664
Cash flow from financing activities	-351	-295	63	18	329
Change in cash and cash equivalents	319	-30	95	47	89
Employees					
Average number of employees	2,555	2,565	2,700	2,703	2,436
Ratios in %					
Gross margin 2)	46.6	49.8	42.4	44.3	44.9
EBITDA margin 2)	15.4	19.5	12.9	15.8	16.2
EBIT margin 2)	10.2	14.4	7.9	9.4	12.9
Return on invested capital (ROIC) 2)	7.7	10.8	7.0	8.7	12.5
Equity ratio	51.2	51.5	47.7	49.1	47.3
Return on equity	-2,2	8.2	5.4	8.8	13.2
Return on equity, continuing operations	6.3	9.2	-	-	-

1) Income statements for 2016 and 2017 consist of continuing operations with discontinuing operations in a separate line.

2) Ratios for 2016 and 2017 apply to continuing operations.

3) Figures for 2013-2015 have not been restated with sale of the emission business in 2017. Figures for 2013-2015 are therefore note comparable to figures for 2006-2017, where divested business is presented as discontinuing operations.

Financial report 2017

Profit from continuing operations amounted to DKK 314 million in 2017 (2016: DKK 462 million). The decline in profit was mainly due to reduced technology revenue in 2017. However, it should be noted that 2016 results were positive affected by the significant one-time effect of restarted Iranian contracts that impacted revenue and EBIT by DKK 122 million.

The financial results in 2017 were negatively impacted by the sale of Haldor Topsoe A/S' emissions control business areas. The transaction was concluded on November 30, 2017, and included a fixed payment of DKK 900 million (adjusted for changes to an agreed normalized working capital level) plus an earn-out, which is dependent on buyer achieving certain targets in the coming years. The value of this earn-out has conservatively been estimated to zero in the 2017 accounts. Consequently, the losses relating to the discontinuing activities within the emissions control business areas amounted to DKK 422 million (mainly related to revaluation).

Net profit (after loss on discontinuing operations) consequently decreased significantly and showed a loss of DKK 108 million for 2017.

EBIT from continuing operations decreased in 2017 by 31% to DKK 513 million corresponding to an EBIT margin of 10.2% (2016: 14.4%). Adjusting for the one-time effect in 2016, EBIT decreased by 17.5%

R&D expenses were maintained at a high level with a R&D-to-revenue-ratio of 10.7% (2016: 10.8%).

Income statement

Revenue

Revenue from continuing operations decreased by 3% to DKK 5,013 million (2016: DKK 5,150 million). Adjusting for 2016 one-time effect, revenue in 2017 is on par with 2016. Exchange rate developments had a negative impact of 0.9% on revenue. Catalyst revenue increased by 4% (driven by 5% volume growth), whereas technology revenue decreased by 17% (5 percentage points of this decrease can be attributable to the one-time positive impact of restarted Iranian contracts in 2016 of DKK 122 million in 2016).

Earnings before interest, tax, depreciation, and amortization (EBITDA)

EBITDA from continuing operations decreased by 23% to DKK 772 million, corresponding to an EBITDA margin of 15.4% (2016: 19.5%).

The 2017 contribution margin was lower than in 2016, mainly due to the one-time impact from Iranian projects of DKK 122 million in 2016, lower contribution from technology contracts, and lower catalyst contribution margins. Staff expenses amounted to DKK 1,566 million, which is on par with 2016. Raw material costs incl. change in inventories increased by 19% to DKK 1,301 million. Purchased equipment for contract work decreased by 21% to DKK 578 million due to decreased activity in the technology business. Other external expenses increased by 5% to DKK 816 million as a result of higher catalyst warranty provisions as well as freight costs due to the increase in catalyst volumes.

Earnings before interest and tax (EBIT)

EBIT from continuing operations decreased by 31% to DKK 513 million corresponding to an EBIT margin of 10.2% (2016: 14.4%). Resumed Iranian contracts had a positive EBIT impact of DKK 122 million in 2016. Depreciation amounted to DKK 259 million, which is on par with 2016.

Net profit

Net profit decreased to DKK -108 million (2016: DKK 409 million).

The decrease in the net profit is mainly explained by:

- A decrease in EBIT to DKK 513 million in 2017 (2016: DKK 744 million).
- A loss on sale of discontinuing operations of DKK 422 million.
- A DKK 101 million decrease in tax to DKK 125 million.

Cash flow and balance sheet

Cash flows from operating activities

Cash flows from operations amounted to DKK 29 million (2016: DKK 663 million). Net working capital increased by DKK 154 million and made up 13.1% of revenue (2016: 11.1%). Initiatives have been taken to reduce net working capital significantly and thereby strengthen cash flows from operating activities in 2018.

CAPEX

CAPEX decreased by 35% and amounted to DKK 292 million (2016: DKK 450 million).

Net indebtedness

Net indebtedness decreased by 32% and amounted to DKK 975 million (2016: DKK 1,429 million).

The interest bearing debt at the end of 2017 was DKK 1,876 million (2016: DKK 2,011 million).

Return on invested capital (ROIC)

ROIC amounted to 7,7% (2016: 10,8%).

Order backlog

The order backlog amounted to DKK 3,508 million at the end of 2017 (a decline in continuing business backlog of DKK 362 million compared to the end of 2016), mainly as a consequence of progression on a number of technology projects during 2017 without Haldor Topsoe A/S obtaining new orders of similar sizes. At the end of 2017, the catalyst order book was at a satisfactory level compared to previous years.

Outlook for 2018

Haldor Topsoe Group

Revenue

In 2018, revenue from continuing operations is expected to be in line with or slightly above the comparable 2017 revenue, i.e. above DKK 5,000 million. However, the revenue development will be significantly impacted by the level of new technology orders, and the progress of existing technology orders in some core markets (e.g. Iran). In some markets, project development is impacted by the level of international sanctions and the project owners' ability to finance projects. Exchange rate developments, most notably the DKK/USD exchange rate, will also impact revenue.

EBIT

EBIT margin is expected to be in the range of 10-12% in 2018. It is expected to maintain a high level of R&D and business development activities in excess of 10% of revenue.

Cash flow and funding

Operating cash flows (including working capital development) are expected to improve in 2018 compared to 2017 due to efforts initiated to reduce net working capital. Haldor Topsoe Group's current funding position is strong, based on access to the corporate bond market, institutional banks as well as commercial banks. Committed revolving credit facilities are also in place. A DKK 500 million tranche of corporate bonds will expire in April 2018. This has been re-financed by a new European Investment Bank loan.

Haldor Topsoe Group intends to maintain a credit profile that matches that of an investment grade company during a business cycle. When market terms are attractive and there is a need, Haldor Topsoe Group will consider issuing additional corporate bonds as well as obtaining other credit facilities.

IGM Biosciences Group

The IGM Biosciences Group is expected to continue its scientific progress. We have had significant interest from the pharma and biotech industry which have led to numerous discussions with potential corporate partners. We expect these to continue at a high pace in 2018. The scientific progress made so far and the positive outlook of the future has enabled Haldor Topsøe Holding A/S to commit full funding of the operation of the activity to the end of 2018 so far. We expect that the progress will be intensified over the coming years, eventually paving the way for a commercialization of the novel technologies developed by IGM Biosciences.

Forward-looking statements

Haldor Topsøe Holding A/S' financial reports, whether in the form of annual reports or interim reports, as well as any presentations based on such financial reports, and any other written information released, or oral statements made, to the public based on this annual report or in the future on behalf of Haldor Topsøe Holding A/S, may contain forward-looking statements.

These forward-looking statements are based on current plans, estimates and projections. By their very nature, forward-looking statements involve inherent risks and uncertainties, both general and specific, which may be outside Haldor Topsøe Holding A/S' influence, and which could materially affect such forward-looking statements.

Haldor Topsøe Holding A/S cautions that a number of factors, including those described in the risk management part of this report, could cause actual results to differ materially from those contemplated in any forward-looking statements.

Risk management

Enterprise risk management

Haldor Topsoe Group operates an enterprise risk management program with quarterly reporting, followed up by reviews and mitigating activities. The program enables Haldor Topsoe Group to identify risks early, assess them, and implement mitigating actions.

During 2014, the Topsoe Code of Conduct was implemented throughout the organization, including policies covering anti-corruption, anti-money laundering, competition law, and other compliance issues. The Code of Conduct is an example of a global mitigating action that prevents a series of potential risks related to business ethics and legal topics. In 2017, a global compliance hotline (whistleblower solution) was implemented. The compliance hotline is available at www.topsoe.com/compliance-hotline

The general risk factors and the associated mitigating actions for Haldor Topsøe Holding Group are outlined below.

Strategic and operational risks

Customer demand

Catalysts are involved in the vast majority of industrial chemical processes today, and we see no indication of reduced demand or substitutes. A very significant part of our catalytic solutions is based on fossil fuels, notably natural gas. If cost-competitive alternative energy sources emerged, it could have a significant impact on our current business. For new products, processes, and services that are being developed, we depend on market demand picking up in order to increase our sales.

Intellectual property (IP) protection

As a highly innovative company, we pursue IP protection through for instance patents, trade secrets, trademarks, design, and copyright law. However, our IP could be challenged, invalidated, circumvented, or rendered unenforceable. Defending and prosecuting our IP rights are therefore of paramount importance.

Raw material prices and availability

Raw materials are a significant cost component in our products, and prices can fluctuate considerably. We seek to mitigate this risk through escalation clauses in customer contracts. The escalation clauses are linked to market indices. In addition, we use financial hedging to a certain extent. We also seek to have multiple suppliers for each raw material. We are exposed to single source risk on some raw material supplies, which makes us vulnerable to cost increases. We work actively to limit our single source exposure.

Operations

The Group's production of catalysts takes place in Frederikssund (Denmark) and Houston (United States). If production is closed down for an extended period in one of our plants, or if commissioning of a new production line is substantially delayed, it could have a material impact on the Group's earnings. We seek to mitigate this risk by operating multiple production lines for key products and enforcing a safety stock policy. We have also taken out business interruption insurance and property insurance.

The Group is exposed to project execution risk on technology projects. Systematic project management seeks to limit the risk of delayed deliveries, re-engineering, and cost overrun.

Issuance of bonds in support of contractual liabilities is an inherent and necessary part of our business model, for instance in the form of bid bonds, advance payment bonds, and performance bonds issued by banks on behalf of the Group. Risk mitigation includes thorough structuring of contracts and related bonds.

Biotech risk

As with all biotech startup ventures the risk of turning science and early development work into a commercial product is substantial. This also applies to IGM Biosciences and there is no guarantee that it will be possible to attract commercial development partner or eventually develop marketable products. Whereas the commercialization risk is very high the science developed at IGM Biosciences is very well protected by valuable solid IPR and patents.

Insurance

Besides property insurance and business interruption insurance, a number of other operational risks are insured, including general liability, product liability, professional indemnity and transportation.

Geopolitical risks

The Group's global presence exposes earnings to geopolitical events. Political actions, such as sanctions, trade barriers, embargoes, new taxes, currency restrictions, and changes in environmental legislation, etc., may impact results and cash flows. To a certain degree, this risk is mitigated by monitoring regulatory initiatives, geographical diversification, and by ensuring – to the extent possible – that cash flows are maintained positive for our individual contracts. New political sanctions or/and cancellation of existing political sanctions could potentially have a significant impact on our business.

Financial risks

Currencies

As the Group operates globally, the income statement, balance sheet, and cash flows are subject to the risk of currency fluctuations, mainly in relation to flows of EUR and USD.

Part of this risk is mitigated through natural hedges arising from activities where the Group has both income and expenses in the same currency. However, the risk is not fully covered by natural hedges, and consequently we hedge certain future cash flows. A 5% increase in the DKK/USD exchange rate is assessed to have a positive EBIT effect of DKK 15-20 million.

Interest rates

Long-term debt consists of loans and bonds with fixed and floating interest rates. The Group's policy is to maintain a loan portfolio where 35-50% is subject to floating interest rates and where 50-65% is subject to fixed interest rates. For the floating rate portion of the Group's interest-bearing debt, a change in the interest rate level of 1 percentage point will change interest expenses by DKK 7 million.

Credit

The credit risk of the Group is primarily related to trade receivables from state-owned as well as privately owned corporations. Where feasible, we seek to mitigate credit risk by applying instruments such as letters of credit and bank guarantees as well as selective structuring of payment terms, etc. On a quarterly basis, it is assessed if the Group should make accruals for bad debt, which is considered unlikely to be collected.

Counterparties

In this context, counterparty risk is defined as credit risk on financial institutions when dealing with them, either by placing deposits, entering into derivative financial instrument transactions, or otherwise. In order to reduce counterparty risk, the Group only deals with financial counterparties that Management believes have a satisfactory credit rating from a recognized international credit rating agency.

Liquidity

The Group must maintain sufficient liquidity to fund daily operations, debt service, and expansion. The Group's access to liquidity consists of cash and cash equivalents, including access to committed revolving credit facilities.

Restrictive covenants

Some of the financing arrangements of the Group are subject to financial covenants, and if violated, this could limit the ability to finance the Group's operations and capital needs for acquisitions and other business activities. Covenants include equity ratio, interest coverage, and leverage (net debt/EBITDA) requirements.

Tax

The Group's business structure with entities and/or business activities in many countries implies that a number of different direct, indirect, and collected taxes apply on a global basis. The combination of complexity in our business and our business structure requires dedicated focus on tax management; a focus that always respects international tax principles and local tax law, while managing the tax cost and tax risk of the Group. We will at all times use our best endeavors to comply with the tax legislation in the countries in which we operate, in accordance with OECD standards. When needed, the Group seeks to clarify uncertainties by involving external advisors and by taking a justifiable position in accordance with international tax principles and in alignment with Topsoe's Code of Conduct. The Group's tax management is documented in a global tax policy.

