Haldor Topsøe Holding A/S – Haldor Topsøes Allé 1
2800 Kgs. Lyngby - Denmark

HALDOR TOPSØE

Annual Report for 2018

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 28, 2019

Lene Ramm

Chair of the meeting,
Lene Ramm

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HALDOR TOPSØE

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Letter from the Chairman

2018 was a very eventful and positive year for Haldor Topsøe Holding A/S.

Haldor Topsoe

Haldor Topsoe Group delivered record results in 2018. Order intake during the year was significantly higher than in 2017. Catalyst revenue improved in 2018 in both core business areas, the chemical and refining industries. Growth in the chemicals area was also driven by revenue from a number of large technology projects that were successfully completed in 2018.

Haldor Topsoe Group remains committed to helping our customers to use fossil resources in the most responsible, environmentally friendly, and efficient manner while at the same time developing and commercialising sustainable solutions to the market. This we achieve by staying committed to our unique R&D platform and focus.

2018 has been a year of significant growth and many positive developments. However, the year was also characterized by geopolitical and macroeconomic uncertainty. This seems to continue into 2019 which despite the overall positive view on the long term business opportunities for the company is of some concern.

In 2018, the Topsøe family – as sole owners of Haldor Topsoe A/S through Haldor Topsøe Holding A/S – took the very important decision to start a process of searching for a suitable financial partner to buy a significant minority stake in Haldor Topsoe A/S with a long term intention to list the company's shares on the stock exchange. In March 2019, the process was concluded as an agreement was signed with the global investment company Temasek. We see this as a true milestone that will enable the company to accelerate growth initiatives – both organically and through acquisitions – while at the same time securing the long term control of Haldor Topsoe by the Topsøe family.

IGM Biosciences

2018 proved to be another busy year with significant progress and a consolidation of IGM Biosciences as the undisputed leader in IgM antibodies. Technological and clininal progress is very positive and several projects are getting close to an IND filing of which we expect the first in 2019. IGM Biosciences is accelerating its development on all fronts which led to a number of key recruitments. This is expected to continue in 2019 and we expect to further explore the strategic options and funding opportunities for the company.

Frydenlund Ejendomsselskab

The manor house renovation project was completed with great success and now serves as a unique conference center and VIP hosting venue for customers of Haldor Topsoe A/S. The orchard changed management during the year and a variety of new projects have been initiated to bring the orchard back to profitability while preserving the historical atmosphere.

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The employees in our companies have all had to face significant challenges in 2018 which makes it even more impressive to reach such positive results both operationally and strategically. On behalf of the Topsøe family, I want to extend a humble and sincere thank you to all employees.

Five-year summary

DKK million

Income statement 1)	2018	2017	2016	2015 3)	2014 3)
Revenue	5,619	5,013	5,150	5,785	5,685
Gross profit	2,503	2,338	2,565	2,452	2,521
EBITDA	808	772	1,006	748	898
Depreciation and amortization	-258	-259	-262	-293	-366
EBIT	550	513	744	455	532
Net financial expenses etc.	-29	-74	-56	-73	-31
Profit from continuing operations	339	314	462	251	381
Loss from discontinuing operations	-16	-422	-53	-	-
Net profit	323	-108	409	251	381
Balance sheet					
Balance sheet total	9,178	9,331	10,136	10,075	9,225
Equity (excl. minority)	4,932	4,782	5,218	4,808	4,534
Net working capital	243	658	574	438	485
Net indebtedness	576	975	1,429	1,524	1,419
Cash flow					
Cash flow from operating activities	830	29	663	716	614
- Of which continuing operations	846	313	700	-	-
Cash flow from investing activities	-242	681	-404	-701	-585
- Of which invest. in property, plant and equip.	-268	-221	-410	-651	-600
Cash flow from financing activities	-519	-351	-295	63	18
Change in cash and cash equivalents	71	319	-30	95	47
Employees					
Average number of employees	2,283	2,555	2,565	2,700	2,703
Ratios in %					
Gross margin 2)	44.5	46.6	49.8	42.4	44.3
EBITDA margin 2)	14.4	15.4	19.5	12.9	15.8
EBIT margin 2)	9.8	10.2	14.4	7.9	9.4
Return on invested capital (ROIC) 2)	9.1	7.7	10.8	7.0	8.7
Equity ratio	53.7	51.2	51.5	47.7	49.1
Return on equity	6.7	-2.2	8.2	5.4	8.8

1) Income statements for 2016-2018 consist of continuing operations with discontinuing operations in a separate line.

2) Ratios for 2016-2018 apply to continuing operations.

3) Figures for 2014-2015 have not been restated with sale of the emission business in 2017. Figures for 2014-2015 are therefore not comparable to figures for 2016-2018, where divested business is presented as discontinuing operations.

Financial report 2018

Profit from continuing operations amounted to DKK 339 million in 2018 (2017: DKK 314 million). The increase in profit was mainly due to a significant growth in catalyst revenue in 2018. Catalyst revenue for the Chemical and Refinery business units increased by 21% and 15%, respectively. Technology revenue was positively affected by the successful close-down of many projects in Iran before the re-instatement of US sanctions on November 4, 2018, including a significant one-time effect of restarted Iranian contracts that impacted revenue and EBIT by DKK 91 million.

2018 was impacted by the finalization of the divestment of the emissions control business areas concluded on November 30, 2017. The losses relating to the discontinuing activities within the emissions control business areas amounted to DKK 16 million - mainly related to adjustment of net assets sold (2017: DKK 422 million).

Net profit (after loss on discontinuing operations) increased significantly and showed a profit of DKK 323 million for 2018 (2017: DKK -108 million).

EBIT from continuing operations increased in 2018 by 7% to DKK 550 million corresponding to an EBIT margin of 9.8% (2017: 10.2%).

R&D expenses were maintained at a high level with a R&D-to-revenue-ratio of 11.4% (2017: 10.7%).

Income statement

Revenue

Revenue from continuing operations increased by 12% to DKK 5,619 million (2017: DKK 5,013 million). Exchange rate developments from 2017 to 2018 had a negative impact of 1,2% on revenue. Catalyst revenue increased by 13% and technology revenue increased by 9%.

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

Average gross margins remained stable in 2018 at 44.5% compared to 46.6% in 2017.

EBITDA from continuing operations increased by 5% to DKK 808 million, corresponding to an EBITDA margin of 14.4% (2017: 15.4%).

Staff expenses amounted to DKK 1,695 million, which is an increase of 8% compared with 2017 (mainly due to redundancy costs in connection with layoffs in August 2018 and increased bonus accrual). Raw material costs, including change in inventories, increased by 18% to DKK 1,536 million, driven by increased catalyst sales volumn. Purchased equipment for contract work increased by 5% to DKK 606 million due to increased activity in the technology business. Other external expenses increased by 33% to DKK 1,082 million. Adjusted for cost of servicing discontinued businesses and associated other revenue, the increase was 22%. The increase was mainly due to increased loss on disposals of fixed assets (e.g. expired patents), external assistance, agent commission, rental and leasing, repair and maintenance.

Earnings before interest and tax (EBIT)

EBIT from continuing operations increased by 7% to DKK 550 million corresponding to an EBIT margin of 9.8% (2017: 10.2%). Depreciation amounted to DKK 258 million, which is on par with 2017.

Net profit

Net profit increased to DKK 323 million (2017: DKK -108 million).

The increase in the net profit is mainly explained by:

- An increase in EBIT to DKK 550 million in 2018 (2017: DKK 513 million).

- A reduced loss on sale of discontinuing operations of DKK -16 million in 2018 (2017: DKK -422).
- Reduced net interest expenses and positive exchange adjustments, in total DKK -35 million (2017: DKK -68 million).
- Partly set-off by an increase in tax to DKK 182 million. (2017: DKK 125 million)

Cash flow and balance sheet

Cash flows from operating activities

Cash flows from continuing operations amounted to DKK 846 million (2017: DKK 313 million). Net working capital decreased by DKK 366 million and made up 4.3% of revenue (2017: 13.1%), excluding warranty provisions. The significant improvement has been driven by collection of accounts receivables, as well as improved inventory turnover in 2018.

CAPEX

CAPEX increased by 35% and amounted to DKK 393 million (2017: DKK 292 million). This includes, e.g., equity investments in Ramagundam Fertilizers and Chemicals Ltd., India, as well as GTLA Holding LP, US. Investments in intangible assets, property, plant, and equipment amounted to DKK 288 million in 2018, an increase of 14% compared to 2017.

Net indebtedness

Net indebtedness decreased by 41% and amounted to DKK 576 million (2017: DKK 975 million).

The interest bearing debt at the end of 2018 was DKK 1,548 million (2017: DKK 1,876 million). A DKK 500 million tranche of corporate bonds expired in April 2018. This was refinanced by a new loan in European Investment Bank. The last remaining tranche of corporate bonds (DKK 500 million) will expire in April 2020.