Information technology and security risks

Digitalization brings a myriad of opportunities to a global business like ours. However, cyber-attacks on businesses are increasing in scale, speed, and sophistication. These developments expose the Group to information security risks. In order to protect the business and our clients, we seek to have the appropriate governance framework, policies, processes, and technical capabilities in place to manage these risks.

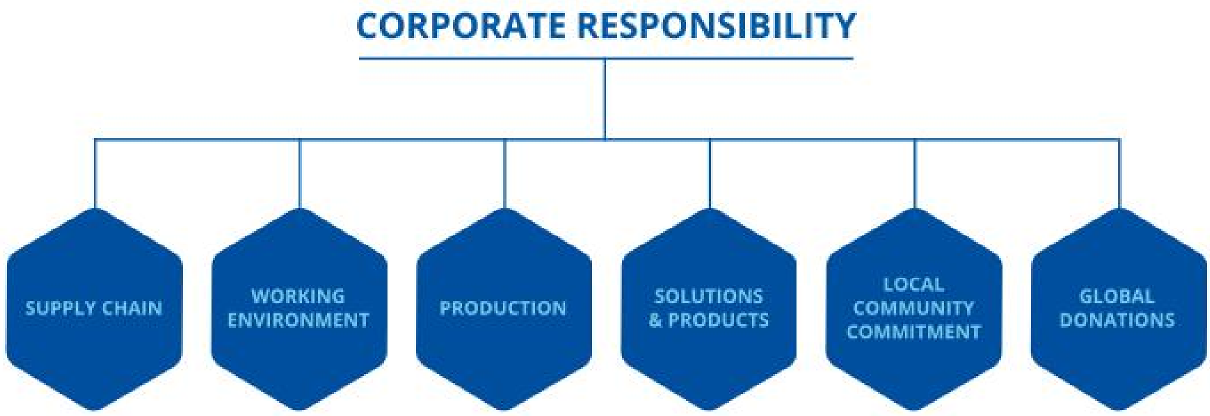
Corporate social responsibility and sustainability

Haldor Topsøe Holding Group continuously strive to create sustainable solutions that make a difference in the world of today – and tomorrow – and we are committed to ensure that our solutions as well as our conduct are economically, environmentally and socially sustainable.

Acting responsibly in all aspects of our business is a fundamental element of our values – expressed in the Topsoe Spirit – that serve as the foundation for how we do business in a complex, international business environment with cultural, political, and legal challenges.

The Topsoe Code of Conduct puts our values into action by providing a common framework that helps everyone understand the standards of behavior we expect of each other, as well as the laws and regulations we must all comply with in our day-to-day work. This includes speaking up if we come across a situation that is inconsistent with our Code of Conduct or values.

As stated in the Corporate Social Responsibility (CSR) and Sustainability policy, it is important for us to conduct every aspect of our business with honesty, integrity and openness, respecting human rights and the interests of our employees, customers, and third parties. Not only are we committed to creating and maintaining a safe and healthy working environment for our employees, we also strive to create a workplace with mutual trust and respect, and where every person is responsible for the performance and reputation of our company. This is very much in line with a central principle on which the Group was founded, namely that the company must be a "great place to work and have worked".



Compliance Hotline
In 2017, the Group launched a compliance hotline, a whistleblower solution, for serious concerns and grievances. The hotline offers employees a possibility to report serious concerns in case they are not comfortable with discussing these concerns with their manager or other colleagues.

This new process and tool has been introduced as a supplement to our existing strong culture for speaking up, where many dilemmas and concerns are successfully tackled through open dialogue and direct communication.

The hotline has been well received and has sparked constructive conversations about both ethical business conduct and our expectations of each other as well as of external stakeholders.

Third party assurance policy
In 2017, we implemented a Third Party Assurance Policy. We operate in an increasingly complex geopolitical environment and ensuring compliance with all applicable international rules and regulations is of highest priority for us.

The policy was implemented to increase transparency and overview of current due diligence procedures. As an early result, we experience greater assurance that all relevant risks are mitigated when venturing into new partnerships and business relations, and in addition we get a deeper understanding of our own business and the world around us.

Global standards and training
The Topsoe Code of Conduct was launched in 2014 and employees across the globe were trained in 2015.
We have decided to retrain our employees in the Code of Conduct to ensure that everyone knows what is expected of them, and what they can expect from management. In 2017, we began developing a bespoke Compliance & Sustainability eLearning course focusing on dilemma-based awareness training. The training will be implemented globally during 2018.

Enhancing our operating standards
In 2017, we conducted an overall compliance and sustainability assessment to measure and document our status and progress on internal processes that are critical for our business and expected from customers, business partners, and regulators. The assessment verified that we have strong measures in place in key areas, e.g. when it comes to protecting our knowledge and know-how, as well as procedures that minimize the risk of corruption.

We have also developed our Corporate Responsibility Framework by defining concrete actions and milestones to be implemented in 2018 and forward. The Corporate Responsibility Framework is a structured approach that allows management to drive progress on corporate social responsibility and sustainability across the Group's global organization. The framework provides transparency of CSR-related efforts in our business.

Supply chain
In 2017, we have undertaken preliminary assessments of the potential for working strategically with CSR in our supply chain.

The outcome of our analysis was a number of CSR-related projects that will be integrated into our sourcing strategy and monitored in our Corporate Responsibility Framework.

Sustainable working environment
We take responsibility for, and do our utmost to ensure the safety and well-being of more than 2,300 employees globally because it is a core value to us and because continuous development of our working environment is of strategic importance.

Increase in accidents, decrease in severity
Despite our continuous and very committed safety focus at board level, in top management, and

across the organization, we have seen an unsatisfactory trend in the number of accidents in 2017. Even though the number of accidents involving higher severity or risk, e.g. when handling chemicals, have decreased, less severe accidents such as slips, trips and falls related to everyday tasks have increased.

Improving health and safety culture
Reducing the number of accidents is a top priority for the Group. The health and safety of our employees is paramount to everything we do, and it is a core value to ensure that our employees are safe when working for the Group, thus supporting that Topsoe is a “great place to work and have worked”. Extensive efforts have therefore been made to improve our health and safety level throughout the company in 2017.

In addition to providing structured guidance in the use of procedures and instructions, we see culture as a key means to reversing the negative trend. Safety awareness needs to be embedded into everyday actions, and a number of initiatives have therefore been implemented to ensure that all employees are reminded that even everyday actions deserve a sound risk assessment.

Around half of our accidents happen while employees perform everyday tasks that may not seem risky at first glance. To raise employees’ awareness of these risks, we will increase our safety initiatives on lifting and roll out a dedicated campaign on slips, trips and falls in 2018.

However, building a strong and proactive requires a long-term effort, so health and safety will continue to be at the top of the agenda in 2018.

Health and safety training
Improving the safety competencies of managers is a corner stone in our efforts to improve our health and safety culture and reduce the number of accidents. In 2017, several managers were trained in their health and safety duties and responsibilities. In 2018, this training will continue.

A basic principle of the health and safety culture is that the person handling over a task also assume responsibility for ensuring safe conditions.

Mental well-being
On a national level in Denmark, we see an increase in illnesses related to the psychological working environment.

In 2017, we therefore made mental well-being a central element of the health and safety training for all managers so that they are better capable of identifying and supporting employees who may experience psychological strain as a consequence of their working environment.

Sustainable production
We provide solutions for our customers that contributes to a sustainable future for society, and our internal aim is to maintain an effective and consistent approach to reducing our environmental impacts. We strive to conduct our daily operations in an environmentally sound way by reducing waste and using less resources and energy.

We consider our environmental impacts in our entire value chain, from product development to the delivery to our customers, by evaluating materials and processes that constitute a potential risk to the environment.

Policy commitment
Our global environmental policy describes how we continuously identify, evaluate, and implement measures to lower our environmental impact.

Our catalysts enable our customers to improve their environmental footprint substantially. Yet, it is not possible to produce our catalysts without environmental impacts and without using chemicals that can potentially harm the environment and people if they are not handled correctly. Therefore, all employees dealing with chemicals go through extensive mandatory training prior to undertaking any assignments so we ensure that our facilities are as safe as possible.

Reduced impact
In 2017, we lowered our environmental impact by installing a new condenser at our production site in Denmark. In addition, the condenser provides excess heat to our neighbors and will consequently reduce CO_2 emissions from the local district heating plant.

In 2017, we have delivered 34,514 MWh to the Frederikssund district heating plant. The excess heat from our plant means that the district heating plant has avoided to incinerate 3,137,636 Nm^3 of natural gas, thereby reducing their CO_2 emission by 7,082 tons. 34,514 MWh per year is enough to heat more than 1,900 single-family houses in the Frederikssund area where our plant is located.

Sustainable products
The Group supplies catalysts, proprietary technologies, process design, engineering, and services for the chemical and refining industries primarily.

Dedication to science
We are at the forefront when it comes to developing sustainable catalytic technologies and it is through our dedication to science that we have our largest positive impact.

We see it as our corporate responsibility to drive innovation, and we reinvest approximately 10% of our revenue in research and development.

Much of our research targets scientific solutions to pressing global challenges, such as improving energy efficiency, enhancing food production, and protecting our environment and the climate.

Bio-based chemicals
Catalysis is essential in the production of chemicals from fossil fuels, but we see a global trend towards looking for new ways to produce chemicals based on renewable resources.

In 2017, the Group entered into a research partnership with Braskem, a leading producer of thermoplastic resins in the Americas. The partnership was set in motion to explore and commercialize MOSAIK™, a new technology to produce chemicals from biomass, which we see as a commercial opportunity.

The partnership aims to develop a pioneering route to produce monoethylene glycol (MEG) from sugar. MEG is a basic building block used in e.g., polyester fabrics and PET plastic. We expect to be able to produce MEG at an attractive cost that can compete on commercial terms with MEG made from fossil sources.

The agreement calls for the construction of a demonstration plant in Denmark, with operation estimated to begin in 2019. We will deliver a packaged solution for this project with Braskem, including catalyst and technology. The companies will combine their expertise to further develop, test and validate the process. The overall goal of the partnership is the start-up of a commercial plant by 2023.

The partnership with Braskem indicates that chemicals from biomass can be a commercially attractive option, even in a tough, mature market such as thermoplastic resins. Catalysis will play an important role in the development of new solutions that can produce chemicals from renewable sources on commercial terms.

We have decided to dedicate our capabilities within catalysis to accelerate this process for the benefit of our customers and the environment.

Donations and community development
Our founder, Dr. Haldor Topsøe, learned at an early age that not all people are equally privileged with sufficient food, housing, and education. During the Great Depression and Second World War, he experienced this personally and it influenced how he led the company throughout his life. Together with his wife, Dr. Topsøe began supporting organizations and people engaged in humanitarian work all over the world. On his many business trips,

Dr. Topsøe would regularly seek out and support people in need. Today, Dr. Topsøe's spirit and engagement lives on through our Donation Committee.

Contributing globally and locally

For Dr. Topsøe, it came naturally to help address local challenges and needs in the countries he visited. Even today, he is remembered for his significant leadership in connection with the Green Revolution in India and Bangladesh, which impacted the lives of millions of farmers.

Dr. Topsøe said: "The corporate world in itself means nothing unless it improves the lives of people and the conditions in poor countries", and as a company, we ensure that his responsible attitude lives on, at both the global and the local level.

The Donation Committee meets four times a year to evaluate ongoing and new projects. The projects are assessed based on a set of principles, focusing primarily on supporting children in need, often with education as a central part.

Help children, pass on knowledge

We aim to inspire others with our passion for science and by supporting young people in less fortunate circumstances in pursuing an education. We feel that ensuring knowledge through education is one of the most efficient ways of helping to improve lives.

Sustainable development in India

The largest project that has been supported in the past decade is in Sunderbans, India. Similar to the other projects that are driven out of Haldor Topsoe A/S's headquarters, with dedicated support and involvement from members of the Topsoe family, the approach has focused on making efforts sustainable.

Through ongoing dialogue with local stakeholders and with emphasis on investing in buildings, the school project for the benefit of 500 poor children in West Bengal is now almost completed. The school has grown over the years, and today six buildings support the daily education and activities. The school's popularity has also grown in recent years, and today it attracts children from far away.

The school was initially provided with operational support, but this has been gradually reduced, and today the school requires a small fee from parents who can afford it. Teachers, the administrative personnel at the school, and not least a local NGO, have been the primary drivers for the project to succeed so well. The children are thriving at the school, and the local society will for sure benefit from the increased access to education.

Local support

At many of our regional offices across the globe, we meet people who dedicate their lives to making a difference for other people in tough or even desperate situations. Often, we wish to support these necessary and inspiring efforts, and our regional offices make a number of contributions to local organizations. One example is the Maria Cecilia Foundation that our Argentinian office supported in 2017.

The Maria Cecilia foundation began offering free treatment for children with cancer in 1995. Today, the organization treats more than 4,000 children every year. The treatment is available to children who do not have health insurance and cannot finance their treatment by other means.

The treatment center is located in the northern part of Buenos Aires and provides chemotherapy, medical treatment, medicine, and psychological support for the children's parents.

Our regional offices in India, Russia, and the US also engage with their local communities, including organizations and charities.

Diversity

With regional offices and production plants in more than 10 countries, our global footprint is in itself embedding diversity in terms of cultures and nationalities. The same can be said of our companies in Denmark where we have attracted many talented non-Danes over the years. We believe that an inclusive working environment can foster great teams and results, so we pursue opportunities to strengthen diversity through increased mobility and when hiring new employees.

A diverse workforce

When we hire people, it is our policy to get the right candidate for the job, regardless of gender, nationality, age, sexuality, religion, culture, etc. The recent hire of Amy Hebert, Deputy CEO and EVP, Chemical Business Unit, for Haldor Topsoe A/S has increased diversity in top management.

To ensure that we continue to develop as an inclusive and diverse company we have a number of key performance indicators in place.

Equal opportunities

Our approach to diversity and inclusion among other things means that we want to ensure an optimal gender ratio in all our career tracks, including our leadership pipeline.

To quantify our early actions and to best direct our efforts globally, we measure the gender ratio amongst our applicants and job interviewees. In 2017, we had 75% male and 25% female applicants. Out of the candidates invited for a job interview, 70% were male and 30% female, which is an increase from 23% interviews with women in 2016.

We use this data-based overview of our selection process to qualify the dialogue about diversity with hiring managers, which could in turn increase the share of female employees and lead to a higher level of diversity.

Diversity in management

The gender ratio across all our locations is 29% female and 71% male. In 2017, the share of female employees grew by one percentage point from 28% in 2016.

Our target for the ratio of women in leadership positions is 30% by 2020, a target that we will include in our work when revising our current policy in 2018.

The Board of Directors have four members. There are three male and one female Board member, which equals 25% women. This is in line with our target.

Statement by the Executive Management and Board of Directors on the Annual Report

The Executive Management and Board of Directors have today considered and approved the Annual Report 2017 of Haldor Topsøe Holding A/S.

The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards as adopted by the EU (IFRS), and the financial statements of the parent company have been prepared in accordance with the Danish Financial Statements Act.

In our opinion, the parent company financial statements and the consolidated financial statements give a true and fair view of the financial position at December 31, 2017 of the Group and the parent company and of the results and cash flows of the Group and parent company operations for 2017 in accordance with the applied accounting policies.

In our opinion, the Management's review includes a true and fair account of the development in the operations and financial circumstances, of the results for the year and of the financial position of the Group and the parent company as well as a description of the most significant risks and elements of uncertainty facing the Group and the parent company.

We recommend that the Annual Report be adopted at the annual general meeting.

Lyngby, March 22, 2018

Executive Management

Henrik Gaarn Bak

Board of Directors

Jakob Haldor Topsøe (Chairman)	Christina Teng Topsøe
Martin Topsøe	Emil Øigaard

Independent Auditor's report

To the shareholders of Haldor Topsøe Holding A/S

Opinion

In our opinion, the Consolidated Financial Statements give a true and fair view of the Group's financial position at December 31, 2017 and of the results of the Group's operations as well as the consolidated cash flows for the financial year January 1 to December 31, 2017 in accordance with International Financial Reporting Standards as adopted by the EU and further requirements in the Danish Financial Statements Act.

Moreover, in our opinion, the Parent Company Financial Statements give a true and fair view of the Parent Company's financial position at December 31, 2017 and of the results of the Parent Company's operations and cash flows for the financial year January 1 to December 31, 2017 in accordance with the Danish Financial Statements Act.

We have audited the Consolidated Financial Statements and the Parent Company Financial Statements of Haldor Topsøe Holding A/S for the financial year January 1 - December 31, 2017, which comprise income statement, balance sheet, statement of changes in equity, cash flow statement and notes, including a summary of significant accounting policies, for both the Group and the Parent Company, as well as statement of comprehensive income for the Group ("financial statements").

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (ISAs) and the additional requirements applicable in Denmark. Our responsibilities under those standards and requirements are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the Group in accordance with the International Ethics Standards Board for Accountants' Code of Ethics for Professional Accountants (IESBA Code) and the additional requirements applicable in Denmark, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Statement on Management's review

Management is responsible for Management's review.

Our opinion on the financial statements does not cover Management's review, and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read Management's review and, in doing so, consider whether Management's review is materially inconsistent with the financial statements or our knowledge obtained during the audit, or otherwise appears to be materially misstated.

Moreover, it is our responsibility to consider whether Management's review provides the information required under the Danish Financials Statements Act.

Based on the work we have performed, in our view, Management's review is in accordance with the Consolidated Financial Statements and the Parent Company Financial Statements and has been prepared in accordance with the requirements of the Danish Financial Statement Act. We did not identify any material misstatement in Management's review.

Management's responsibilities for the Financial Statements

Management is responsible for the preparation of Consolidated Financial Statements that give a true and fair view in accordance with International Financial Reporting Standards as adopted by the EU and further requirements in the Danish Financial Statements Act and for the preparation of Parent Company Financial Statements that give a true and fair view in accordance with the Danish Financial Statements Act, and for such internal control as Management determines 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, Management is responsible for assessing the Group's and the Parent Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting in preparing the financial statements unless Management either intends to liquidate the Group or the Parent Company or to cease operations, or has 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 ISAs and the additional requirements applicable in Denmark 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 conducted in accordance with ISAs and the additional requirements applicable in Denmark, 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 Group's and the Parent Company'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 Management's use of the going concern basis of accounting in preparing the financial statements and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's and the Parent Company'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 Group and the Parent Company to cease to continue as a going concern.

- Evaluate the overall presentation, structure and contents of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that gives 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.

Copenhagen, March 22, 2018

PricewaterhouseCoopers
Statsautoriseret Revisionspartnerselskab
CVR nr. 33 77 12 31

Mikkel Sthyr
State Authorized Public Accountant
Mne26693

Maj-Britt Nørskov Nannestad
State Authorized Public Accountant
Mne32198

Accounting policies and key estimates and judgements of the Haldor Topsøe Holding Group

Basis of preparation

Basis of preparation

The consolidated financial statements of Haldor Topsøe Holding A/S have been prepared in accordance with International Financial Reporting Standards (IFRS), as adopted by the EU, as well as additional Danish disclosure requirements applying to large enterprises of reporting class C.
The accounting policies are unchanged from last year.

New standards, amendments and interpretations adopted by Haldor Topsøe Holding

The following standards have been implemented by Haldor Topsøe Holding for the financial year 2017:

- IAS 7 “Statement of cash flows”: Additional disclosures on reconciliation of financial liabilities required. Interest-bearing debt to be reconciled from beginning to end of period.
- IAS 12 “Income taxes”: Clarifies when a difference is considered a temporary difference in respect of tax assets related to financial assets that are measured at fair value. When an enterprise has acquired a receivable which is treated as available for sale and, consequently, is measured at fair value through other comprehensive income, a subsequent decline in the fair value of the receivable will result in a temporary difference between the carrying amount and the tax base, on which deferred tax is to be calculated.

Haldor Topsøe Holding has assessed that the new standards, amendments and interpretations effective for financial years beginning on or after January 1, 2017 do not have a significant impact on the consolidated financial statements of Haldor Topsøe Holding.

New standards, amendments and interpretations not yet effective

The following new standards, amendments and interpretations have been adopted by the IASB and adopted by the EU. Haldor Topsøe Holding will adopt the standards when they become effective:

- IFRS 9 “Financial instruments”: The standard introduces an expected loss model for impairment losses on loans and receivables. As an overriding main rule, this new model will imply larger impairment losses than those incurred under IAS 39. The number of classification categories for financial assets is reduced to three: amortized cost, fair value through profit or loss and fair value through other comprehensive income. Fair value changes to financial liabilities which are attributable to the fair value and which arise from changes in own credit risks must be recognized in other comprehensive income. Simplified rules on hedge accounting are introduced. The standard will be effective for financial years beginning on or after January 1, 2018.

  Haldor Topsøe Holding has assessed that the standard will not have a significant impact on the consolidated financial statements. However, implementation of the standard will impact disclosures.

- IFRS 15 “Revenue from contracts with customers”: A new standard on revenue recognition that replaces IAS 11 and IAS 18 among others. The standard may potentially affect revenue recognition in a number of areas, including:
  - The timing of revenue recognition
  - Recognition of variable consideration

- o Allocation of revenue from multi-element arrangements
- o Recognition of revenue from license rights
- o Incremental costs of obtaining the contract

The standard also includes a large number of new disclosure requirements.

IFRS 15 “Revenue from contracts with customers”: Clarifications of IFRS 15 concerning the identification of performance obligations, principal versus agent considerations and license considerations as well as changes to the transition rules.

IFRS 15 and the clarifications will be effective for financial years beginning on or after January 1, 2018.

Haldor Topsøe Holding has analyzed contracts and assessed that the standard will not have a significant impact on the consolidated financial statements. However, items currently recognized in the balance sheet will be separately recognized as contract assets and liabilities. Furthermore, the implementation of the standard will impact disclosures.

- IFRS 16 “Leases”: Going forward, the lessee is required to recognize all leases as a lease liability and a lease asset in the balance sheet with two exceptions: short-term leases (less than 12 months) and leases relating to low-value assets. It must furthermore be considered whether the agreement is a lease or a service arrangement.

  The current rules remain largely unchanged for the lessor. Consequently, leases are still to be classified as finance leases and operating leases.

  The standard will be effective for financial years beginning on or after January 1, 2019.

  Haldor Topsøe Holding has started analyzing the Group’s current contracts containing a lease to assess the impact of implementing IFRS 16. However, the full impact is not yet known. Based on the ongoing analyses, the new standard is expected to result in an increase in total assets of approx. 4-6%. Consequently, the related key ratios in the consolidated financial statements, such as EBITDA and ROIC, will be impacted. The lease asset and lease liability are to be presented separately in the balance sheet or disclosed in the notes. Furthermore, the implementation of IFRS 16 will impact disclosures.

The IASB has issued the following new standards, amendments and new interpretations that are relevant to Haldor Topsøe Holding, but which have not yet been adopted by the EU:

- IFRS 9 “Financial instruments”: A minor amendment concerning the classification of receivables in situations where a borrower has a prepayment option and where such a prepayment has negative consequences for the borrower. They are to be measured at amortized cost or fair value with adjustments through other comprehensive income if certain criteria are met. The amendment will be effective for financial years beginning on or after January 1, 2019.
- IFRIC 22 “Foreign currency transactions and advance consideration”: IAS 21 requires an enterprise to use the exchange rate at the date of the transaction which is defined as the date on which the transaction first qualifies for recognition. The amendment will be effective for financial years beginning on or after January 1, 2018.
- IFRIC 23 “Uncertainty over income tax treatments”: The interpretation clarifies that it must be determined whether each tax position is to be treated individually or collectively with other uncertain tax positions. The assessment should be based on the assumption that the tax

authorities have the same knowledge of the enterprise's circumstances and, therefore, the assessment should disregard any detection risk. This determination may be based on e.g. how tax statements are prepared, or how the enterprise expects the tax authorities to treat the uncertain tax positions. The uncertain tax position must be recognized if it is probable that the enterprise will have to pay or receive refunds. The uncertain tax position must be measured so as to better reflect the receivable/liability and the related uncertainty. The amendment will be effective for financial years beginning on or after January 1, 2019.

- Annual improvements (2015-2017): Include three minor clarifications:
    - IAS 12 "Income taxes": Income tax consequences of dividends should be recognized in profit or loss, see IAS 12.
    - IAS 23 "Borrowing costs": Borrowing costs incurred on specific-purpose borrowing may subsequently change into borrowing costs on general borrowing, see IAS 23.
    - IFRS 3 "Business combinations": Clarifies that a step acquisition of a joint venture by which an enterprise obtains control must be treated in accordance with IFRS 3.

The amendments will be effective for financial years beginning on or after January 1, 2019.

The above standards and interpretations will be applied when they become effective. None of these are expected to have a significant impact on the consolidated financial statements of Haldor Topsøe Holding.

General

The consolidated financial statements have been prepared in accordance with the historical cost convention, except for the following items that are stated at fair value:

- Land and buildings
- Financial assets available-for-sale
- Derivative financial instruments

Part of the information required by IFRS appears from Management's Review. The remaining information appears from the following sections.

Consolidation

The consolidated financial statements comprise the parent company, Haldor Topsøe Holding A/S, and enterprises in which the parent company directly or indirectly holds the majority of the voting rights or in which the parent company through share ownership or otherwise exercises control.

Consolidation is performed by summarizing the financial statements of the parent company and group enterprises, which have been prepared in accordance with the Group's accounting policies.

On consolidation, elimination is made of intercompany income and expenses, shareholdings, dividends and accounts as well as of realized and unrealized profits and losses on transactions between the consolidated enterprises.

The parent company's investments in consolidated group enterprises are set off against the parent company's share of the net asset value of group enterprises at the time of consolidation.

The non-controlling interest's share of profit for the year and of equity in subsidiaries which are not wholly owned is included as part of the Group's profit and equity, respectively, but shown as separate items.

Functional and presentation currency

Items in the financial statements of each of the Group's enterprises are presented in the currency used in the primary economic environment in which the enterprise operates. The consolidated financial statements are presented in Danish kroner (DKK), which is the functional and presentation currency of the parent company.

Translation policies

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the date of transaction. Foreign currency monetary items are translated into the functional currency at the exchange rates prevailing at the balance sheet date.

Financial statements of group enterprises with another functional currency than Danish kroner are translated into Danish kroner using the exchange rates prevailing at the balance sheet date for balance sheet items and average exchange rates for income statement items.

Realized and unrealized foreign exchange gains and losses are recognized in financial income and financial expenses, except for unrealized losses and gains arising from hedging of future cash flows, which are recognized in equity under reserve for value adjustment of hedging instruments. In addition, the following currency translation differences are recognized directly in equity under the foreign currency translation reserve, using the exchange rates prevailing at the balance sheet date:

- Translation of group enterprises' net assets at the beginning of the financial year.
- Translation of group enterprises' income statements from average exchange rates to the exchange rates prevailing at the balance sheet date.
- Translation of non-current intercompany balances that are considered an addition to the net investment in group enterprises.

Derivative financial instruments

Derivative financial instruments are initially recognized in the balance sheet at cost and are subsequently remeasured at their fair values. Positive and negative fair values of derivative financial instruments are recognized in "Other receivables" and "Other payables".

Changes in the fair values of derivative financial instruments that qualify as hedges of expected future cash flow are recognized directly in equity. Amounts recognized in equity are transferred to the income statement in the period when the hedged item affects the income statement.