Return on invested capital (ROIC)

ROIC amounted to 9% (2017: 8%) driven by the increase in EBIT as well as asset reduction.

Order backlog

The order backlog amounted to DKK 3,796 million at the end of 2018 (an increase of DKK 311 million compared to the end of 2017 including Iranian contracts). This was mainly due to a high inflow of catalyst orders. Excluding Iranian contracts, the increase in order backlog from 2017 to 2018 was DKK 1,079 million.

At the end of 2018, the catalyst order book was at a satisfactory level compared to previous years.

Outlook for 2019

Haldor Topsoe Group

Revenue

Revenue is expected to be in the range of DKK 5,400-5,700 million in 2019. The revenue development will depend on the level of new catalyst and technology orders obtained during 2019 and the progress of existing technology orders. In some markets, project development is impacted by the project owners' ability to finance projects. Exchange rate developments, most notably the DKK/USD exchange rate, will impact revenue. Revenue development is negatively impacted by the close-down of all Iranian commercial activities on November 4, 2018.

EBIT

EBIT margin is expected to be in the range of 11-13% in 2019. In 2019, it is expected to maintain a high level of R&D and business development activities at approx. 9% of revenue.

Cash flow and funding

Operating cash flow (excluding working capital development) is expected to be at the same level in 2019 compared to 2018. Excluding warranty provisions, working capital is expected to be below 10% of revenue on average. 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.

Haldor Topsoe Group intends to maintain a credit profile that will ensure compliance with all bank covenants at any time. 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 further progress its proprietary product pipeline and hopes to bring its first product candidate into the clinic in 2019. We have seen significant interest from the life sciences community in the potential of the IgM technology and will leverage this to attract the best talent as we build out the organization in 2019 and accelerate developments. The strong interest and positioning of IGM as the number one IgM antibody technology platform company has enabled Haldor Topsøe Holding A/S to continue its funding of the activities in 2019.

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 where feasible.

The Topsoe Code of Conduct has been implemented throughout the organization, including policies and business processes related to anti-corruption, anti-money laundering, competition law, and other compliance issues. The Code of Conduct is an example of a global mitigating action that is intended to prevent a number of potential risks related to business ethics and legal issues. There is a global compliance hotline (whistleblower solution) which 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. We see no indication of disruption in our core markets that will reduce demand or create substitute products, but we obviously cannot rule out such disruption in the future. On most products we compete on quality, wherefore significant resources are allocated to R&D to be able to continue producing high-performing products as requested by our customers. A very significant part of our technical and 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, and the level of markets, impacted by the shift towards alternative energy sources. In the Sustainable Business Unit, we seek to develop new sustainable solutions which can cater for future demand. For new products, processes, and services that are being developed, our sales depend on market demand.

Our product demand is driven by global macro trends, such as enhancing food production, increasing energy efficiency, and protecting the environment. We sell across the globe.

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. We will defend and prosecute our IP rights in court if deemed necessary.

Cyber security

As a knowledge based company, the Group is exposed to the risk of theft of confidential information. To mitigate the risk of the Group confidential information being disclosed through theft or fraud, an Information Security Roadmap has been established, focusing on identifying and adequately mitigating potential risk areas. As the risk profile is developing continuously, and new risks areas can evolve, the Group is continuously measuring the efforts within this area and seek to mitigate new potential threats.

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 and which can potentially influence the upstream supply chain. The single source raw materials and suppliers are continuously assessed and we work actively to mitigate and 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 – e.g. due to damage to the production facilities (caused by fire, flooding, wind storm, etc.), equipment failure or cyber attacks – 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 uses and produces chemicals. In our portfolio, we have hazardous chemicals that could potentially pose a risk if not handled with care. It is of high priority that all our chemical operations are fully compliant with all chemical and environmental regulations in all jurisdictions where we operate or sell our products. We have processes in place to continuous monitoring of global chemical regulations in order to identify any relevant regulatory changes that might affect our products or operations.

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 early stage biotech companies the risks involved in turning science and early development work into commercial products is substantial. This also applies to IGM Biosciences, a preclinical stage company which has yet to demonstrate the superiority of its technology in a clinical setting. There is no guarantee that it will be successful in commercializing its products or attract adequate funding from financial or commercial partners to finance the costs of drug development and marketing. IGM Biosciences will be very selective with the drugs it brings into the clinic to maximise the likelihood of success and is rigorously pursuing IP protection of its technology to ensure the ability to market its products should they be approved by the FDA

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 embargoes, sanctions, trade barriers, 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 cancellation of existing political sanctions could potentially have a significant impact on our business. Our regulatory monitoring and business integrated compliance measures ensure that the Group is compliant with applicable international sanctions at all times.

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 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 USD/DKK exchange rate is assessed to have a positive EBIT effect of DKK 5-10 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 increase interest expenses by DKK 4 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. Loss allowances are assessed on an ongoing basis.

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 who, in the opinion of Management, have satisfactory financial strength (based on credit rating from a recognized international credit rating agency where feasible).

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. The target is to maintain a minimum of DKK 500 million in unused committed revolving credit facilities at any time.

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 company's operations and capital needs for acquisitions and other business activities. Covenants include equity ratio (min. 20%), interest coverage (min. 5), and leverage (net debt/EBITDA) requirements (max. 3,5).

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 its best endeavors to comply with the tax legislation in the countries in which it operates, 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.

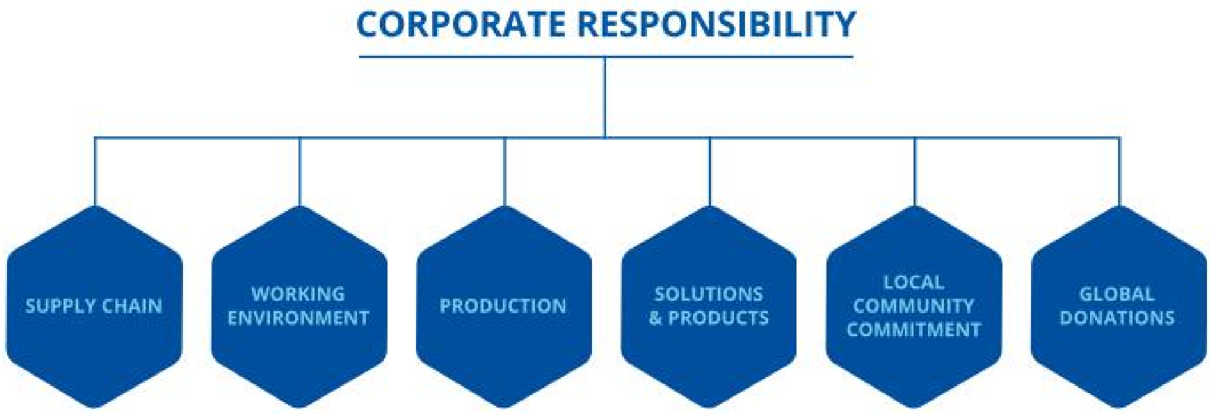
Sustainable business

Haldor Topsøe Holding Group continuously strives to create sustainable solutions that make a difference in the world of today – and tomorrow. 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. It serves as the foundation for how we do business in a complex, international business environment with cultural, political, and legal challenges.

A corporate responsibility framework has been instituted that allows management to drive progress on corporate social responsibility and sustainability across the global organization. The framework provides transparency of environmental, social, and governance efforts within our business.

Read more about Haldor Topsøe Holding A/S´ progress on
www.topsoe.com/holdingsustainable



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 2018 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, 2018 of the Group and the parent company and of the results and cash flows of the Group and parent company operations for 2018 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 27, 2019

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, 2018 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, 2018 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, 2018 and of the results of the Parent Company's operations and cash flows for the financial year January 1 to December 31, 2018 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, 2018, 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 27, 2019

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, except from what is mentioned below.

New standards, amendments and interpretations adopted by Haldor Topsøe Holding A/S

The following standards have been implemented by Haldor Topsøe Holding A/S for the financial year 2018:

- IFRS 9 "Financial instruments: Classification and measurement of financial assets and financial liabilities". The standard contains requirements for the classification and measurement of financial assets and liabilities, impairment methodology and general hedging accounting. IFRS 9 has had an insignificant impact on the consolidated financial statements. The implementation has resulted in additional disclosures. The basis for calculating the provision for bad debt has been changed from incurred losses to expected losses. However, this has had only insignificant impact on the provision and thereby the consolidated financial statements. The standard has been implemented retrospectively using January 1, 2018 as the date of initial application. The Group has made use of the relief from restating the comparative figures. Upon initial application of IFRS 9, "Other securities and investments" previously classified as available for sale have been designated at fair value through other comprehensive income. Please refer to note 15 for further information.

- IFRS 15 "Revenue from contracts with customers": The standard establishes a single framework for revenue recognition. The implementation of IFRS 15 has had an insignificant impact on the consolidated financial statements. The implementation has resulted in additional disclosures. The standard was implemented using the modified retrospective method. The Group has made use of the relief from restating comparative figures and has applied IFRS 15 only to contracts that were not completed as of January 1, 2018.