Changes in the fair values of derivative financial instruments that do not qualify as hedges are recognized in the income statement. The fair values of derivative financial instruments are determined based on prices obtained from stock exchanges or other reliable data sources.

Non-current assets (or disposal groups) held for sale and discontinuing operations

Non-current assets (or disposal groups) are classified as held for sale if their carrying amount will be recovered principally through a sale transaction rather than through continuing use and a sale is considered highly probable. They are measured at the lower of their carrying amount and fair value less costs to sell, except for assets such as deferred tax assets, assets arising from employee benefits and financial assets that are carried at fair value, which are specifically exempt from this requirement.

An impairment loss is recognized for any initial or subsequent write-down of the asset (or disposal group) to fair value less costs to sell. A gain is recognized for any subsequent increases in fair value less costs to sell of an asset (or disposal group), but not in excess of any cumulative impairment loss previously recognized. A gain or loss not previously recognized by the date of the sale of the non-current asset (or disposal group) is recognized at the date of derecognition.

Non-current assets (including those that are part of a disposal group) are not depreciated or amortized while they are classified as held for sale. Interest and other expenses attributable to the liabilities of a disposal group classified as held for sale continue to be recognized.

Non-current assets classified as held for sale and the assets of a disposal group classified as held for sale are presented separately from the other assets in the balance sheet. The liabilities of a disposal group classified as held for sale are presented separately from other liabilities in the balance sheet.

A discontinued operation is a component of the entity that has been disposed of or is classified as held for sale and that represents a separate major line of business or geographical area of operations or is part of a single co-ordinated plan to dispose of such a line of business or area of operations The results of discontinued operations are presented separately in the income statement.

Income statement

Revenue
Revenue from the sale of finished goods is recognized in the income statement when delivery and transfer of risk have been made before year-end and when the income can be measured reliably and is expected to be received. Revenue is recognized exclusive of VAT and net of discounts relating to sales.

Contract work in progress is recognized based on the stage of completion, which means that revenue equals the selling price of the work completed for the year (percentage-of-completion method). This method is applied when total revenue and expenses in respect of the contract and the stage of completion at the balance sheet date can be measured reliably, and it is probable that economic benefits, including payments, will flow to the Group.

Other operating income
Other operating income comprises income of a secondary nature to the Group's core activities, including government grants provided for research projects.

Purchased equipment for contract work
Purchased equipment for contract work comprises hardware etc. related to engineering projects.

Raw materials and consumables used
Raw materials and consumables used comprise raw materials and consumables consumed to achieve revenue for the year.

Other external expenses
Other external expenses comprise expenses for premises, sales and distribution as well as office expenses, etc.

Government grants
Government grants received for research and development projects are recognized in "Other operating income" as the projects progress. Grants received for investment in property, plant and equipment are set off against the related property, plant and equipment, if directly related. Otherwise grants are recognized as deferred income and systematically recognized in "Other external expenses" over the useful life of the asset.

Leases
Leases in which a significant portion of the risks and rewards of ownership are retained by the lessor are classified as operating leases. Payments made under operating leases are charged to the income statement on a straight-line basis over the lease term. The liability related to non-cancellable leases is disclosed in the notes.

Leases where the Group has substantially all the risks and rewards of ownership are classified as financial leases.
Financial leases are capitalized at the lease's commencement at the lower of the fair value of the leased property and the present value of the minimum lease payments. The property acquired under finance leases is depreciated over the shorter of the useful life or the asset and the lease term. The corresponding lease obligation is included in liabilities.

Tax
Tax consists of current tax for the year, deferred tax as well as any adjustments to prior years. Tax attributable to the profit for the year is recognized in the income statement, whereas tax attributable to equity transactions is recognized directly in equity.

Haldor Topsøe Holding A/S and Danish group enterprises are jointly taxed. Tax for the individual companies is allocated fully on the basis of expected taxable income.

Balance sheet

Intangible assets
Goodwill
Goodwill consists of the positive difference between cost and fair value of identifiable net assets in the acquired enterprise. Goodwill is measured at historical cost less accumulated impairment losses. Goodwill is tested for impairment once a year and if there is an indication of impairment. Goodwill is written down to the lower recoverable amount. The recoverable amount is determined as the higher of net selling price and present value of expected cash flows of the cash-generating unit to which goodwill has been allocated. Impairment indicators comprise e.g.:

- Reduced earnings compared to expected future results
- Material negative development trends in the sector or the economy in the markets of the enterprise.

Impairment loss relating to goodwill is not reversed.

Development projects
Development projects that are clearly defined and identifiable and in respect of which technical feasibility, sufficient resources and a potential future market or development opportunity in the enterprise can be demonstrated, and where it is the intention to manufacture, market or use the project, are recognized as intangible assets. This applies if sufficient certainty exists that the value in use of future earnings can cover the cost of sales and distribution involved as well as the development costs.

Development projects that do not meet the Group's criteria for recognition in the balance sheet and research expenses are recognized as expenses in the income statement as incurred.

Other intangible assets
Rights and patents are measured at cost less accumulated amortization and impairment losses. Both rights and patents are amortized on a straight-line basis over the remaining patent term, but not exceeding 10 years, due to the notoriously fast development in applied technologies and related uncertainty about longer amortization period.

Internally developed software for major projects is measured at cost less accumulated amortization and impairment losses. Software is amortized on a straight-line basis over 4 years.

Other intangible assets are tested for impairment when there is an indication of impairment. Material impairment indicators which may lead to an impairment test are similar to those stated in the section on goodwill.

Impairment losses relating to other intangible assets are reversed if the recoverable amount subsequently increases.

Gains or losses from divestment of intangible assets are recognized in the income statement under "Other external expenses".

Property, plant and equipment
Plant and machinery and other fixtures and equipment are measured at cost less accumulated depreciation and impairment losses. Land and buildings are measured using the revaluation model at cost with the addition of revaluations less accumulated depreciation and impairment losses.

Property, plant and equipment under construction are measured at cost.

Cost comprises the cost of acquisition and expenses directly related to the acquisition up until the time when the asset is ready for use as well as costs of restoration to the extent that a provision is recognized at the same time.

In the case of assets of own construction, cost comprises direct and indirect expenses for labor, materials, components and sub-suppliers. Borrowing costs related to construction of major property, plant and equipment are recognized in cost over the period of construction.

Revaluations of land and buildings are performed on the basis of Management's estimate of fair value which is based on an independent valuation. Revaluations less depreciation and deferred taxes are transferred to the revaluation reserve under equity.

Property, plant and equipment are divided into sub-assets if the future useful life of the individual assets is different.

Depreciation based on cost and revaluations reduced by any residual value is calculated on a straight-line basis over the expected useful lives of the assets, which are:

Buildings	13–40 years
Plant and machinery	5–10 years
Other fixtures and equipment	4–20 years

Land is not depreciated.

The residual value and useful lives of the assets are assessed annually and adjusted if necessary at the balance sheet date.

Property, plant and equipment are tested for impairment when there is an indication of impairment. Impairment indicators which may lead to an impairment test are similar to those stated in the section on goodwill. Additionally, indicators comprise damage to the asset or changed use of the asset.
Impairment losses relating to property, plant and equipment are reversed if the recoverable amount subsequently increases.

Gains and losses from sale of property, plant and equipment are recognized in the income statement under "Other external expenses".

Investment in joint venture
Investment in joint venture is recognized and measured under the equity method.

The item "Result of investment in joint ventures" in the income statement includes the proportionate share of the result after tax.

Other securities and investments
Investments are measured at fair value at the balance sheet date.

Unrealized fair value adjustments are recognized directly in equity under the "Reserve for value adjustment of financial assets" available-for-sale. On realization, value adjustments are transferred from equity to the income statement. Impairment losses are recognized in the income statement.

Securities in the form of loans are measured in the balance sheet at the lower of amortized cost and net realizable value, which corresponds to nominal value less provision for bad and doubtful debts.

Inventories
Inventories are measured at cost under the FIFO method. Cost is determined using a standard cost method that includes direct and indirect production costs. Direct production costs comprise raw materials, consumables and direct labor costs, whereas indirect production costs comprise indirect materials and labor costs, maintenance and depreciation of machinery, production buildings and

equipment used in the production process as well as the cost of plant administration and management.

Please see “Key accounting estimates and judgements” for information about write-downs.

Receivables

Receivables are measured in the balance sheet at the lower of amortized cost and net realizable value, which corresponds to nominal value less provisions for bad debts. Provisions for bad debts are determined on the basis of an individual assessment of each receivable.

Contract work in progress

Contract work in progress is measured at the selling price of the work completed calculated on the basis of the stage of completion. The stage of completion is determined on the basis of the share of contract costs incurred compared to the total expected contract costs. Where it is probable that total contract expenses will exceed the total revenue from a contract, the expected loss is recognized as an expense in the income statement.

Where the selling price cannot be measured reliably, the selling price is measured at the lower of expenses incurred and net realizable value.

Prepayments are set off against contract work in progress. Received payments on account exceeding the performed share of contracts are determined separately for each contract and recognized in “Contract work in progress” under current liabilities.

Expenses relating to sales work and the winning of contracts are recognized in the income statement as incurred.

Reserves

The revaluation reserve includes a reserve for revaluation of land and buildings after depreciation and deferred tax.

The foreign currency translation reserve comprises all translation adjustments arising from the translation of financial statements of group enterprises with another functional currency than Danish kroner as well as translation adjustments concerning non-current intercompany balances that are considered an addition to the net investment in such enterprises.

Reserve for value adjustment of hedging instruments comprises the accumulated net change in the fair value of hedging transactions which meet the criteria of future cash flow hedges and where the hedged transaction has not yet been completed.

Reserve for value adjustment of financial assets available-for-sale comprises the accumulated net change in the fair value of financial assets classified as financial assets available-for-sale. The reserve is dissolved as the financial assets in question have been sold.

Dividend

Proposed dividend for the financial year is recognized in “Retained earnings”.

Pension obligations and similar obligations

The costs of defined contribution plans are recognized in the income statement in the financial year to which they relate.

The costs and liabilities of defined benefit plans are determined in accordance with the projected unit credit method. The liability is calculated annually by an actuary. Actuarial gains and losses are recognized in full in “Other comprehensive income”. Plan assets are only recognized to the extent that the Group is able to derive future economic benefits such as refunds from the plan or reductions of future contributions.

Costs related to other non-current staff benefits are accrued over the employees’ expected average working life.

Deferred tax

Deferred income tax is measured using the balance sheet liability method in respect of temporary differences arising between the tax bases of assets and liabilities. Deferred tax is not recognized in respect of goodwill, unless it is deductible for tax purposes. The tax base of tax loss carryforwards is deducted from deferred tax when it is probable that the losses may be utilized. Deferred tax is measured on the basis of the tax rules and tax rates expected to be in force on elimination of temporary differences. Any changes in deferred tax due to changes in tax rates are recognized in the income statement with the share attributable to the results for the year and directly in equity with the share attributable to equity transactions.

Provisions

Provisions are recognized when – in consequence of a previous event – the Group has a legal or constructive obligation and it is probable that economic benefits must be given up to settle the obligation. Provisions are measured at Management's estimate of the discounted amount expected to be required to repay the obligation.

Financial liabilities

Loans such as bonds, mortgage loans and loans from credit institutions which are expected to be held to maturity are recognized initially at the proceeds received net of transaction expenses incurred. Subsequently, the loans are measured at amortized cost, corresponding to capitalized value, using the effective interest rate; the difference between the proceeds and the nominal value is recognized in the income statement over the loan period. Other debts are measured at amortized cost, mainly corresponding to nominal value.

Deferred income

Deferred income comprises payments received in respect of income in subsequent years and is primarily related to government grants.

Other areas

Cash flow statement

The Group's cash flow statement, which is prepared according to the indirect method, shows the Group's cash flows for the year broken down by operating, investing and financing activities as well as the Group's cash and cash equivalents at the beginning and end of the year.

The Group's cash comprises the Group's cash and cash equivalents.

Financial highlights

The financial ratios have been prepared in accordance with the Danish Society of Financial Analysts' "Recommendations and Financial Ratios 2015".

Gross margin	$\frac{\text{Gross profit x 100}}{\text{Revenue}}$
EBITDA margin	$\frac{\text{EBIT + depreciation, amortization etc. x 100}}{\text{Revenue}}$
EBIT margin	$\frac{\text{EBIT x 100}}{\text{Revenue}}$
Return on invested capital	$\frac{\text{EBIT x 100}}{\text{Average invested capital}}$
Equity ratio	$\frac{\text{Equity at year end x 100}}{\text{Total assets}}$
Return on equity	$\frac{\text{Net profit x 100}}{\text{Average equity}}$

Key accounting estimates and judgements

In accordance with general accounting policies, determination of the carrying amount of certain assets and liabilities requires assessments and estimates of future events. Assessments and estimates are performed based on historical experience and other factors which management considers reasonable under the circumstances. These assumptions may be incomplete or inaccurate and unexpected issues may arise, which implies that the assessments and estimates made are subject to some uncertainty. Special risks for the Group appears from the "Risk management" section.

Goodwill
Goodwill is tested for impairment once a year and if there is an indication of impairment. The impairment test requires that Management estimates various significant factors, including expected future cash flows, discount rates and growth rates for the period. The sensitivity of estimates made can, combined or individually, be significant.

Land and buildings
The Group's land and buildings are measured in accordance with the revaluation model. Fair value is determined on the basis of a market based estimate performed by an independent, qualified valuation expert. The frequency of an independent valuation depends on the extent to which management assesses that the market development shows signs of significant difference between the carrying amount and fair value.

Other investments
Other investments are measured at fair value at the balance sheet date. To the extent that fair value cannot be derived from an active market, it is required that management assesses and selects an appropriate method for determination of the fair value. In this case, the fair value is measured at the discounted value of expected future cash flows. Material assumptions comprise expected future cash flows, discount rates and growth rates for the period.

Inventory
The standard cost calculations are reviewed on a regular basis to ensure that all relevant assumptions such as prices, output and capacity utilization are incorporated correctly. Changes in the calculation method used to calculate indirect production costs may impact the gross margin and the overall measurement of inventories.

Inventories are written down to net realizable value if this is lower than cost. The need to write down inventories is primarily assessed based on negotiability and production quality. The net realizable value is calculated as the total of future revenue expected to be generated in the process of normal operations and determined by allowing for marketability, obsolescence and development in expected selling price less selling expenses.

Revenue from engineering projects
In Management's opinion, the Group's sale of engineering projects is to a high degree individually adjusted, and contract work in progress is consequently measured at the selling price of the work completed based on the stage of completion. The stage of completion is determined on the basis of the share of contract costs incurred compared to the total expected contract costs. These costs are partly based on an estimate which to a high degree is based on historical experience. Expected income and costs of engineering projects may be adjusted along with the finalization of the projects and clarifications of uncertainties. Parallel changes to the engineering contract may occur and certain assumptions in the contract may not be met.

Warranty provision for engineering projects
The evaluation of the warranty provision for engineering projects is based on historical levels. Furthermore, the warranty provision also reflects

the risks associated with bringing new technologies to the market as well as executing projects in countries with higher geopolitical risks.

Contingent liabilities and lawsuits

As part of the Group's business, the Group may become party of a lawsuit and/or dispute. In these cases, the potential liabilities and their likelihood are evaluated. The evaluation is based on available information and legal assessment from advisors. Assessing the final outcome of lawsuits/disputes is difficult and the outcome may thus deviate from the evaluation made by the Group.

Research and development costs

Research costs are expensed when incurred. Development costs which do not meet the requirements of capitalization are expensed when incurred. Management assesses whether the capitalization requirements are met based on expectations of the technical possibility of completing the development project, expectations of the existence of a market for the product, etc.

Consolidated income statement

	Note	2017 DKK mio.	2016 DKK mio.
Continuing operations			
Revenue	1	**5.013**	**5.150**
Change in inventories of finished goods and intermediate products		-139	150
Other operating income		20	18
Purchased equipment for contract work		-578	-736
Raw materials and consumables used		-1.162	-1.242
Other external expenses		-816	-775
Gross profit		**2.338**	**2.565**
Staff expenses	2	-1.566	-1.559
EBITDA		**772**	**1.006**
Depreciation, amortization and impairment losses	3	-259	-262
EBIT		**513**	**744**
Result of investment in joint venture	4	-30	-15
Financial income	5	71	74
Financial expenses	6	-115	-115
Profit before tax		**439**	**688**
Tax	7	-125	-226
Profit from continuing operations		**314**	**462**
Loss from discontinuing operations	36	-422	-53
Net profit		**-108**	**409**
Profit attributable to:			
Owners of the parent		-98	464
Non-controlling interests		-10	-55
Net profit		**-108**	**409**

Consolidated statement of comprehensive income

	Note	2017	2016
		DKK mio.	DKK mio.
Net profit		**-108**	**409**
Foreign currency translation adjustment		-194	30
Recycling currency translation adjustments from discontinuing operations	36	24	0
Derivative financial instruments used for hedging of future cash flows		12	0
Realized derivative financial instruments transferred to financial income/expense		1	24
Tax on this		-3	-5
Fair value adjustment of available-for-sale financial assets		-26	-48
Tax on this		-4	0
Tax adjustment on revaluation of land and building		17	0
Items that may be reclassified to the income statement		**-173**	**1**
Actuarial adjustments on pension obligations		13	15
Tax on this		-5	-6
Items that may not be reclassified to the income statement		**8**	**9**
Other comprehensive income		**-165**	**10**
Total comprehensive income		**-273**	**419**
Attributable to:			
Owners of the parent		-260	475
Non-controlling interests		-13	-56
Total comprehensive income		**-273**	**419**
Continuing operations		149	472
Discontinuing operations		-422	-53
Total comprehensive income attributed to the owners of the parent company		**-273**	**419**

Consolidated balance sheet at December 31
Assets

	Note	2017 DKK mio.	2016 DKK mio.
Goodwill		3.383	3.396
Other intangible assets		84	103
Intangible assets under construction		0	3
Intangible assets	8	**3.467**	**3.502**
Land and buildings		827	1.038
Plant and machinery		791	1.400
Other fixtures and equipment		258	273
Property, plant and equipment under construction		250	318
Property, plant and equipment	9	**2.126**	**3.029**
Investment in joint venture		0	14
Other securities and investments		316	348
Other receivables		52	51
Investments	10	**368**	**413**
Non-current assets		**5.961**	**6.944**
Inventories	11	**1.043**	**1.362**
Trade receivables	12	995	865
Contract work in progress	13	173	154
Tax receivables		7	8
Other receivables	14	215	180
Prepayments		36	41
Receivables		**1.426**	**1.248**
Cash		**901**	**582**
Current assets		**3.370**	**3.192**
Assets		**9.331**	**10.136**

Consolidated balance sheet at December 31
Equity and liabilities

	Note	2017	2016
		DKK mio.	DKK mio.
Share capital	15	2.200	2.200
Share premium		335	335
Revaluation reserve	16	44	27
Foreign currency translation reserve	16	14	181
Reserve for value adjustment of hedging instruments	16	2	-8
Reserve for value adjustment of financial assets available-for-sale	16	-131	-101
Retained earnings		2.318	2.584
Equity attributable to the owners of the parent		**4.782**	**5.218**
Non-controlling interests		13	73
Total equity		**4.795**	**5.291**
Pension obligations and similar obligations	18	30	74
Deferred tax	19	568	514
Provisions	20	255	203
Deferred income	21	0	11
Bonds	21	499	997
Mortgage debt	21	60	63
Credit institutions	21	575	686
Leasing obligations	21	130	130
Other payables	22	3	4
Non-current liabilities		**2.120**	**2.682**
Bonds	21	499	0
Mortgage debt	21	3	3
Credit institutions	21	110	132
Prepayments from customers	23	229	280
Contract work in progress	13	675	732
Trade payables		387	488
Other payables	22	512	527
Deferred income	21	1	1
Current liabilities		**2.416**	**2.163**
Liabilities		**4.536**	**4.845**
Equity and liabilities		**9.331**	**10.136**

Consolidated statement of changes in equity

	Share capital	Share premium	Reserves	Retained earnings	Equity attributable to the owners of the parent	Non-controlling interest	Total equity
	DKK mio.	DKK mio.	DKK mio.	DKK mio.	DKK mio.	DKK mio.	DKK mio.
Equity at January 1, 2017	2.200	335	99	2.584	5.218	73	5.291
Adjustment of non-controlling interest	0	0	0	-75	-75	-51	-126
Adjusted equity at January 1, 2017	**2.200**	**335**	**99**	**2.509**	**5.143**	**22**	**5.165**
Net profit	0	0	0	-98	-98	-10	-108
Other comprehensive income	0	0	-170	8	-162	-3	-165
Comprehensive income	**0**	**0**	**-170**	**-90**	**-260**	**-13**	-273
Dividend	0	0	0	-99	-99	0	-99
Capital increase in subsidiary	0	0	0	-2	-2	4	2
Transactions with owners	**0**	**0**	**0**	**-101**	**-101**	**4**	-97
Equity at December 31, 2017	**2.200**	**335**	**-71**	**2.318**	**4.782**	**13**	**4.795**

Consolidated statement of changes in equity

	Share capital	Share premium	Reserves	Retained earnings	Equity attributable to the owners of the parent	Non-controlling interest	Total equity
	DKK mio.	DKK mio.	DKK mio.	DKK mio.	DKK mio.	DKK mio.	DKK mio.
Equity at January 1, 2016	2.200	335	97	2.176	4.808	99	4.907
Net profit	0	0	0	464	464	-55	409
Other comprehensive income	0	0	2	9	11	-1	10
Comprehensive income	**0**	**0**	**2**	**473**	**475**	**-56**	419
Dividend	0	0	0	-65	-65	0	-65
Capital increase in subsidiaries	0	0	0	0	0	27	27
Non-controlling interest arising on business combination	0	0	0	0	0	3	3
Transactions with owners	**0**	**0**	**0**	**-65**	**-65**	**30**	-35
Equity at December 31, 2016	**2.200**	**335**	**99**	**2.584**	**5.218**	**73**	**5.291**

Consolidated cash flow statement

	Note	2017	2016
		DKK mio.	DKK mio.
Net profit		-108	409
Adjustments for non-cash items	32	437	571
Change in working capital	33	-154	-82
Cash flows from operating activities before financial items and tax		175	898
Interest received, etc.		53	63
Interest paid, etc.		-132	-133
Cash flows from ordinary activities		96	828
Corporation tax paid		-67	-165
Cash flows from operating activities		**29**	**663**
- Of which continuing operations		313	700
Purchase of intangible assets		-31	-24
Purchase of property, plant and equipment		-221	-410
Sale of property, plant and equipment		0	11
Purchase of fixed asset investments		-40	-16
Sale of fixed asset investments		30	9
Sale of emissions control business areas		919	0
Dividend received		24	26
Cash flows from investing activities		**681**	**-404**
Raising of non-current loans		0	387
Repayment of non-current loans		-126	-644
Non-controlling interest's payment of share capital		-126	27
Dividend paid		-99	-65
Cash flows from financing activities		**-351**	**-295**
Change in cash and cash equivalents		**359**	**-36**
Cash and cash equivalents at January 1		582	612
Foreign currency translation adjustment		-40	6
Cash and cash equivalents at December 31		**901**	**582**
Cash		901	582
Cash and cash equivalents at December 31		**901**	**582**

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1 Revenue

The Group's activities are in the business segment of providing catalytic processes for integrated solutions to industrial plants. The provision of these integrated solutions comprises fundamental and applied research, reaction engineering, process engineering, mechanical design and production and supply of catalysts. The Group's revenue can be specified as follows:

	2017	2016
	DKK mio.	DKK mio.
Sale of products	4.435	4.510
Sale of services	578	640
Total revenue	**5.013**	**5.150**

Of the total revenue, 32% (2016: 39%) derives from engineering projects.

Government grants for research and development amounting to DKK 8 million (2016: DKK 11 million) have been recognized in the income statement under "Other operating income".

2 Staff expenses

	2017	2016
	DKK mio.	DKK mio.
Wages and salaries	1.305	1.319
Pension – defined contribution plan	137	126
Pension – defined benefit plan	8	11
Other social security contribution	138	137
Total	**1.588**	**1.593**
Capitalisation of work performed on property, plant and equipment	-22	-34
Total staff expenses	**1.566**	**1.559**
Executive Management salary	1	1
Executive Management pension	0	0
Fee to Board of directors	1	2
Total remuneration to Executive Management and Board members	**2**	**3**
Average number of employees	**2.555**	**2.565**
Of which in Denmark	**1.745**	**1.810**

3 Depreciation, amortization and impairment losses

	2017	2016
	DKK mio.	DKK mio.
Other intangible assets	25	26
Land and buildings	19	18
Plant and machinery	135	132
Other fixtures and equipment	80	86
Total depreciation, amortization and impairment losses	**259**	**262**

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		2017	2016
		DKK mio.	DKK mio.
4	**Result of investment in joint venture**		
	Share of result in joint venture	-30	-15
	Total result of investment in joint venture	**-30**	**-15**

		2017	2016
		DKK mio.	DKK mio.
5	**Financial income**		
	Dividend	24	26
	Interest income	7	6
	Gains on derivative financial instruments (currency)	0	1
	Foreign currency translation adjustment	40	39
	Other financial income	0	2
	Total financial income	**71**	**74**

		2017	2016
		DKK mio.	DKK mio.
6	**Financial expenses**		
	Interest expense	53	51
	Loss on derivative financial instruments (interest)	1	25
	Loss on derivative financial instruments (currency)	2	1
	Foreign currency translation adjustment	59	38
	Total financial expenses	**115**	**115**

		2017	2016
		DKK mio.	DKK mio.
7	**Tax**		
	Current tax for the year	102	127
	Change in deferred tax for the year	90	64
	Change in corporate tax rate	-22	0
	Adjustments to prior years	-3	4
	Total tax	**167**	**195**
	Tax on continuing operations	125	226
	Tax on discontinuing operations	42	-31
	Total tax	**167**	**195**

Notes to the Annual Report of the Haldor Topsøe Holding Group

		2017	2016
7	**Tax (continued)**	%	%
	Danish corporate tax rate	22,0	22,0
	Non-deductible expenses	1,9	1,5
	Income not subject to tax	-1,2	-0,7
	Differences in foreign tax rates	10,3	6,8
	Adjustments relating to prior years	-0,1	1,4
	Change in corporate tax	-4,9	0,0
	Other adjustments	0,6	1,9
	Effective tax rate	**28,6**	**32,9**

8 Intangible assets

	Goodwill	Other intangible fixed assets	Intangible assets under construction
	DKK mio.	DKK mio.	DKK mio.
Cost at January 1, 2017	3.396	230	3
Exchange adjustments	-13	-1	0
Additions during the year	0	26	5
Disposals during the year	0	-39	0
Transfers during the year	0	8	-8
Cost at December 31, 2017	3.383	224	0
Amortization and impairment losses at January 1, 2017	0	127	0
Amortization for the year	0	29	0
Reversal of amortization and impairment losses on assets sold and scrapped	0	-16	0
Amortization and impairment losses at December 31, 2017	0	140	0
Carrying amount at December 31, 2017	**3.383**	**84**	**0**

Research and development costs expensed in 2017	541

Notes to the Annual Report of the Haldor Topsøe Holding Group

8 Intangible assets (continued)

	Goodwill	Other intangible fixed assets	Intangible assets under construction
	DKK mio.	DKK mio.	DKK mio.
Cost at January 1, 2016	3.392	211	2
Exchange adjustments	4	0	0
Additions during the year	0	21	3
Disposals during the year	0	-4	0
Transfers during the year	0	2	-2
Cost at December 31, 2016	3.396	230	3
Amortization and impairment losses at January 1, 2016	0	98	0
Amortization for the year	0	29	0
Amortization and impairment losses at December 31, 2016	0	127	0
Carrying amount at December 31, 2016	**3.396**	**103**	**3**

Reseach and development costs expensed in 2016	552

The goodwill at January 1, 2017 originates from the acquisition of the shares in Haldor Topsøe A/S in 2007 and IGM Biosciences in 2013.