- IFRIC 22 "Foreign currency translation 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 Group has assessed the impact of the new interpretation and concluded that it has no significant impact on the consolidated financial statements.

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 A/S will adopt the standards when they become effective:

- IFRS 9 "Financial instruments": A minor amendment concerning the classification of receivables in situations where a borrower has prepayment option and where such a prepayment has negative consequences for the borrower. The receivables 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 the financial year beginning on

January 1, 2019. Haldor Topsøe Holding A/S 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 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. In the income statement, the lease expense is replaced by depreciation of the asset and an interest expense for the financial liability. 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 implemented on January 1, 2019, using the modified retrospective approach, where the lease liability is determined on that date and the right-of-use assets are measured at an amount equal to the lease liability. Comparative figures are not restated.

  Haldor Topsøe Holding A/S has assessed the impact of the new standard once implemented: Balance sheets will gross up by approximately DKK 524 million for right-of-use assets and DKK 525 million for lease liabilities, measured at the present value of the remaining lease payments discounted using the incremental borrowing rate per country. The discrepancy between right-of-use assets and lease liabilities is the adjustment of the prepaid lease payments before the date of initial application. The income statement will not be significantly impacted. However, the related key ratios in the consolidated financial statements, such as EBITDA and ROIC, will be impacted.

  Furthermore, the implementation of IFRS 16 will impact disclosures.

- 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. Haldor Topsøe Holding A/S has assessed that the standard will not have a significant impact on the consolidated financial statements.

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

- IAS 19 “Employee Benefits”: The amendment consists of a minor clarification of IAS 19 regarding remeasurement of defined benefit plans. When pension obligations are remeasured due to an amendment, a curtailment or termination of a pension plan, service costs and net interest for the period after the remeasurement must be determined based on the assumptions used for the remeasurement.
  - The net interest for the remaining period is calculated on the basis of the remeasured defined benefit liability or asset.

o However, the service costs and net interest for the financial period preceding such amendment, curtailment or termination of a pension plan are not affected by the remeasurement.

The amendment will be effective for financial years beginning on January 1, 2019.

- IAS 28 ”Investments in associates and joint ventures”: A clarification that enterprises are to apply IFRS 9, including the requirements for impairment of financial assets, on recognition of long-term investments even though such receivables are considered part of the net investment in the associate or joint ventures under IAS 21. The amendment will be effective for financial years beginning on January 1, 2019.

- Annual improvements (2015-2017): Include three minor clarifications:
  - o IAS 12 ”Income taxes”: Income tax consequences of dividends should be recognized in profit or loss, see IAS 12.
  - o IAS 23 ”Borrowing costs”: Borrowing costs incurred on specific-purpose borrowing may subsequently change into borrowing costs on general borrowing, see IAS 23.
  - o 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 A/S.

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 measured at fair value through other comprehensive income
- 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.

Business combinations

On acquisition of new enterprises, the purchase method is applied. Cost is measured at fair value of the consideration. Identifiable assets and liabilities and contingent liabilities acquired in connection with the business combination are initially measured at fair value at the date of acquisition. Any positive differences between cost and fair value of the acquired identifiable net assets are recognized as goodwill. Goodwill is adjusted until 12 months after the date of acquisition if it turns out that the identifiable assets, liabilities and contingent liabilities have another fair value than determined at the date of acquisition.

Newly acquired enterprises are recognized from the date of acquisition and comparatives are not restated.

In stepwise acquisitions, value adjustments of previously recognized investments are recognized in the income statement. The effect of the purchase of non-controlling interests without change of control is included directly in equity.

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 on initial recognition. 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 through comprehensive income under reserve for value adjustment of hedging instruments. In addition, the following currency translation differences are recognized through comprehensive income 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 fair value 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 through comprehensive income. Amounts recognized through comprehensive income 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 sale or disposal.

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 discontinuing operation is a component of an entity that has been disposed of or is classified as held for sale and which represents a separate major line of business or geographical area of operations or is part of a single coordinated plan to dispose of such a line of business or area of operations. The results of discontinuing 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 control has been transferred to the customer, i.e. when goods are delivered. 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 of the asset or 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 other comprehensive income transactions is recognized through other comprehensive income.

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 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 venture" 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.

Fair value adjustments are recognized through other comprehensive income under the "Reserve for financial assets measured at fair value".

Securities in the form of loans are measured in the balance sheet at amortized cost less expected credit loss.

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 refer to "Key accounting estimates and judgements" for information about write-downs.

Receivables
Receivables are measured in the balance sheet at amortized cost less expected credit loss.

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. This method is found to be the best and most prudent method to reflect the progress. 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 using 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 financial assets measured at fair value comprises the accumulated net change in the fair value of financial assets classified as financial assets measured at fair value through other comprehensive income.

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, unless they relate to items recognized either in other comprehensive income or directly in shareholders’ equity.

Provisions

Provisions are recognized when – in consequence of a previous event – the Group has a legal or constructive obligation and it is probable that an outflow of economic benefits will be required 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 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 Recommendations & Financial Ratios produced by the Danish Finance Society and CFA Society Denmark.

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 appear 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. Please refer to note 9 for further information.

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. Please refer to note 10 for further information.

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. Please refer to note 11 for further information.

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. Please refer to note 12 for further information.

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. Please refer to note 21 for further information.

Contingent liabilities and lawsuits

As part of the Group's business, Haldor Topsøe Holding A/S may become party to a lawsuit and/or dispute. In such 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 Haldor Topsøe Holding A/S.

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	2018 DKK mio.	2017 DKK mio.
Continuing operations			
Revenue	1	**5.619**	**5.013**
Change in inventories of finished goods and intermediate products		63	-139
Other operating income	2	108	20
Purchased equipment for contract work		-606	-578
Raw materials and consumables used		-1.599	-1.162
Other external expenses		-1.082	-816
Gross profit		**2.503**	**2.338**
Staff expenses	3	-1.695	-1.566
EBITDA		**808**	**772**
Depreciation, amortization and impairment losses	4	-258	-259
EBIT		**550**	**513**
Result of investments in joint venture	5	-10	-30
Financial income	6	72	71
Financial expenses	7	-91	-115
Profit before tax		**521**	**439**
Tax	8	-182	-125
Profit from continuing operations		**339**	**314**
Loss from discontinuing operations	38	-16	-422
Net profit		**323**	**-108**
Profit attributable to:			
Owners of the parent		335	-98
Non-controlling interests		-12	-10
Net profit		**323**	**-108**

Consolidated statement of comprehensive income

	Note	2018 DKK mio.	2017 DKK mio.
Net profit		**323**	**-108**
Foreign currency translation adjustment		53	-194
Recycling currency translation adjustments from discontinuing operations	38	0	24
Derivative financial instruments used for hedging of future cash flows	17	-3	12
Realized derivative financial instruments transferred to financial income/expense	17	-6	1
Tax on this	17	1	-3
Fair value adjustment of financial assets	17	-40	-26
Tax on this	17	1	-4
Other		-3	0
Revaluation of land and buildings	17	30	17
Tax on this	17	-7	0
Items that may be reclassified to the income statement		**26**	**-173**
Actuarial adjustments on pension obligations		-2	13
Tax on this		0	-5
Items that will not be reclassified to the income statement		**-2**	**8**
Other comprehensive income		**24**	**-165**
Total comprehensive income		**347**	**-273**
Attributable to:			
Owners of the parent company		358	-260
Non-controlling interests		-11	-13
Total comprehensive income		**347**	**-273**
Continuing operations		363	149
Discontinuing operations		-16	-422
Total comprehensive income attributed to the owners of the parent company		**347**	**-273**

Consolidated balance sheet at December 31
Assets

	Note	2018	2017
		DKK mio.	DKK mio.
Goodwill		3.387	3.383
Other intangible assets		73	84
Intangible assets under construction		4	0
Intangible assets	9	**3.464**	**3.467**
Land and buildings		860	827
Plant and machinery		740	791
Other fixtures and equipment		237	258
Property, plant and equipment under construction		345	250
Property, plant and equipment	10	**2.182**	**2.126**
Investment in joint venture		0	0
Finance lease receivables		8	0
Other securities and investments		344	316
Other receivables		22	52
Investments	11	**374**	**368**
Non-current assets		**6.020**	**5.961**
Inventories	12	**1.138**	**1.043**
Trade receivables	13	717	995
Contract work in progress	14	187	173
Finance lease receivables	11	1	0
Tax receivables		0	7
Other receivables	15	124	215
Prepayments		19	36
Receivables		**1.048**	**1.426**
Cash		**972**	**901**
Current assets		**3.158**	**3.370**
Assets		**9.178**	**9.331**