An impairment test has been carried out at December 31, 2017 for the goodwill related to Haldor Topsøe A/S. No indication of impairment was identified.

During the impairment test, the cash generating unit's discounted cash flow is compared to the unit's book value. The cash generating unit is by Management defined as the total activity in the subsidiary Haldor Topsøe A/S. Cash flow is based on forecasts and business plans for the years 2018-2022.

The calculation is based on material assumptions in terms of growth rate and discount rate. The discount rate is determined based on Management's estimate of general capital market conditions and the specific risk profile and has been determined to 10% before tax compared to 9% i 2016. The change is due to increase in the risk free interest. The growth rate in the terminal period has by Management been estimated to 2% corresponding to 2016.

The Group has evaluated the goodwill related to IGM Biosciences Inc. at December 31, 2017 and found no reason for an impairment adjustment considering the great scientific progress achived by the company in 2017.

Notes to the Annual Report of the Haldor Topsøe Holding Group

9 Property, plant and equipment

	Land and buildings	Plant and machinery	Other fixtures and equipment	Property, plant and equipment under construction
	DKK mio.	DKK mio.	DKK mio.	DKK mio.
Cost at January 1, 2017	1.284	2.307	744	318
Foreign currency translation adjustment	-26	-72	-5	-15
Additions for the year	10	48	68	95
Disposals for the year	-206	-799	-108	-6
Transfers for the year	0	97	45	-142
Cost at December 31, 2017	1.062	1.581	744	250
Revaluation at January 1, 2017	45	0	0	0
Foreign currency translation adjustment	-5	0	0	0
Revaluation at December 31, 2017	40	0	0	0
Depreciation and impairment losses at January 1, 2017	291	907	471	0
Foreign currency translation adjustment	-4	-25	-4	0
Depreciation for the year	27	186	96	0
Reversal of depreciation on assets sold and scrapped	-39	-278	-77	0
Depreciation and impairment losses at December 31, 2017	275	790	486	0
Carrying amount at December 31, 2017	**827**	**791**	**258**	**250**
Carrying amount at December 31, 2017, under the depreciated cost model	787	791	258	250
Borrowing costs capitalised in 2017				2
Carrying amount of financial leased assets	125	0	0	0

Notes to the Annual Report of the Haldor Topsøe Holding Group

9 Property, plant and equipment (continued)

	Land and buildings	Plant and machinery	Other fixtures and equipment	Property, plant and equipment under construction
	DKK mio.	DKK mio.	DKK mio.	DKK mio.
Cost at January 1, 2016	1.064	1.895	657	540
Foreign currency translation adjustment	2	18	3	-7
Additions during the year	152	125	43	219
Disposals during the year	-15	-41	-2	0
Transfers during the year	81	310	43	-434
Cost at December 31, 2016	1.284	2.307	744	318
Revaluation at January 1, 2016	44	0	0	0
Foreign currency translation adjustment	1	0	0	0
Revaluation at December 31, 2016	45	0	0	0
Depreciation and impairment losses at January 1, 2016	272	776	375	0
Foreign currency translation adjustment	0	8	0	0
Depreciation for the year	23	159	98	0
Reversal of depreciation on assets sold and scrapped	-4	-36	-2	0
Depreciation and impairment losses at December 31, 2016	291	907	471	0
Carrying amount at December 31, 2016	**1.038**	**1.400**	**273**	**318**
Carrying amount at December 31, 2016. under the depreciated cost model	993	1.400	273	318
Borrowing costs capitalised in 2016				4
Carrying amount of financial leased assets	129	0	0	0

Where Management assesses that a revaluation is material, the properties in question have been revalued by an independent assessor in connection with closing of the accounts, latest in 2017.

Notes to the Annual Report of the Haldor Topsøe Holding Group

9 Property, plant and equipment (continued)

	Level 1	Level 2	Level 3
	DKK mio.	DKK mio.	DKK mio.
Office buildings in Denmark	0	0	299
Production plants in Denmark and US	0	0	336
Excess land in US	0	67	0
Distribution of assets stated at fair value at December 31, 2017	**0**	**67**	**635**

	Level 1	Level 2	Level 3
	DKK mio.	DKK mio.	DKK mio.
Office buildings in Denmark	0	0	293
Production plants in Denmark, US, and China	0	0	540
Excess land in US	0	76	0
Distribution of assets stated at fair value at December 31, 2016	**0**	**76**	**833**

Level 1: Quoted prices (unadjusted) in an active market for identical assets.
Level 2: Input other than quoted prices included within level 1 that is observable for the assets, either directly (i.e. as prices) or indirectly (i.e. derived from prices).
Level 3: Input for assets that are not based on observable market data (i.e. unobservable inputs).

There have been no transfers between levels 1 and 2 during the year.

The fair value of office buildings in Denmark has been derived using a market approach primarily based on rental per m^2 for comparable buildings and an interest rate. The rental per m^2 is set at DKK 700-1000 for office buildings and DKK 300-700 for storage and laboratories. The fair value of production plants has been derived using a cost approach, which reflects the cost of constructing similar buildings at an equivalent age and use. Excess land in US is valuated using a sales comparison approach. Sales prices of comparable land in close proximity are adjusted for differences in key attributes such as property size. The sales price per acre is set at USD 105,000.

The current use of land and buildings is considered to represent the highest and best use of the assets.

The valuation methods have not changed from last year.

	2017	2016
	DKK mio.	DKK mio.
Fair value of level 3 assets at January 1	833	763
Additions	10	103
Disposals	-167	-11
Included in the income statement as depreciation	-23	-23
Foreign currency translation adjustment	-18	1
Fair value of level 3 assets at December 31	**635**	**833**

Notes to the Annual Report of the Haldor Topsøe Holding Group

10 Investments

	Investment in joint venture	Other securities and investments	Other receivables
	DKK mio.	DKK mio.	DKK mio.
Cost at January 1, 2017	39	448	68
Foreign currency translation adjustment	0	0	-5
Additions during the year	0	4	41
Disposals during the year	0	-8	-37
Cost at December 31, 2017	39	444	67
Value adjustment at January 1, 2017	-25	-100	-17
Net result for the year	-30	0	0
Disposals during the year	0	-2	17
Value adjustments for the year	1	-26	0
Investments with negative equity transferred to receivables	15	0	-15
Value adjustment at December 31, 2017	-39	-128	-15
Carrying amount at December 31, 2017	**0**	**316**	**52**

	Investment in joint venture	Other securities and investments	Other receivables
	DKK mio.	DKK mio.	DKK mio.
Cost at January 1, 2016	39	440	72
Additions during the year	0	0	15
Disposals during the year	0	0	-11
Transfer during the year	0	8	-8
Cost at December 31, 2016	39	448	68
Value adjustment at January 1, 2016	-9	-52	-17
Net result for the year	-15	0	0
year	-1	-48	0
Value adjustment at December 31, 2016	-25	-100	-17
Carrying amount at December 31, 2016	**14**	**348**	**51**

Notes to the Annual Report of the Haldor Topsøe Holding Group

10 Investments (continued)

Investment in joint venture is specified as follows:

Ferrostaal Topsoe Projects GmbH
The Group has invested in a joint venture together with Ferrostaal GmbH. The share capital of the joint venture is EUR 10 million of which the Group owns 50%. The investment is measured under the equity method. The negative equity has been set off against receivables form the joint venture.

Other securities and investments are specified as follows:

Karnaphuli Fertilizer Limited, Bangladesh (KAFCO)
The Group has a shareholding in KAFCO of nominally BDT 692 million, which equals 15.01% of the shares in KAFCO. The shares are measured at fair value based on a discounted cash flow calculation on the basis of the present budgets and forecasts of KAFCO. The calculation is moreover based on material assumptions in terms of growth rate and discount rate. The discount rate is determined based on management's estimate of general capital market conditions and the specific risk profile and has been determined at 12% after tax. The growth rate in the terminal period has by Management been estimated at 0%. Both the discount rate and the growth rate correspond to the 2016 rates. Based on these criteria, the KAFCO shares have been written down by DKK 42 million (2016: DKK 50 million).

Chambal Fertilizer and Chemical Ltd., India
The Group has an investment in Chambal Fertilizer and Chemicals Ltd., corresponding to 0.48% of the share capital. The investment is measured at fair value based on listed market value.

Fatima Fertilizer Co. Ltd., Pakistan
The Group has an investment in Fatima Fertilizer Co. Ltd., corresponding to 0.05% of the share capital. The investment is measured at the fair value based on listed market value.

Faradion Ltd., United Kingdom
The Group has an investment in Faradion Ltd., corresponding to 22.16% of the share capital. The investment is measured at fair value based on market value.

Fauji Fertilizer Company (FFC), Parkistan
The Group has an investment in FFE corresponding to 0.01% of the shares. The investment is measured at fair value based on listed market value.

11 Inventories

	2017 DKK mio.	2016 DKK mio.
Raw materials and consumables	258	367
Work in progress	115	132
Finished goods	670	863
Inventories at December 31	**1.043**	**1.362**
Cost of sales for the year	1.832	1.415
Impairment losses for the year	63	112
Reversed impairment losses for the year	-46	-49

Reversal of impairment losses is attributable to disposal or reuse of impaired goods in the production.

Notes to the Annual Report of the Haldor Topsøe Holding Group

12 Trade receivables	2017 DKK mio.	2016 DKK mio.
Trade receivables, gross	1.016	896
Provision for bad debts at January 1	-31	-35
Provision for bad debts for the year	-5	-16
Reversal of bad debts, prior years	15	20
Provision for bad debts at December 31	**-21**	**-31**
Trade receivables	**995**	**865**
Of this, due after more than 1 year	8	2
Realized losses for the year	10	6

Receivables, gross due at December 31 have the following aging:	2017 %	2016 %
1-90 days	24	31
91-180 days	12	1
181+ days	13	11

13 Contract work in progress	2017 DKK mio.	2016 DKK mio.
Selling price of work performed at the balance sheet date	5.581	5.476
Payments received on account	-6.083	-6.054
Contract work in progress at December 31	**-502**	**-578**
Contract work in progress recognized in assets	173	154
Contract work in progress recognized in liabilities	-675	-732
Contract work in progress at December 31	**-502**	**-578**

14 Other receivables	2017 DKK mio.	2016 DKK mio.
VAT and tax receivable	60	119
Fair value of derivative financial instruments	23	21
Government grants	0	1
Other receivables	132	39
Other receivables at December 31	**215**	**180**
Of this, due after more than 1 year	41	0

Notes to the Annual Report of the Haldor Topsøe Holding Group

15 Share capital

	A shares	B shares	Total
	Number of shares of DKK 1.000	Number of shares of DKK 1.000	Number of shares of DKK 1.000
Share capital at January 1, 2017	200.000	2.000.000	2.200.000
Share capital at December 31, 2017	200.000	2.000.000	2.200.000

	A shares	B shares	Total
	Number of shares of DKK 1.000	Number of shares of DKK 1.000	Number of shares of DKK 1.000
Share capital at January 1, 2016	200.000	2.000.000	2.200.000
Share capital at December 31, 2016	200.000	2.000.000	2.200.000

The Company's share capital is nominally DKK 2,200 million divided into shares of DKK 1,000 or multiples thereof. The share capital is fully paid. The shares are divided into 2 classes. A shares are entitled to 10 votes per share amount of DKK 1,000. B shares are entitled to one vote for each share of DKK 1,000.

16 Reserves

	Revaluation reserve	Foreign currency translation reserve	Reserve for value adjustment of hedging instruments	Reserve for value adjustment of financial assets available-for-sale	Total
	DKK mio.	DKK mio.	DKK mio.	DKK mio.	DKK mio.
Reserves at January 1, 2017	27	181	-8	-101	99
Foreign currency translation adjustment	0	-191	0	0	-191
Recycling currency translation adjustments from discontinuing operations	0	24	0	0	24
Derivative financial instruments used for hedging of future cash flows	0	0	12	0	12
Realized derivative financial instruments transferred to financial income/expenses	0	0	1	0	1
Fair value adjustment of financial assets available-for-sale	0	0	0	-26	-26
Tax adjusted on revaluation of land and buildings	17	0	0	0	17
Tax	0	0	-3	-4	-7
Reserves at December 31, 2017	**44**	**14**	**2**	**-131**	**-71**

Notes to the Annual Report of the Haldor Topsøe Holding Group

16 Reserves

	Revaluation reserve	Foreign currency translation reserve	Reserve for value adjustment of hedging instruments	Reserve for value adjustment of financial assets available-for-sale	Total
	DKK mio.	DKK mio.	DKK mio.	DKK mio.	DKK mio.
Reserves at January 1, 2016	27	150	-27	-53	97
Foreign currency translation adjustment	0	31	0	0	31
Realized derivative financial instruments transferred to financial income/expenses	0	0	24	0	24
Fair value adjustment of financial assets available-for-sale	0	0	0	-48	-48
Tax	0	0	-5	0	-5
Reserves at December 31, 2016	**27**	**181**	**-8**	**-101**	**99**

17 Dividend

Proposed dividend constitutes DKK 200 million (2016: DKK 99 million) corresponding to DKK 90.91 (2016: DKK 45.00) per share.