Consolidated balance sheet at December 31
Equity and liabilities

	Note	2018	2017
		DKK mio.	DKK mio.
Share capital	16	2.200	2.200
Share premium		335	335
Revaluation reserve	17	67	44
Foreign currency translation reserve	17	62	14
Reserve for value adjustment of hedging instruments	17	-6	2
Reserve for financial assets measured at fair value	17	-170	-131
Retained earnings		2.444	2.318
Equity attributable to the owners of the parent		**4.932**	**4.782**
Non-controlling interests		19	13
Total equity		**4.951**	**4.795**
Pension obligations and similar obligations	19	43	30
Deferred tax	20	381	568
Provisions	21	287	255
Bonds	22	499	499
Mortgage debt	22	57	60
Credit institutions	22	699	575
Lease obligations	22	129	130
Other payables	23	2	3
Non-current liabilities		**2.097**	**2.120**
Bonds	22	0	499
Mortgage debt	22	3	3
Credit institutions	22	161	110
Prepayments from customers	24	418	229
Contract work in progress	14	492	675
Trade payables		408	387
Corporation tax		24	0
Other payables	23	610	512
Deferred income	21	14	1
Current liabilities		**2.130**	**2.416**
Liabilities		**4.227**	**4.536**
Equity and liabilities		**9.178**	**9.331**

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, 2018	2.200	335	-71	2.318	4.782	13	4.795
Net profit	0	0	0	335	335	-12	323
Other comprehensive income	0	0	24	-1	23	1	24
Comprehensive income	**0**	**0**	**24**	**334**	**358**	**-11**	347
Capital increase in subsidiary	0	0	0	0	0	9	9
Change in minority	0	0	0	-8	-8	8	0
Dividend	0	0	0	-200	-200	0	-200
Transactions with owners	**0**	**0**	**0**	**-208**	**-208**	**17**	-191
Equity at December 31, 2018	**2.200**	**335**	**-47**	**2.444**	**4.932**	**19**	**4.951**

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
Capital increase in subsidiaries	0	0	0	-2	-2	4	2
Dividend	0	0	0	-99	-99	0	-99
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 cash flow statement

	Note	2018	2017
		DKK mio.	DKK mio.
Net profit		323	-108
Adjustments for non-cash items	33	485	437
Change in working capital	34	366	-154
Cash flows from operating activities before financial items and tax		1.174	175
Interest received, etc.		56	53
Interest paid, etc.		-91	-132
Cash flows from ordinary activities		1.139	96
Corporation tax paid		-309	-67
Cash flows from operating activities		**830**	**29**
- Of which continuing operations		846	313
Purchase of intangible assets		-20	-31
Sale of intangible assets		45	0
Purchase of property, plant and equipment		-268	-221
Sale of property, plant and equipment		30	0
Purchase of non-current financial assets		-139	-40
Sale of fixed asset investments		60	30
Sale of emissions control business areas		0	919
Dividend received		16	24
Business combination, net cash		34	0
Cash flows from investing activities		**-242**	**681**
Raising of non-current loans		299	0
Repayment of non-current loans		-626	-126
Non-controlling interest's payment of share capital		8	-126
Dividend paid		-200	-99
Cash flows from financing activities		**-519**	**-351**
Change in cash and cash equivalents		**69**	**359**
Cash and cash equivalents at January 1		901	582
Foreign currency translation adjustment		2	-40
Cash and cash equivalents at December 31		**972**	**901**
Cash		972	901
Cash and cash equivalents at December 31		**972**	**901**

Notes to the consolidated statements

List of notes

Notes to the Annual Report of the Haldor Topsøe Holding Group

1 Revenue

The Group's revenue can be divided into two main categories: catalyst sales and technology sales. Catalyst sales comprise the sale of catalysts. Technology sales comprise basic engineering design, license fee and hardware.

Revenue from catalyst sales is recognized when control has been transferred, which typically takes place when goods are delivered. The majority of catalyst sales are paid after delivery with typically 30-60 days of credit, but in certain situations the Group receives prepayments.

Revenue from technology sales is recognized over time according to the percentage-of-completion method based on actual versus forecasted cost. Technology sales are paid in installments during the contract's life time. The Group strives to be cash flow positive on all technology contracts at any time during project execution.

The transaction price of a contract is allocated to performance obligations, e.g. delivered catalyst and delivered technology. Technology is considered to be one performance obligation, since the deliveries must be treated as a whole and not as distinct elements.

	2018	2017
	DKK mio.	DKK mio.
Catalyst	3.853	3.395
Technology	1.766	1.618
Total disaggregation of revenue from contract with customers	**5.619**	**5.013**
Future revenue regarding unsatisfied or partially unsatisfied performance obligations except perfomance obligations due within a year. The majority is realized in 2020.	**472**	**-**
Revenue recognized that was included in contract liability balance at the beginning of the year	**813**	**-**
Revenue recognized from performance obligations satisfied in previous periods	**7**	**-**
Trade receivables	717	995
Contract work in progress	187	173
Contract assets at December 31	**904**	**1.168**
Prepayments from customers	418	229
Contract work in progress	492	675
Contract liabilities at December 31	**910**	**904**

Trade receivables decreased during the year, mainly due to large overdues being paid.

The increase in prepayments from customers mainly relates to prepayments from suspended contracts, part of which were transferred from contract work in progress, liabilities to prepayments, liabilities.

Contract work in progress recognized under liabilities decreased during the year due to progression and finalization a number of technology contracts.

Notes to the Annual Report of the Haldor Topsøe Holding Group

2 Other operating income

Government grants for research and development amounting to DKK 11 million (2017: DKK 8 million) have been recognized in the income statement under "Other operating income".

3 Staff expenses

	2018 DKK mio.	2017 DKK mio.
Wages and salaries	1.427	1.305
Pension – defined contribution plan	137	137
Pension – defined benefit plan	6	8
Other social security contribution	141	138
Total	**1.711**	**1.588**
Capitalisation of work performed on property, plant and equipment	-16	-22
Total staff expenses	**1.695**	**1.566**
Executive Management salary	1	1
Executive Management pension	0	0
Fee to Board of directors	3	1
Total remuneration to Executive Management and Board members	**4**	**2**
Average number of employees	**2.283**	**2.555**
Of which in Denmark	**1.619**	**1.745**

4 Depreciation, amortization and impairment losses

	2018 DKK mio.	2017 DKK mio.
Other intangible assets	20	25
Land and buildings	19	19
Plant and machinery	135	135
Other fixtures and equipment	84	80
Total depreciation, amortization and impairment losses	**258**	**259**

5 Result of investments in joint venture

	2018 DKK mio.	2017 DKK mio.
Share of result in joint venture	-10	-30
Recognition of badwill	-2	0
Fair value adjustment of investment in joint venture	2	0
Total result of investments in joint venture	**-10**	**-30**

Notes to the Annual Report of the Haldor Topsøe Holding Group

6 Financial income

	2018 DKK mio.	2017 DKK mio.
Dividend from other investments	16	24
Interest income	9	7
Gains on derivative financial instruments (currency)	6	0
Foreign currency translation adjustment	40	40
Other financial income	1	0
Total financial income	**72**	**71**

7 Financial expenses

	2018 DKK mio.	2017 DKK mio.
Interest expense	49	53
Loss on derivative financial instruments (interest)	0	1
Loss on derivative financial instruments (currency)	0	2
Foreign currency translation adjustment	42	59
Total financial expenses	**91**	**115**

8 Tax

	2018 DKK mio.	2017 DKK mio.
Current tax for the year	272	102
Change in deferred tax for the year	-105	90
Change in corporate tax rate	0	-22
Adjustments to prior years	12	-3
Total tax	**179**	**167**
Tax on continuing operations	182	125
Tax on discontinuing operations	-3	42
Total tax	**179**	**167**

	2018 %	2017 %
Danish corporate tax rate	22,0	22,0
Non-deductible expenses	2,3	1,9
Income not subject to tax	-0,3	-1,2
Differences in foreign tax rates	4,6	10,3
Adjustments relating to prior years	4,5	-0,1
Change in corporate tax	0,0	-4,9
Other adjustments	2,1	0,6
Effective tax rate	**35,2**	**28,6**

Notes to the Annual Report of the Haldor Topsøe Holding Group

9 Intangible assets

	Goodwill	Other intangible fixed assets	Intangible assets under construction
	DKK mio.	DKK mio.	DKK mio.
Cost at January 1, 2018	3.383	224	0
Foreign currency translation adjustment	4	0	0
Additions during the year	0	17	3
Disposals during the year	0	-45	0
Transfers during the year	0	4	1
Cost at December 31, 2018	3.387	200	4
Amortization and impairment losses at January 1, 2018	0	140	0
Amortization for the year	0	20	0
Reversal of amortization and impairment losses on assets sold and scrapped	0	-33	0
Amortization and impairment losses at December 31, 2018	0	127	0
Carrying amount at December 31, 2018	**3.387**	**73**	**4**

Research and development costs expensed in 2018	638

Notes to the Annual Report of the Haldor Topsøe Holding Group

9 Intangible assets (continued)

	Goodwill	Other intangible fixed assets	Intangible assets under construction
	DKK mio.	DKK mio.	DKK mio.
Cost at January 1, 2017	3.396	230	3
Foreign currency translation adjustment	-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**
Reseach and development costs expensed in 2017			541

The goodwill 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, 2018 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 2019-2023.

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 corresponding to 2017. The growth rate in the terminal period has by Management been estimated to 2% corresponding to 2017.

The Group has evaluated the goodwill related to IGM Biosciences Inc. at December 31, 2018 and found no reason for an impairment adjustment considering the great scientific progress achived by the company in 2018.

Notes to the Annual Report of the Haldor Topsøe Holding Group

10 Property, plant and equipment

	Land and buildings DKK mio.	Plant and machinery DKK mio.	Other fixtures and equipment DKK mio.	Property, plant and equipment under construction DKK mio.
Cost at January 1, 2018	1.062	1.581	744	250
Foreign currency translation adjustment	8	10	-1	6
Additions for the year	14	29	41	184
Disposals for the year	-2	-6	-2	-20
Transfers for the year	0	47	23	-75
Cost at December 31, 2018	1.082	1.661	805	345
Revaluation at January 1, 2018	40	0	0	0
Foreign currency translation adjustment	2	0	0	0
Additions during the year	30	0	0	0
Revaluation at December 31, 2018	72	0	0	0
Depreciation and impairment losses at January 1, 2018	275	790	486	0
Foreign currency translation adjustment	1	2	-1	0
Depreciation for the year	19	135	84	0
Reversal of depreciation and impairment loss on assets sold and scrapped	-1	-6	-1	0
Depreciation and impairment losses at December 31, 2018	294	921	568	0
Carrying amount at December 31, 2018	**860**	**740**	**237**	**345**
Carrying amount at December 31, 2018, under the depreciated cost model	788	740	237	345
Borrowing costs capitalised in 2018				2
Carrying amount of finance lease assets	122	0	0	0

Notes to the Annual Report of the Haldor Topsøe Holding Group

10 Property, plant and equipment (continued)

	Land and buildings DKK mio.	Plant and machinery DKK mio.	Other fixtures and equipment DKK mio.	Property, plant and equipment under construction DKK mio.
Cost at January 1, 2017	1.284	2.307	744	318
Foreign currency translation adjustment	-26	-72	-5	-15
Additions during the year	10	48	68	95
Disposals during the year	-206	-799	-108	-6
Transfers during 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 and impairment loss 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 finance lease assets	125	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 2018.

Notes to the Annual Report of the Haldor Topsøe Holding Group

10 Property, plant and equipment (continued)

	Level 1	Level 2	Level 3
	DKK mio.	DKK mio.	DKK mio.
Office buildings in Denmark	0	0	310
Production plants in Denmark and US	0	0	329
Excess land in US	0	99	0
Distribution of assets stated at fair value at December 31, 2018	**0**	**99**	**639**

	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: 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 700-1,100 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 valutated 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 152,500.

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.

	2018	2017
	DKK mio.	DKK mio.
Fair value of level 3 assets at January 1	635	833
Additions	14	10
Disposals	-1	-167
Included in the income statement as depreciation	-16	-23
Foreign currency translation adjustment	7	-18
Fair value of level 3 assets at December 31	**639**	**635**

Notes to the Annual Report of the Haldor Topsøe Holding Group

11 Investments

	Investment in joint venture	Finance lease receivables	Other securities and investments	Other receivables
	DKK mio.	DKK mio.	DKK mio.	DKK mio.
Cost at January 1, 2018	39	0	444	67
Foreign currency translation adjustment	0	0	-2	2
Additions during the year	0	9	76	11
Disposals during the year	0	0	-2	-52
Transfers during the year	-39	0	0	0
Cost at December 31, 2018	0	9	516	28
Value adjustment at January 1, 2018	-39	0	-128	-15
Net result for the year	-10	0	0	0
Disposals during the year	0	0	-6	0
Value adjustments for the year	27	0	-38	-5
Investments with negative equity transferred to receivables	-14	0	0	14
Transfers during the year	36	0	0	0
Value adjustment at December 31, 2018	0	0	-172	-6
Carrying amount at December 31, 2018	**0**	**9**	**344**	**22**
Of this, less than 1 year		1		

	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, 2018	-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**

Notes to the Annual Report of the Haldor Topsøe Holding Group

11 Investments (continued)

Investments in joint ventures are specified as follows:

Ferrostaal Topsoe Projects GmbH, Essen, Germany
The joint venture Ferrostaal Topsoe Project GmbH was fully acquired during 2018 and is now 100% owned by the Group and fully consolidated in the Group from August 2018. Ferrostaal Topsoe Project GmbH has changed name to Haldor Topsoe Germany GmbH.

Saturn FS Gas Chemicals LLC, Wilmington, Delaware, US
After the Group has obtained 100% ownership of Haldor Topsoe Germany GmbH as mentioned above, the Group became part of the joint venture Saturn FS Gas Chemicals LLC. The Group owns 50% of the joint venture. The investment is measured under the equity method. The negative equity has been offset against receivables from the joint venture.

Other securities and investments are specified as follows:

Karnaphuli Fertilizer Limited, Bangladesh (KAFCO)
The Group holds shares 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 set at 11.4% (2017: 12.0%) after tax. The growth rate in the terminal period has by Management been estimated at 0% (2017: 0%). Based on these criteria, the KAFCO shares have been written down by DKK 37 million (2017: DKK 42 million).

A change in the discount rate of -1% or +1%, respectively, would impact the value by -7% or +8%, respectively. A change in the growth rate in the terminal period of -10% or +10%, respectively, would impact the value by -8% or +7%, respectively.

Chambal Fertilizer and Chemical Ltd., India
The Group has an investment in Chambal Fertilizer and Chemicals Ltd., corresponding to 0.34% of the share capital. During 2018, the Group has sold 30% of the investment. The remaining investment has been sold in the beginning of 2019. The investment is measured at fair value based on listed market value.

GTLA Holding LP, US
The Group has invested in GTLA Holding LP, corresponding to 3% of the share capital. The purpose of the company is to develop a project regarding construction of a gas-to-liquid plant.

Ramagundam Fertilizers and Chemicals Limited, India
The Group has invested in Ramagundam Fertilizers and Chemicals Limited, corresponding to 3.9% of the share capital. The company is constructing a fertilizer plant in India. The Group is obligated to invest an additional amount of up to INR 230 million.

12 Inventories	2018 DKK mio.	2017 DKK mio.
Raw materials and consumables	273	258
Work in progress	135	115
Finished goods	730	670
Inventories at December 31	**1.138**	**1.043**
Cost of sales for the year	2.038	1.832
Impairment losses for the year	46	63
Reversed impairment losses for the year	-34	-46

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

13 **Trade receivables**	2018 DKK mio.	2017 DKK mio.
Trade receivables, gross	739	1.016
Provision for bad debts at January 1	-21	-31
Provision for bad debts for the year	-22	-5
Reversal of bad debts, prior years	21	15
Provision for bad debts at December 31	**-22**	**-21**
Trade receivables	**717**	**995**
Of this, due after more than 1 year	4	8
Realized losses for the year	19	10

Receivables, gross due at December 31 have the following aging:	2018 %	2017 %
Not due	65	51
1-90 days	20	24
91-180 days	4	12
181+ days	11	13

	Gross trade DKK million	Expected %	Loss DKK million
Not due	476	0%	0
1-90 days	150	0%	0
91-180 days	30	0%	0
180-360 days	47	32%	15
360+ days	36	19%	7
Total at December 31, 2018	**739**		**22**

If IFRS 9 had been implemented as at December 31, 2017, the loss allowance would have amounted to DKK 15 million.

14 **Contract work in progress**	2018 DKK mio.	2017 DKK mio.
Selling price of work performed at the balance sheet date	5.911	5.581
Payments received on account	-6.216	-6.083
Contract work in progress at December 31	**-305**	**-502**
Contract work in progress recognized in assets	187	173
Contract work in progress recognized in liabilities	-492	-675
Contract work in progress at December 31	**-305**	**-502**

Notes to the Annual Report of the Haldor Topsøe Holding Group

		2018	2017
15	**Other receivables**	DKK mio.	DKK mio.
	Receivable regarding VAT and tax	76	60
	Fair value of derivative financial instruments	0	23
	Other receivables	48	132
	Other receivables at December 31	**124**	**215**
	Of this, due after more than 1 year	32	41

16 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, 2018	200.000	2.000.000	2.200.000
Share capital at December 31, 2018	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, 2017	200.000	2.000.000	2.200.000
Share capital at December 31, 2017	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.