Paid dividend during the year amounts to DKK 99 million regarding 2016 (2016: DKK 65 million) corresponding to DKK 45.00 (2016: DKK 29.55) per share.

Notes to the Annual Report of the Haldor Topsøe Holding Group

18 Pension obligations and similar obligations

The Group has entered into pension plans with a considerable number of its employees. Most of the plans are defined contribution plans and only a small part is defined benefit plans.

Defined contribution plans
The Group finances the plans by currently paying a premium to independent insurance companies that are responsible for the pension obligations. Once the pension contributions to the defined contribution plans have been paid, the Group has no further pension obligations to current or terminated employees.

Defined benefit plans
The Group has made agreements with specific groups of employees regarding payment of certain benefits, including pension. These pensions relate to certain employees in the Group's US subsidiary where the plan partly consists of a basic pension and partly of an additional pension for selected members of management. The pension obligations are partly hedged through an independent fund. Actuarial valuation is performed annually.

	2017	2016
	DKK mio.	DKK mio.
Pension costs	6	7
Interest expenses	10	12
Interest income	-8	-8
Total pension recognized in staff expenses	**8**	**11**

	2017	2016
	%	%
Applied actuarial assumptions:		
Discount rate	3,28	3,75
Future pay increases	3,00	3,00

A change in the discount rate of -0.5% or + 0.5%, respectively, would impact the defined benefit obligation by +5% or -4%, respectively. A change in the future pay increase of -0.5% or +0.5, respectively, would impact the defined benefit obligation by -1% or +1%, respectively.

The weighted average duration of the defined benefit obligation is 9.5 years (2016: 9.5 years).

	2017	2016
	%	%
US	35	41
Developed countries	33	28
Emerging markets	4	5
Share investment	72	74
US investment grade	7	6
High yield	9	10
Inflation protected	1	1
Other	1	1
Bond investment	18	18
Real estate	3	3
Commodities	4	5
Other	3	0
Distribution of assets to cover the obligation at December 31	**100**	**100**

Notes to the Annual Report of the Haldor Topsøe Holding Group

18 Pension obligations and similar obligations (continued)

	2017 DKK mio.	2016 DKK mio.
Present value of pension obligations	288	320
Fair value of pension plan assets	-258	-246
Net obligation at December 31	**30**	**74**
Present value of pension obligations at January 1	320	314
Foreign currency translation adjustment	-36	10
Pension costs	6	7
Interest expenses	10	12
Gain/loss on curtailments	-12	0
Actuarial gains and losses, demographic assumptions	-4	-1
Actuarial gains and losses, financial assumptions	25	-4
Pension paid	-21	-18
Present value of pension obligations at December 31	**288**	**320**
Fair value of pension plan assets at January 1	246	224
Foreign currency translation adjustment	-30	8
Interest on pension assets	8	8
Return on plan assets excl. interest on pension assets	33	13
Paid by the company	22	11
Pension paid	-21	-18
Fair value of pension plan assets at December 31	**258**	**246**

Expected defined benefit pension payments by the Group in 2018 amount to DKK 21 million.

Notes to the Annual Report of the Haldor Topsøe Holding Group

		2017	2016
		DKK mio.	DKK mio.
19	**Deferred tax**		
	Deferred tax at January 1	514	446
	Foreign currency translation adjustment	-4	1
	Tax on equity items	-1	6
	Tax for the year	44	68
	Tax previous years	15	-7
	Deferred tax at December 31	**568**	**514**
	Intangible assets and property, plant and equipment	185	200
	Inventories	15	17
	Work in progress	386	360
	Provisions	-27	-59
	Other	9	-4
	Deferred tax at December 31	**568**	**514**
	Of this, due after more than 1 year	415	371

		2017	2016
		DKK mio.	DKK mio.
20	**Provisions**		
	Provisions at January 1	203	206
	Reversal during the year	-7	-14
	Provisions for the year	59	11
	Provision at December 31	**255**	**203**
	Warranty provision for catalysts and engineering projects	205	198
	Waste disposal	1	1
	Other provisions	49	4
	Provisions at December 31	**255**	**203**
	Of this, due after more than 1 year	255	203

Notes to the Annual Report of the Haldor Topsøe Holding Group

		2017	2016
		DKK mio.	DKK mio.
21	**Non-current liabilities**		
	Bonds		
	After 5 years	0	0
	Between 1 and 5 years	499	997
	More than 1 year	499	997
	Less than 1 year	499	0
	Bonds at December 31	**998**	**997**
	Mortgage debt		
	After 5 years	46	49
	Between 1 and 5 years	14	14
	More than 1 year	60	63
	Less than 1 year	3	3
	Mortgage at December 31	**63**	**66**
	Credit institutions		
	After 5 years	93	189
	Between 1 and 5 years	482	497
	More than 1 year	575	686
	Less than 1 year	110	132
	Credit institutions at December 31	**685**	**818**
	Leasing obligations		
	After 5 years	126	127
	Between 1 and 5 years	4	3
	More than 1 year	130	130
	Less than 1 year	0	0
	Leasing obligations at December 31	**130**	**130**
	Deferred income		
	After 5 years	0	10
	Between 1 and 5 years	0	1
	More than 1 year	0	11
	Less than 1 year	1	1
	Deferred income at December 31	**1**	**12**

The Group leases property under a non-cancellable finance lease agreeent. The lease runs until 2036.
At the end of the lease period, the Group is obligated to purchase the property at a price of DKK 74 million.

Interest bearing debt at January 1	2.011
Foreign currency translation adjustment	-9
Instalments	-126
Interest bearing debt at December 31	**1.876**

Notes to the Annual Report of the Haldor Topsøe Holding Group

	2017 DKK mio.	2016 DKK mio.
22 Other payables		
Staff related items	272	326
Fair value of derivative financial instruments	3	5
Tax related items	4	5
Other payables	236	195
Other payables at December 31	**515**	**531**
More than 1 year	3	4
Less than 1 year	512	527
Other payables at December 31	**515**	**531**

	2017 DKK mio.	2016 DKK mio.
23 Prepayments from customers		
Prepayments related to licence agreements	0	0
Prepayments related to sale of goods	229	280
Prepayments from customers at December 31	**229**	**280**

24 Assets provided as security

Carrying amount of non-current assets (land and buildings) provided as security	271	293
Remaining balance of loans secured by non-current assets	64	67
Nominal value of the loans (real estate deeds and owners' mortgage deeds)	73	73
Remaining balance of loan secured by all assets of Haldor Topsoe Inc.	12	66

Assets are provided as security for mortgage debt and other non-current loans. In case of other debt to the secured creditor, the asset(s) provided as security may – until release thereof – serve as security for any present or future obligation that the group may have towards such parties.

Notes to the Annual Report of the Haldor Topsøe Holding Group

25 Guarantees

	2017 DKK mio.	2016 DKK mio.
Guarantees given by banks and credit insurance institutions on the Group's behalf for contract work, etc.	735	749
Guarantees issued at December 31	**735**	**749**
Less than 1 year	292	405
Between 1 and 5 years	413	312
After 5 years	30	32
Guarantees issued at December 31	**735**	**749**

26 Contractual obligations

	2017 DKK mio.	2016 DKK mio.
Less than 1 year	93	79
Between 1 and 5 years	235	191
After 5 years	387	351
Contractual obligations regarding leases at December 31	**715**	**621**
Payments for the year recognized as operating lease expenses	101	80

Leases and rental agreements relate mainly to premises and extend in some cases to 2032.

Notes to the Annual Report of the Haldor Topsøe Holding Group

27 Contingent liabilities

The Group's property in Frederikssund, Denmark, has been found to be contaminated. Management assesses that the remediation costs will not be significant.

Through joint taxation scheme with Danish group enterprises, the company is jointly and severally liable for taxes etc. payable in Denmark.

28 Fee to auditors appointed at the general meeting

	2017 DKK mio.	2016 DKK mio.
Statutory audit fee	3	2
Tax assistance	3	1
Other assistance	4	1
Total fee to auditors appointed at the general meeting	**10**	**4**

29 Related parties

Related parties	Transactions	2017 DKK mio.	2016 DKK mio.
Joint venture	Administration fee	0	1

Remuneration to Executive Committee and Board of Directors, please see note 2.

Intercompany transactions have been eliminated in the consolidated financial statements.

Notes to the Annual Report of the Haldor Topsøe Holding Group

30 Derivative financial instruments

	Contract amount 2017	Fair value 2017	Contract amount 2016	Fair value 2016
	DKK mio.	DKK mio.	DKK mio.	DKK mio.
Purchase of USD, matures in 2017	0	0	56	2
Sale of KWD, matures in 2018	193	11	0	0
Forward exchange contracts at December 31	**193**	**11**	**56**	**2**

The Group uses forward exchange contracts to hedge against changes in exchange rates in volatile currencies for contract related payments up to 12 months forward. When the contract is considered hedging, the fair value is recognized in the balance sheet through other comprehensive income. Otherwise the fair value is recognized directly in statement of profit and loss.

	Contract amount 2017	Fair value 2017	Contract amount 2016	Fair value 2016
	DKK mio.	DKK mio.	DKK mio.	DKK mio.
EUR interest rate swap, matures on December 31, 2021	32	-3	41	-5
Interest swap at December 31	**32**	**-3**	**41**	**-5**

The Group uses interest rate swaps to hedge against changes in interest rate levels and thus to reduce the interest rate risk. Interest rate swaps are used on floating rate loans. The fair value of the swaps is recognized in the balance sheet through other comprehensive income. The Group thus applies the rules on hedge accounting.

	Contract amount 2017	Fair value 2017	Contract amount 2016	Fair value 2016
	DKK mio.	DKK mio.	DKK mio.	DKK mio.
Aggregate amount of commodity swaps within metals, matures in 2019	3	0	0	0
Aggregate amount of commodity swaps within metals, matures in 2018	45	12	23	6
Aggregate amount of commodity swaps within metals, matures in 2017	0	0	73	13
Commodity swaps at December 31	**48**	**12**	**96**	**19**

The Group uses commodity swaps to hedge against price fluctuations in raw materials, primarily base metals (nickel, copper and zinc) of specific production contracts. Hedging duration depend on the specific underlying contract, but it is typically less than 24 months. The fair value of the swaps is recognized directly in the income statement.

The cost of raw materials is a significant cost component in our products, and costs can fluctuate considerably. The Group seeks to minimize the risk related to commodity price fluctuations through contractual escalation

Notes to the Annual Report of the Haldor Topsøe Holding Group

31 Financial assets and liabilities

	2017	2016
	DKK mio.	DKK mio.
Other securities and investments	316	348
Trade receivables	995	865
Other financial receivables	267	231
Cash	901	582
Financial assets at December 31	**2.479**	**2.026**
Bonds, mortgage debt and debt to credit institutions	1.746	1.881
Financial lease	130	130
Trade payables	387	488
Other financial liabilities	515	531
Financial liabilities at December 31	**2.778**	**3.030**
Assets available-for-sale	316	348
Financial assets measured at amortized cost	2.140	1.657
Derivative financial instruments	23	21
Classification of financial assets at December 31	**2.479**	**2.026**
Financial liabilities measured at amortized cost	2.775	3.025
Derivative financial instruments	3	5
Classification of financial liabilities at December 31	**2.778**	**3.030**

Notes to the Annual Report of the Haldor Topsøe Holding Group

31 Financial assets and liabilities (continued)

Bonds, mortgage debt and debt to credit institutions:		
Installments:		
Less than 1 year	646	174
Between 1 and 5 years	1.034	1.600
After 5 years	149	341
Bonds, mortgage debt and debt to credit institutions at nominal value	**1.829**	**2.115**
Future finance charges	-83	-234
Bonds, mortgage debt and debt to credit institutions at present value	**1.746**	**1.881**
Leasing obligations		
Minimum lease payments:		
After 5 years	196	204
Between 1 and 5 years	29	28
Less than 1 year	7	7
Leasing obligations at nominal value	**232**	**239**
Future finance charges	-102	-109
Leasing obligations at present value	**130**	**130**
Trade payables:		
Less than 1 year	387	488
Derivative financial instruments:		
Less than 1 year	0	0
Between 1 and 5 years	3	4
After 5 years	0	1
Other financial liabilities:		
Less than 1 year	512	526

Notes to the Annual Report of the Haldor Topsøe Holding Group

31 Financial assets and liabilities (continued)

	Level 1	Level 2	Level 3
	DKK mio.	DKK mio.	DKK mio.
Fair value of contingent considerations	0	0	0
Other securities and investments	45	0	271
Derivative financial instruments	0	23	0
Distribution of assets stated at fair value at December 31, 2017	**45**	**23**	**271**

	Level 1	Level 2	Level 3
	DKK mio.	DKK mio.	DKK mio.
Derivative financial instruments	0	3	0
Distribution of liabilities stated at fair value at December 31, 2017	**0**	**3**	**0**

Level 1: Listed prices in an active market for the same type of instrument.
Level 2: Listed prices in an active market for similar assets or liabilities or other valuation methods according to which all material input is based on observable market data
Level 3: Valuation methods according to which material input is not based on observable market data

Please refer to note 10 for information on input to valuation of investments in other enterprises stated at fair value in level 3.

Fair value of contingent considerations

In the event that the operations of the divested Automotive Business achieve certain performance criteria during the period from January 1, 2018 to December 31, 2020 as specified in an 'Volume earn-out' clause in the sales agreement, an additional cash consideration will be receivable from the buyer. At year-end, the fair value of the 'Volume earn-out' was determined to be close to DKK 0 million, as Management assesses that the performance criteria are unlikely to be met.

There have been no transfers between levels 1, 2 and 3 during the year.