Notes to the Annual Report of the Haldor Topsøe Holding Group

17 Reserves

	Revaluation reserve	Foreign currency translation reserve	Reserve for value adjustment of hedging instruments	Reserve for financial assets measured at fair value	Total
	DKK mio.	DKK mio.	DKK mio.	DKK mio.	DKK mio.
Reserves at January 1, 2018	44	14	2	-131	-71
Foreign currency translation adjustment	0	52	0	0	52
Derivative financial instruments used for hedging of future cash flows	0	0	-3	0	-3
Realized derivative financial instruments transferred to financial income/expenses	0	0	-6	0	-6
Fair value adjustment of financial assets	0	0	0	-40	-40
Other	0	-4	0	0	-4
Revaluation of land	30	0	0	0	30
Tax	-7	0	1	1	-5
Reserves at December 31, 2018	**67**	**62**	**-6**	**-170**	**-47**

	Revaluation reserve	Foreign currency translation reserve	Reserve for value adjustment of hedging instruments	Reserve for financial assets measured at fair value	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	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

18 Dividend

Proposed dividend constitutes DKK 400 million (2017: DKK 200 million) corresponding to DKK 181.82 (2017: DKK 90.91) per share.

Paid dividend during the year amounts to DKK 200 million regarding 2017 (2017: DKK 99 million) corresponding to DKK 90.91 (2017: DKK 45.00) per share.

19 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 mainly 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. In addition, employees in India and Germany are covered by defined benefit plans.

	2018	2017
	DKK mio.	DKK mio.
Pension costs	4	6
Interest expenses	11	10
Interest income on plan assets	-9	-8
Total pension recognized in staff expenses	**6**	**8**

	2018	2017
	%	%
Applied actuarial assumptions:		
Discount rate	2,00-7,63	3,28
Future pay increases	2,50-9,81	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 7,7-10,9 years (2017: 9,5 years).

	2018	2017
	%	%
US	32	35
International	28	33
Global	3	4
Shares	63	72
US investment grade	16	7
High yield	11	9
Inflation protected	1	1
Other	1	1
Bonds	29	18
Real estate	3	3
Commodities	4	4
Other	1	3
Distribution of plan assets at December 31	**100**	**100**

Notes to the Annual Report of the Haldor Topsøe Holding Group

19 Pension obligations and similar obligations (continued)

	2018	2017
	DKK mio.	DKK mio.
Present value of pension obligations	294	288
Fair value of pension plan assets	-251	-258
Net obligation at December 31	**43**	**30**

	2018	2017
Present value of pension obligations at January 1	288	320
Foreign currency translation adjustment	55	-36
Pension costs	4	6
Interest expenses	11	10
Gain/loss on curtailments	0	-12
Actuarial gains and losses, demographic assumptions	6	-4
Actuarial gains and losses, financial assumptions	-33	25
Pension paid	-37	-21
Present value of pension obligations at December 31	**294**	**288**

	2018	2017
Fair value of pension plan assets at January 1	258	246
Foreign currency translation adjustment	19	-30
Interest on pension assets	9	8
Return on plan assets excl. interest on pension assets	-22	33
Paid by the company	24	22
Pension paid	-37	-21
Fair value of pension plan assets at December 31	**251**	**258**

Expected defined benefit pension payments by the Group in 2019 amount to DKK 34 million.

20 Deferred tax

	2018	2017
	DKK mio.	DKK mio.
Deferred tax at January 1	568	514
Foreign currency translation adjustment	3	-4
Tax on equity items	7	-1
Tax for the year	-197	44
Tax previous years	0	15
Deferred tax at December 31	**381**	**568**

	2018	2017
Intangible assets and property, plant and equipment	159	185
Inventories	12	15
Work in progress	294	386
Provisions	-34	-27
Other	-50	9
Deferred tax at December 31	**381**	**568**
Of this, due after more than 1 year	258	415

Notes to the Annual Report of the Haldor Topsøe Holding Group

21 Provisions

	Warranty provision for engineering projects and catalysts	Waste disposal	Other	Total
	DKK mio.	DKK mio.	DKK mio.	DKK mio.
Provisions at January 1, 2018	205	1	49	255
Reversals during the year	-2	-1	-3	-6
Provisions for the year	26	0	12	38
Provisions at December 31, 2018	**229**	**0**	**58**	**287**
Of this, due after more than 1 year				287

	Warranty provision for engineering projects and catalysts	Waste disposal	Other	Total
	DKK mio.	DKK mio.	DKK mio.	DKK mio.
Provisions at January 1, 2017	198	1	4	203
Reversals during the year	-7	0	0	-7
Provisions for the year	14	0	45	59
Provisions at December 31, 2017	**205**	**1**	**49**	**255**
Of this, due after more than 1 year				255

Warranty provision can be impacted by unexpected quality issues on our catalyst or technology solutions, e.g. on new technologies.

Notes to the Annual Report of the Haldor Topsøe Holding Group

		2018	2017
		DKK mio.	DKK mio.
22	**Non-current liabilities**		
	Bonds		
	After 5 years	0	0
	Between 1 and 5 years	499	499
	More than 1 year	499	499
	Less than 1 year	0	499
	Bonds at December 31	**499**	**998**
	Mortgage debt		
	After 5 years	43	46
	Between 1 and 5 years	14	14
	More than 1 year	57	60
	Less than 1 year	3	3
	Mortgage at December 31	**60**	**63**
	Credit institutions		
	After 5 years	158	93
	Between 1 and 5 years	541	482
	More than 1 year	699	575
	Less than 1 year	161	110
	Credit institutions at December 31	**860**	**685**
	Lease obligations		
	After 5 years	124	126
	Between 1 and 5 years	5	4
	More than 1 year	129	130
	Less than 1 year	0	0
	Lease obligations at December 31	**129**	**130**
	Deferred income		
	After 5 years	0	0
	Between 1 and 5 years	0	0
	More than 1 year	0	0
	Less than 1 year	14	1
	Deferred income at December 31	**14**	**1**

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.

	2018	2017
Interest bearing debt at January 1	1.876	2.011
Foreign currency translation adjustment	-1	-9
Raising loans	299	0
Installments	-626	-126
Interest bearing debt at December 31	**1.548**	**1.876**

Notes to the Annual Report of the Haldor Topsøe Holding Group

	2018 DKK mio.	2017 DKK mio.
23 Other payables		
Staff-related items	336	272
Fair value of derivative financial instruments	5	3
Tax-related items	4	4
Other payables	267	236
Other payables at December 31	**612**	**515**
More than 1 year	2	3
Less than 1 year	610	512
Other payables at December 31	**612**	**515**

	2018 DKK mio.	2017 DKK mio.
24 Prepayments from customers		
Prepayments related to sale of goods	418	229
Prepayments from customers at December 31	**418**	**229**

	2018 DKK mio.	2017 DKK mio.
25 Assets provided as security		
Carrying amount of non-current assets (land and buildings) provided as security	100	271
Remaining balance of loans secured by non-current assets	61	64
Nominal value of the loans (real estate deeds and owners' mortgage deeds)	65	73
Remaining balance of loan secured by all assets of Haldor Topsoe Inc.	0	12

Assets are provided as security for mortgage debt, and for 2017 also 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.

	2018 DKK mio.	2017 DKK mio.
26 Guarantees		
Guarantees given by banks and credit insurance institutions on the Group's behalf for contract work, etc.	1.040	735
Guarantees issued at December 31	**1.040**	**735**
Less than 1 year	507	292
Between 1 and 5 years	505	413
After 5 years	28	30
Guarantees issued at December 31	**1.040**	**735**

Notes to the Annual Report of the Haldor Topsøe Holding Group

27 Contractual obligations

	2018	2017
	DKK mio.	DKK mio.
Less than 1 year	103	93
Between 1 and 5 years	290	235
After 5 years	333	387
Contractual obligations regarding leases at December 31	**726**	**715**
Payments for the year recognized as operating lease expenses	105	101

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

The Group is obligated to invest an additional DKK 29 million in companies included under "Other investments".

28 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.

29 Fee to auditors appointed at the general meeting

	2018	2017
	DKK mio.	DKK mio.
Statutory audit fee	2	3
Other assurance statements	1	0
Tax assistance	2	3
Other assistance	8	4
Total fee to auditors appointed at the general meeting	**13**	**10**

30 Related parties

Remuneration to Executive Committee and Board of Directors, please refer to note 3.

Intercompany transactions have been eliminated in the consolidated financial statements.

Notes to the Annual Report of the Haldor Topsøe Holding Group

31 Derivative financial instruments

	Contract amount 2018	Fair value 2018	Contract amount 2017	Fair value 2017
	DKK mio.	DKK mio.	DKK mio.	DKK mio.
Sale of KWD (exchange rate 21.621), matures in 2018	0	0	193	11
Forward exchange contracts at December 31	**0**	**0**	**193**	**11**

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. The fair value of the contracts is recognized in the balance sheet through other comprehensive income. The Group thus applies the rules on hedge accounting.