	2017	2016
	DKK mio.	DKK mio.
Fair value of level 3 assets at January 1	313	363
Write-down recognized in other comprehensive income	-42	-50
Fair value of level 3 assets at December 31	**271**	**313**

Notes to the Annual Report of the Haldor Topsøe Holding Group

31 Financial assets and liabilities (continued)

Financial risks

Currencies
As the Group operates globally, the income statement, balance sheet, and cash flows are subject to the risk of currency fluctuations, mainly in relation to flows of EUR and USD.

Part of this risk is mitigated through natural hedges arising from activities where the Group has both income and expenses in the same currency. However, the risk is not fully covered by natural hedges, and consequently we hedge certain future cash flows. A 5% increase in the DKK/USD exchange rate is assessed to have a positive EBIT effect of DKK 15-20 million.

Interest rates
Long-term debt consists of loans and bonds with fixed and floating interest rates. The Group’s policy is to maintain a loan portfolio where 35-50% is subject to floating interest rates and where 50-65% is subject to fixed interest rates. For the floating rate portion of the Group’s interest-bearing debt, a change in the interest rate level of 1 percentage point will change interest expenses by DKK 7 million.

Credit
The credit risk of the Group is primarily related to trade receivables from state-owned as well as privately owned corporations. Where feasible, we seek to mitigate credit risk by applying instruments such as letters of credit and bank guarantees as well as selective structuring of payment terms, etc. On a quarterly basis, it is assessed if the Group should make accruals for bad debt, which is considered unlikely to be collected.

Liquidity
The Group must maintain sufficient liquidity to fund daily operations, debt service, and expansion. The Group’s access to liquidity consists of cash and cash equivalents, including access to committed revolving credit facilities.

32 Adjustments for non-cash items

	2017 DKK mio.	2016 DKK mio.
Financial income	-77	-89
Financial expenses	132	146
Result of investment in joint venture	30	15
Amortization, depreciation and impairment losses, including gains and losses from sale of assets	338	309
Tax	132	195
Other adjustments	-118	-5
Total adjustmens for non-cash items	**437**	**571**

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	2017	2016
	DKK mio.	DKK mio.
33 Change in working capital		
Increase (-) / decrease in inventories	283	-126
Increase (-) / decrease in receivables	-262	468
Increase / decrease (-) in contract billing	-75	-392
Increase / decrease (-) in suppliers, etc.	-100	-32
Total change in working capital (+ fall, - increase)	**-154**	**-82**

34 Subsequent events

No events materially affecting the Company's financial position at December 31, have occured after the balance sheet date.

35 List of group companies

Name	Registered office	Voting and ownership share
Haldor Topsoe A/S	Lyngby, Denmark	100%
Haldor Topsoe, Inc.	Houston, USA	100%
Topsoe Fuel Cell A/S	Lyngby, Denmark	100%
Haldor Topsoe India Pvt. Ltd.	New Delhi, India	100%
Haldor Topsøe (Beijing) Co., Ltd	Beijing, China	100%
Haldor Topsøe International A/S	Lyngby, Denmark	100%
Haldor Topsøe Sustainables A/S	Lyngby, Denmark	100%
OOO Haldor Topsøe	Moscow, Russia	100%
Haldor Topsoe America Latina S.A.	Buenos Aires, Argentina	100%
Haldor Topsoe Sdn. Bhd.	Kuala Lumpur, Malaysia	100%
Haldor Topsoe Canada Limited	Vancouver, Canada	100%
Subcontinent Ammonia Investment Company ApS	Lyngby, Denmark	100%
Haldor Topsoe S.A.	Cape Town, South Africa	100%
IGM Biosciences, Inc.	Mountain View, USA	87.07%
IGM Biosciences A/S	Lyngby, Denmark	87.07%
Haldor Topsoe Ohio, Inc.	Wilmington, USA	100%
Frydenlund Ejendomsselskab ApS	Rudersdal, Denmark	100%
Haldor Topsoe Science & Technology (Dalian) Co.	Dalian, China	100%
Haldor Topsoe De Mexico, S. A. de C. V.	Mexico City, Mexico	100%
Haldor Topsoe do Brasil Tecnologia e Servicos em Catalisadores Eireli	Rio de Janeiro, Brazil	100%

Notes to the Annual Report of the Haldor Topsøe Holding Group

36 Discontinuing operations

On June 20, 2017, Topsoe announced that it had sold its emissions control business areas. The divestment involves a loss of DKK 362 million (mainly related to revaluation) and and a loss of DKK 60 million of the discontinuing operations for eleven months of 2017. The total loss of the divestment and the discontinuing operations for 2017 of DKK 422 million is recognized in the financial statements for 2017. The divestment was finalized on November 30, 2017. The divestment comprises the business areas automotive and stationary denox consisting of the subsidiaries Haldor Topsøe Catalyst (Tianjin) Co., Ltd., Haldor Topsøe Automotive Catalyst Trading (Tianjin) Co., Ltd. and Haldor Topsoe Catalisadores e Technologias do Brasil Ltda. as well as business assets and liabilities in Denmark, the US. and China.

The financial performance and cash flow information presented are for the eleven months ended November 30, 2017 (2017 column) and the year ended December 31, 2016.

	2017	2016
	DKK mio.	DKK mio.
Revenue	652	674
Expenses	-705	-758
Loss before tax	-53	-84
Tax	-7	31
Loss after tax of discontinuing operations	-60	-53
Loss on sale of discontinuing operations	-362	-
Loss from discontinuing operations	**-422**	**-53**
Foreign currency translation adjustment from discontinuing operations	24	0
Other comprehensive income arising from discontinuing operations	**24**	**0**
Net cash inflow from operating activities	-284	-37
Net cash inflow (outflow) from investing activities (2017 includes an inflow of DKK 922 million from the divestment)	913	-160
Net cash (outflow) from financing activities	-126	0
Net increase in cash generated by the discontinuing operations	**503**	**-197**
Cash	956	-
Fair value of contingent considerations	0	-
Total received or receivable consideration	**956**	**-**
Carrying amount of net assets sold	-1.195	-
Transaction costs	-64	
Loss on sale before income tax and reclassification of foreign currency translation reserve	**-303**	**-**
Reclassification of foreign currency translation reserve	-24	-
Income tax expense on loss	-35	-
Loss on sale	**-362**	**-**

Notes to the Annual Report of the Haldor Topsøe Holding Group

36 Discontinuing operations continued

In the event the operations of the divested Automotive Business achieve certain performance criteria during the period from January 1, 2018 to December 31, 2020 as specified in an 'Volume earn-out' clause in the sales agreement, an additional cash consideration of up to 300 DKK million will be receivable from the buyer. At year-end, the fair value of the 'Volume earn-out' was determined to be 0 DKK million, as Management assesses that the perfomance criteria are unlikely to be met.

Intangible assets	18	-
Property, plant and equipment	702	-
Financial assets	18	-
Inventories	313	-
Receivables	236	-
Non-current liabilities	-4	
Current liabilities	-88	-
Total carrying amount of assets and liabilities in discontinuing operations at November 30, 2017	**1.195**	**0**

Accounting policies of the Haldor Topsøe Holding A/S

Basis of preparation

The financial statements of Haldor Topsøe Holding A/S have been prepared in accordance with the provisions of the Danish Financial Statements Act applying to large enterprises of reporting class C. The accounting policies are unchanged from last year.

The applied accounting policies are similar to those of the Group except for the following matters:

Dividend from group enterprises
The dividend declared in the financial year is recognized in the parent company's income statement.

Investments in group enterprises
Investments in group enterprises are recognized and measured at cost in the parent company's financial statements.

Income statement of Haldor Topsøe Holding A/S

	Note	2017	2016
		DKK mill.	DKK mill.
Other external expenses		-6	-3
Staff expenses	1	-3	-2
EBIT		**-9**	**-5**
Dividend from group enterprises		334	300
Financial income		1	1
Financial expenses	2	-7	-33
Profit before tax		**319**	**263**
Tax		1	15
Net profit	3	**320**	**278**

Balance sheet at December 31 of Haldor Topsøe Holding A/S
Assets

	Note	2017	2016
		DKK mill.	DKK mill.
Investments in group enterprises		5.708	5.646
Investments	4	**5.708**	**5.646**
Non-current assets		**5.708**	**5.646**
Receivables from Group Enterprises		32	0
Corporate income tax		38	70
Other receivables		0	2
Receivables		**70**	**72**
Cash		**1**	**1**
Current assets		**71**	**73**
Assets		**5.779**	**5.719**

Balance sheet at December 31 of Haldor Topsøe Holding A/S
Equity and liabilities

	Note	2017	2016
		DKK mill.	DKK mill.
Share capital	5	2.200	2.200
Share premium		335	335
Retained earnings		2.668	2.548
Proposed dividend		200	99
Equity		**5.403**	**5.182**
Payables to group enterprises		371	535
Other payables	6	5	2
Current liabilities		**376**	**537**
Liabilities		**376**	**537**
Equity and liabilities		**5.779**	**5.719**
Suretyship	7		
Fee to auditors appointed at the general meeting	8		
Contractual liabilities	9		
Related parties	10		
Subsequent events	11		

Statement of changes in equity of Haldor Topsøe Holding A/S

	Share capital	Share premium	Retained earnings	Proposed dividend	Total
	DKK mill.	DKK mill.	DKK mill.	DKK mill.	DKK mill.
Equity at January 1, 2017	2.200	335	2.548	99	5.182
Net profit	0	0	120	0	120
Net profit and income and expenses recognized under equity	**0**	**0**	**120**	**0**	**120**
Dividend paid	0	0	0	-99	-99
Dividend proposed	0	0	0	200	200
Transactions with owners	**0**	**0**	**0**	**101**	**101**
Equity at December 31, 2017	**2.200**	**335**	**2.668**	**200**	**5.403**

Cash flow statement of Haldor Topsøe Holding A/S

	2017 DKK mill.	2016 DKK mill.
Net profit	320	278
Adjustment for non-cash items	-329	-283
Change in working capital	-92	18
Cash flow from operating activities before financial items and tax	-101	13
Interest received etc.	1	1
Interest paid etc.	-7	-33
Cash flow from ordinary activities	-107	-19
Corporate tax paid	34	-52
Cash flow from operating activities	**-73**	**-71**
Investment in group companies	-62	-78
Dividend received	334	300
Cash flow from investing activities	**272**	**222**
Reduction of long term loan	-100	-100
Dividend paid	-99	-65
Cash flow from financing activities	**-199**	**-165**
Change in cash and cash equivalents	**0**	**-14**
Cash and cash equivalents at January 1	1	15
Cash and cash equivalents at December 31	1	1
Change in cash and cash equivalents	**0**	**-14**

Notes to the annual report of Haldor Topsøe Holding A/S

1 Staff expenses

	2017	2016
	DKK mio.	DKK mio.
Wages and salaries	3	2
Total staff expenses	**3**	**2**
Total remuneration to Executive Management and Board of Directors	**3**	**2**
Average number of employees	2	1

2 Financial expenses

	2017	2016
	DKK mio.	DKK mio.
Interest payments to group enterprises	2	5
Other interest	2	3
Loss on derivative financial instruments	3	25
Total financial expenses	**7**	**33**

3 Proposed distribution of profit

	2017	2016
	DKK mio.	DKK mio.
Proposed dividend	200	99
Retained earnings	120	179
Total proposed distribution of profit	**320**	**278**

Notes to the annual report of Haldor Topsøe Holding A/S

4 Investments	Investments in group enterprises
	DKK mio.
Cost at January, 1 2017	5.646
Additions during the year	62
Cost at December, 31 2017	5.708
Carrying amount at December, 31 2017	**5.708**

Investments in group enterprises are specified as follows:

Name	Registered office	Vote and ownership interest
Haldor Topsøe A/S	Lyngby-Taarbæk, Denmark	100,00%
Frydenlund Ejendomsselskab ApS	Rudersdal, Denmark	100,00%
IGM Biosciences A/S	Lyngby-Taarbæk, Denmark	87,07%

Investments in Haldor Topsøe A/S
Haldor Topsøe A/S is a world leader in catalysis. They supply high-performance catalysts, proprietary technologies, process design, engineering, and services for use in the chemical and oil and gas industries. The investment is measured at cost.

Investments in Frydenlund Ejendomsselskab ApS
Frydenlund Ejendomsselskab ApS owns and operates the property Frydenlund manor house, including the operation of the main building, orchard and tenanted properties. The investment is measured at cost.

Investments in IGM Biosciences A/S
IGM Biosciences A/S was founded i 2017 by a share-for-share exchange of the shares in IGM Biosciences Inc. making IGM Biosciences A/S the holding company. IGM Biosciences Inc. carries out protein engineering of antibodies. The investment is measured at cost.

5 Share capital	A shares	B shares	Total
	Number of shares of DKK 1.000	Number of shares of DKK 1.000	Number of shares of DKK 1.000
Total share capital	200.000	2.000.000	2.200.000

The share capital constitutes nominally DKK 2,200,000 distributed on shares of DKK 1,000 or multiple of this.

Notes to the annual report of Haldor Topsøe Holding A/S

6 Other payables

	2017	2016
	DKK mill.	DKK mill.
Fees to advisors	3	0
Other	2	2
Total other payables	**5**	**2**

At the balance sheet date, the Group had a non-current unused loan commitment of DKK 250 million (2016: DKK 350 million) expiring in 2020.

7 Suretyship

Suretyship of DKK 673 million has been provided as security of certain liabilities in a group enterprise (2016: DKK 739 million).

8 Fee to auditors appointed at the general meeting

Please refer to the note in the consolidated financial statements.

9 Contractual liabilities

Through joint taxation scheme with Danish group enterprises, the company is jointly and severally liable for taxes etc. payable in Denmark.

10 Related parties

No transactions have been carried out with the Board of Directors, Executive Management, key management staff, shareholders, group enterprises or other related parties which have not been under normal market conditions.

11 Subsequent events

No events materially affecting the Company's financial position at December 31, 2017 have occured after the balance sheet date.