	Contract amount 2018	Fair value 2018	Contract amount 2017	Fair value 2017
	DKK mio.	DKK mio.	DKK mio.	DKK mio.
EUR interest rate swap (4.62%), matures on December 31, 2021	24	-2	32	-3
Interest swap at December 31	**24**	**-2**	**32**	**-3**

The Group uses interest rate swaps to hedge against changes in interest rate levels and thus 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 2018	Fair value 2018	Contract amount 2017	Fair value 2017
	DKK mio.	DKK mio.	DKK mio.	DKK mio.
Aggregate amount of commodity swaps within metals, matures in 2020	5	0	0	0
Aggregate amount of commodity swaps within metals, matures in 2019	23	-3	3	0
Aggregate amount of commodity swaps within metals, matures in 2018	0	0	45	12
Commodity swaps at December 31	**28**	**-3**	**48**	**12**

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 depends 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 clauses. In addition, the Group uses financial hedging when quoting fixed contract prices.

Notes to the Annual Report of the Haldor Topsøe Holding Group

32 Financial assets and liabilities

	2018 DKK mio.	2017 DKK mio.
Other securities and investments	344	316
Trade receivables	717	995
Other financial receivables	146	267
Cash	972	901
Financial assets at December 31	**2.179**	**2.479**
Bonds, mortgage debt and debt to credit institutions	1.419	1.746
Lease obligations	129	130
Trade payables	408	387
Other financial liabilities	612	515
Financial liabilities at December 31	**2.568**	**2.778**
Financial assets measured at fair value through other comprehensive income	344	316
Financial assets measured at amortized cost	1.835	2.140
Derivative financial instruments measured at fair value	0	23
Classification of financial assets at December 31	**2.179**	**2.479**
Financial liabilities measured at amortized cost	2.563	2.775
Derivative financial instruments measured at fair value	5	3
Classification of financial liabilities at December 31	**2.568**	**2.778**

Notes to the Annual Report of the Haldor Topsøe Holding Group

32 Financial assets and liabilities (continued)

	2018	2017
	DKK mio.	DKK mio.
Bonds, mortgage debt and debt to credit institutions:		
Installments:		
After 5 years	206	149
Between 1 and 5 years	1.097	1.034
Less than 1 year	193	646
Bonds, mortgage debt and debt to credit institutions at nominal value	**1.496**	**1.829**
Future finance charges	-77	-83
Bonds, mortgage debt and debt to credit institutions at present value	**1.419**	**1.746**
Lease obligations		
Minimum lease payments:		
After 5 years	189	196
Between 1 and 5 years	30	29
Less than 1 year	7	7
Lease obligations at nominal value	**226**	**232**
Future finance charges	-97	-102
Lease obligations at present value	**129**	**130**
Trade payables:		
Less than 1 year	408	387
Derivative financial instruments:		
After 5 years	0	0
Between 1 and 5 years	2	3
Less than 1 year	3	0
Other financial liabilities:		
Less than 1 year	607	512

Notes to the Annual Report of the Haldor Topsøe Holding Group

32 Financial assets and liabilities (continued)

	Level 1 DKK mio.	Level 2 DKK mio.	Level 3 DKK mio.
Other securities and investments	21	0	323
Distribution of assets stated at fair value at December 31, 2018	**21**	**0**	**323**

	Level 1 DKK mio.	Level 2 DKK mio.	Level 3 DKK mio.
Derivative financial instruments	0	5	0
Distribution of liabilities stated at fair value at December 31, 2018	**0**	**5**	**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 11 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 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.

	2018 DKK mio.	2017 DKK mio.
Fair value of level 3 assets at January 1	271	313
Addition	89	0
Write-down recognized in other comprehensive income	-37	-42
Fair value of level 3 assets at December 31	**323**	**271**

Notes to the Annual Report of the Haldor Topsøe Holding Group

32 Financial assets and liabilities (continued)

Financial risks

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

Part of this risk is mitigated through natural hedges arising from activities where Topsoe has both income and expenses in the same currency. However, the risk is not fully covered by natural hedges, and consequently Topsoe hedges certain future cash flows in accordance with a hedging policy. A 5% change in the USD/DKK exchange rate is assessed to have an EBIT effect of DKK 5-10 million.

Interest rates
Long-term debt consists of loans and bonds with floating as well as fixed interest rates. Topsoe's policy is to maintain a loan portfolio with 35-50% floating rate and 50-65% fixed rate. For the floating rate portion of Topsoe's interest-bearing debt, an increase in the interest rate level of 1 percentage point will increase interest expenses by DKK 4 million.

Credit
Topsoe's credit risk 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. Loss allowances are assessed on an ongoing basis.

Liquidity
Topsoe must maintain sufficient liquidity to fund daily operations, debt service, and expansion. Topsoe's access to liquidity consists of cash and cash equivalents, including access to committed revolving credit facilities. The target is to maintain a minimum of DKK 500 million in unused committed revolving credit facilities at any time.
.

	2018	2017
	DKK mio.	DKK mio.
33 Adjustments for non-cash items		
Financial income	-72	-77
Financial expenses	91	132
Result of investment in joint venture	10	30
Amortization, depreciation and impairment losses, including gains and losses from sale of assets	258	338
Tax	182	132
Other adjustments	16	-118
Total adjustmens for non-cash items	**485**	**437**

	2018	2017
	DKK mio.	DKK mio.
34 Change in working capital		
Increase (-) / decrease in inventories	-79	283
Increase (-) / decrease in receivables	246	-262
Increase / decrease (-) in contract billing	-220	-75
Increase / decrease (-) in suppliers, etc.	419	-100
Total change in working capital (+ fall, - increase)	**366**	**-154**

Notes to the Annual Report of the Haldor Topsøe Holding Group

35 Subsequent events

Haldor Topsøe Holding A/S and Temasek have signed an agreement for Temasek to purchase 30 % of the shares in Haldor Topsoe A/S. Closing of the agreement is expected later this year.

No events materially affecting the Company's financial position at December 31, 2018 have occured after the balance sheet date.

36 List of group companies

Name	Registered office	Voting and ownership share
Haldor Topsoe A/S	Lyngby, Denmark	100%
Haldor Topsøe International A/S	Lyngby, Denmark	100%
Subcontinent Ammonia Investment Company ApS	Lyngby, Denmark	100%
Haldor Topsøe Project Investment A/S	Lyngby, Denmark	100%
HT Ramagundam A/S	Lyngby, Denmark	100%
Haldor Topsøe Sustainables A/S	Lyngby, Denmark	100%
Topsoe Fuel Cell A/S under frivillig likvidation	Lyngby, Denmark	100%
Haldor Topsoe Germany GmbH	Essen, Germany	100%
IGM Biosciences A/S under frivillig likvidation	Lyngby, Denmark	90,94%
Frydenlund Ejendomsselskab ApS	Rudersdal, Denmark	100%
OOO Haldor Topsøe	Moscow, Russia	100%
Haldor Topsoe, Inc.	Houston, USA	100%
Haldor Topsoe LFG Solutions Inc.	Houston, USA	100%
Haldor Topsoe Project Development Inc.	Houston, USA	100%
Pacific Coast Fertilizer LLC	Seattle, USA	77%
IGM Biosciences, Inc.	Mountain View, USA	90,94%
Haldor Topsoe Canada Limited	Vancouver, Canada	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%
Haldor Topsoe America Latina S.A.	Buenos Aires, Argentina	100%
Haldor Topsøe (Beijing) Co., Ltd	Beijing, China	100%
Haldor Topsøe Science & Technology (Dalian) Co., Ltd.	Dalian, China	100%
Jiangsu JITRI-Topsoe Joint R&D Center Co, Ltd.	Suzhou, China	60%
Haldor Topsoe India Pvt. Ltd.	New Delhi, India	100%
Haldor Topsoe Sdn. Bhd.	Kuala Lumpur, Malaysia	100%

Notes to the Annual Report of the Haldor Topsøe Holding Group

37 Business combinations

On August 3, 2018, the Group acquired the remaining 50% of the shares in the joint venture Ferrostaal Topsoe Project GmbH, whose activity is project development. The acquisition increases the Group's project planning and development competencies.

Ferrostaal Topsoe Project GmbH has changed name to Haldor Topsoe Germany GmbH. The company owns two minor subsidiaries, Haldor Topsoe Project Development Inc. and Pacific Coast Fertilizer LLC.

	Fair value at acquisition DKK mio.
Deferred tax receivables	33
Other receivables	1
Cash	34
Assets	**68**
Pension obligation	-33
Other payables	-33
Liabilities	**-66**
Net identifiable assets acquired	**2**
Negative goodwill	-2
Net assets acquired	**0**
Cash	0
Fair value of previously owned shares in the company	0
Total consideration	**0**
Acquired cash	34
Cash consideration	**-34**

The Group's previous investment in the company has been adjusted to reflect the fair value of the shares, which has led to a fair value adjustment of DKK -2 million, which is included in "Result of investments in joint ventures".

Negative goodwill amounting to DKK 2 million is included in "Result of investments in joint venture". The negative goodwill has arisen from the workforce.

The acquired business contributed revenue of DKK 1 million and net profit of DKK 15 million to the Group for the period from August 3 to December 31, 2018. If the acquisition had occured on January 1, 2018, consolidated pro-forma revenue and net profit would have been DKK 5,617 million and DKK 481 million, respectively.

Notes to the Annual Report of the Haldor Topsøe Holding Group

38 Discontinuing operations

On June 20, 2017, Topsoe announced that it had sold its emissions control business areas. The divestment involved a loss of DKK 362 million (mainly related to revaluation) 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 was recognized in the financial statements for 2017. The divestment was finalized on November 30, 2017. The divestment comprised 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.

2018 has been impacted by the finalization of the divestment of the emissions control business areas. This resulted in a loss after tax on discontinuing operations of DKK 1 million in 2018. During 2018, loss on slae of discontinuing operations before tax amounted to a loss of DKK 18 million (mainly related to adjustment of net assets sold). Income tax on loss on sale of discontinuing operations was a gain of DKK 3 million. Consequently, the net loss on the sale of discontinuing operations amounted to DKK 15 million in 2018. Loss from discontinuing operations amounted to DKK 16 million.

The financial performance and cash flow information presented are for the year ended December 31, 2018 and the eleven months ended November 30, 2017 (2017 column).

	2018	2017
	DKK mio.	DKK mio.
Revenue	50	652
Expenses	-51	-705
Loss before tax	**-1**	**-53**
Tax	0	-7
Loss after tax on discontinuing operations	-1	-60
Loss on sale of discontinuing operations	-15	-362
Loss from discontinuing operations	**-16**	**-422**
Foreign currency translation adjustment from discontinuing operations	0	24
Other comprehensive income arising from discontinuing operations	**0**	**24**
Net cash inflow from operating activities		-284
Net cash inflow (outflow) from investing activities (2017 includes an inflow of DKK 922 million from the divestment)		913
Net cash (outflow) from financing activities		-126
Net increase in cash generated by the discontinuing operations		**503**
Cash		956
Fair value of contingent considerations		0
Total received or receivable consideration		**956**
Carrying amount of net assets sold	-16	-1.195
Transaction costs	-2	-64
Loss on sale before income tax and reclassification of foreign currency translation reserve	**-18**	**-303**
Reclassification of foreign currency translation reserve	-	-24
Income tax expense on loss	3	-35
Loss on sale of discontinuing operations	**-15**	**-362**

Notes to the Annual Report of the Haldor Topsøe Holding Group

38 Discontinuing operations continued

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 DKK 0 million, as Management assesses that the performance criteria are unlikely to be met.

	2017 DKK mio.
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**

Accounting policies of the Haldor Topsøe Holding A/S

Basis of preparation

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	2018	2017
		DKK mill.	DKK mill.
Other external expenses		-10	-6
Staff expenses	1	-4	-3
EBIT		**-14**	**-9**
Dividend from group enterprises		875	334
Financial income		1	1
Financial expenses	2	-4	-7
Profit before tax		**858**	**319**
Tax		2	1
Net profit	3	**860**	**320**

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

	Note	2018	2017
		DKK mill.	DKK mill.
Investments in group enterprises		5.846	5.708
Other receivables		3	0
Investments	4	**5.849**	**5.708**
Non-current assets		**5.849**	**5.708**
Receivables from group enterprises		38	32
Corporate income tax		192	38
Receivables		**230**	**70**
Cash		**179**	**1**
Current assets		**409**	**71**
Assets		**6.258**	**5.779**

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

	Note	2018	2017
		DKK mill.	DKK mill.
Share capital	5	2.200	2.200
Share premium		335	335
Retained earnings		3.128	2.668
Proposed dividend		400	200
Equity		**6.063**	**5.403**
Payables to group enterprises		190	371
Other payables	6	5	5
Current liabilities		**195**	**376**
Liabilities		**195**	**376**
Equity and liabilities		**6.258**	**5.779**
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, 2018	2.200	335	2.668	200	5.403
Net profit	0	0	460	0	460
Net profit and income and expenses recognized under equity	**0**	**0**	**460**	**0**	**460**
Dividend paid	0	0	0	-200	-200
Dividend proposed	0	0	0	400	400
Transactions with owners	**0**	**0**	**0**	**200**	**200**
Equity at December 31, 2018	**2.200**	**335**	**3.128**	**400**	**6.063**

Cash flow statement of Haldor Topsøe Holding A/S

	2018 DKK mill.	2017 DKK mill.
Net profit	860	320
Adjustment for non-cash items	-874	-329
Change in working capital	-187	-92
Cash flow from operating activities before financial items and tax	-201	-101
Interest received etc.	1	1
Interest paid etc.	-4	-7
Cash flow from ordinary activities	-204	-107
Corporate tax paid	-152	34
Cash flow from operating activities	**-356**	**-73**
Investment in group companies	-138	-62
Purchase of fixed asset investmetns	-3	0
Dividend received	875	334
Cash flow from investing activities	**734**	**272**
Reduction of long term loan	0	-100
Dividend paid	-200	-99
Cash flow from financing activities	**-200**	**-199**
Change in cash and cash equivalents	**178**	**0**
Cash and cash equivalents at January 1	1	1
Cash and cash equivalents at December 31	179	1
Change in cash and cash equivalents	**178**	**0**

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

		2018	2017
1	**Staff expenses**	DKK mio.	DKK mio.
	Wages and salaries	4	3
	Total staff expenses	**4**	**3**
	Total remuneration to Executive Management and Board of Directors	3	**3**
	Average number of employees	2	2

		2018	2017
2	**Financial expenses**	DKK mio.	DKK mio.
	Interest payments to group enterprises	2	2
	Other interest	2	2
	Loss on derivative financial instruments	0	3
	Total financial expenses	**4**	**7**

		2018	2017
3	**Proposed distribution of profit**	DKK mio.	DKK mio.
	Proposed dividend	400	200
	Retained earnings	460	120
	Total proposed distribution of profit	**860**	**320**

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

4 Investments	Investments in group enterprises	Other receivables
	DKK mio.	DKK mio.
Cost at January, 1 2018	5.708	0
Additions during the year	138	3
Cost at December, 31 2018	5.846	3
Carrying amount at December, 31 2018	**5.846**	**3**

Investments in group enterprises are specified as follows:

Name	Registered office	Vote and ownership interest
Haldor Topsoe A/S	Lyngby, Denmark	100%
Haldor Topsøe International A/S	Lyngby, Denmark	100%
Subcontinent Ammonia Investment Company ApS	Lyngby, Denmark	100%
Haldor Topsøe Project Investment A/S	Lyngby, Denmark	100%
HT Ramagundam A/S	Lyngby, Denmark	100%
Haldor Topsøe Sustainables A/S	Lyngby, Denmark	100%
Topsoe Fuel Cell A/S under frivillig likvidation	Lyngby, Denmark	100%
Haldor Topsoe Germany GmbH	Essen, Germany	100%
IGM Biosciences A/S under frivillig likvidation	Lyngby, Denmark	90,94%
Frydenlund Ejendomsselskab ApS	Rudersdal, Denmark	100%
OOO Haldor Topsøe	Moscow, Russia	100%
Haldor Topsoe, Inc.	Houston, USA	100%
Haldor Topsoe LFG Solutions Inc.	Houston, USA	100%
Haldor Topsoe Project Development Inc.	Houston, USA	100%
Pacific Coast Fertilizer LLC	Seattle, USA	77%
IGM Biosciences, Inc.	Mountain View, USA	90,94%
Haldor Topsoe Canada Limited	Vancouver, Canada	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%
Haldor Topsoe America Latina S.A.	Buenos Aires, Argentina	100%
Haldor Topsøe (Beijing) Co., Ltd	Beijing, China	100%
Haldor Topsøe Science & Technology (Dalian) Co., Ltd	Dalian, China	100%
Jiangsu JITRI-Topsoe Joint R&D Center Co, Ltd.	Suzhou, China	60%
Haldor Topsoe India Pvt. Ltd.	New Delhi, India	100%
Haldor Topsoe Sdn. Bhd.	Kuala Lumpur, Malaysia	100%

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

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.

6	Other payables	2018	2017
		DKK mill.	DKK mill.
	Fees to advisors	3	3
	Other	2	2
	Total other payables	**5**	**5**

At the balance sheet date, the Group had a non-current unused loan commitment of DKK 250 million (2017: DKK 250 million) expiring in 2021.

7 Suretyship

Suretyship of DKK 859 million has been provided as security of certain liabilities in a group enterprise (2017: DKK 673 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.

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

11 Subsequent events

Haldor Topsøe Holding A/S and Temasek have signed an agreement for Temasek to purchase 30 % of the shares in Haldor Topsoe A/S. Closing of the agreement is expected later this year.

No events materially affecting the Company's financial position at December 31, 2018 have occured after the balance sheet date.